PD-ABM-815

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

1. TRANSACTION CODE: A (A = Add, C = Change, D = Delete) — Amendment Number: — DOCUMENT CODE: 3

2. COUNTRY/ENTITY: Uganda

3. PROJECT NUMBER: 617-0125 ISN 99194

4. BUREAU/OFFICE: AFR/EA/U

5. PROJECT TITLE (maximum 40 characters): Investment in Developing Export Agriculture

6. PROJECT ASSISTANCE COMPLETION DATE (PACD): MM 09 DD 30 YY 99

7. ESTIMATED DATE OF OBLIGATION (Under 'B.' below, enter 1, 2, 3, or 4)
A. Initial FY 93 B. Quarter 4 C. Final FY 98

8. COSTS ($000 OR EQUIVALENT $1 =)

A. FUNDING SOURCE	FIRST FY 93 B. FX	C. L/C	D. Total	LIFE OF PROJECT E. FX	F. L/C	G. Total
AID Appropriated Total	750		750	17,886	7,114	25,000
(Grant)	(750)	( )	(750)	(17,886)	(7,114)	(25,000)
(Loan)	( )	( )	( )	( )	( )	( )
Other U.S. 1.						
Other U.S. 2.						
Host Country					845	845
Other Donor(s) World Bank Loans				17,000		17,000
TOTALS	750		750	34,886	7,959	42,845

9. SCHEDULE OF AID FUNDING ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE 1. Grant	2. Loan	D. OBLIGATIONS TO DATE 1. Grant	2. Loan	E. AMOUNT APPROVED THIS ACTION 1. Grant	2. Loan	F. LIFE OF PROJECT 1. Grant	2. Loan
(1) DFA						750		25,000	
(2)									
(3)									
(4)									
TOTALS								25,000	

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each)

11. SECONDARY PURPOSE CODE

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)
A. Code
B. Amount

13. PROJECT PURPOSE (maximum 480 characters)

To increase production and marketing of selected non-traditional agricultural exports.

14. SCHEDULED EVALUATIONS
Interim MM 07 YY 96 MM YY
Final MM 07 YY 99

15. SOURCE/ORIGIN OF GOODS AND SERVICES
☐ 000 ☐ 941 ☐ Local ☒ Other (Specify) 935

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a ____ page PP Amendment.)

17. APPROVED BY
Signature: Keith W. Sherper Keith W. Sherper
Title: Mission Director
Date Signed: MM 09 DD 28 YY 93

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION
MM DD YY

AID 1330-4 (8-79)

I have reviewed and hereby approve the methods of implementation and financing in this Project Paper.

A/CONTROLLER

ACTION MEMORANDUM FOR THE MISSION DIRECTOR, USAID/UGANDA

FROM: Susan Fine, Project Development Officer

ACTION: You are requested to authorize the Investment in Developing Export Agriculture (IDEA) Project, 617-0125, with life-of-project A.I.D. funding of $25 million from the DFA and a Project Assistance Completion Date of September 30, 1999.

Background

Uganda has a per capita income of $170, making it one of the poorest countries in the world. The balance of payments, with exports covering only about one-third of the import bill, is not possible without substantial external assistance. Uganda desperately needs to increase incomes, particularly rural incomes, and increase exports to generate foreign exchange. Agriculture is the largest productive sector of the economy and is the only sector with the potential to generate substantial and sustainable economic growth in the near future. While the GOU has made much progress in eliminating macroeconomic constraints to increasing agricultural exports, a number of infrastructural, institutional, financial, technological and information constraints inhibit export growth. The IDEA Project will address technological and information constraints for non-traditional agricultural exports (NTAEs).[1] Other constraints are being addressed to varying degrees by other donors and USAID through the Agricultural Non-Traditional Export Promotion Program.

You approved the PID for the IDEA Project on April 30, 1993. The design process for the Project Paper began in mid-May and involved interviews and discussions with over a hundred women and men from the private sector, various GOU institutions and other donor agencies and culminated in a workshop attended by 70 people representing a broad spectrum of private and public sector entities. The workshop participants endorsed the proposed project approach. A report submitted by the design contractor, Chemonics International, provided input into the IDEA Project Paper (PP), particularly the annexes. USAID and REDSO staff continued to develop and refine the project during July and August, in consultation with the relevant implementing entities.

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[1] Non-traditional agricultural exports (NTAEs) are defined for the purposes of this project as anything but coffee, tea, cotton and tobacco.

Discussion

The Investment in Developing Export Agriculture Project is a six year, $25 million project to expand and diversify Uganda's export base and thereby increase incomes of those involved in production and marketing of NTAEs. The project goal is to increase incomes, particularly those of rural men and women, from non-traditional agricultural exports. This goal is similar to USAID/Uganda's strategic objective of increasing rural men's and women's incomes from agricultural exports, but it also captures project benefits that will accrue to others such as exporters who may be urban-based. The project will monitor the incomes of people participating in production and export of project-assisted commodities in order to assess people-level impact.

The purpose of the project is to increase production and marketing of selected non-traditional agricultural exports. Project activities will result in increased levels of production and export of the NTAEs identified for assistance. Based on studies conducted by the ANEP Project, USAID has identified five commodity groups with good export potential that will be the focus of project activities; they fall into two broad categories:

1) **low value food crop exports (primarily maize and beans) to regional markets;** these will increase incomes of a large number of farmers, most of them smallholders, as well as marketing agents and exporters;

2) **High value exports (cut flowers, spices and essential oils, vegetables and fruits) to overseas markets** that will provide substantial returns to a relatively small number of producers and exporters.

As market conditions change and new opportunities arise, other NTAEs may be added to the above list. By the end of the project, annual exports of maize and beans will have increased to $20 million from a current level of $6.6 million and exports of project-assisted high value commodities will be $7.47 million annually. Furthermore, there will be an increase of approximately 7,400 smallholders and hired laborers involved in production of the high value commodities. The project will encourage participation of women in high value exports, which tend to be dominated by men because of the potential for high returns.

The IDEA project will be implemented primarily by the Agribusiness Development Center (ADC), an autonomous, project-funded implementation unit that will provide technical assistance, training and other export development services to targeted NTAE exporters, producers, associations and related service firms and institutions such as Makerere University and the National Agricultural Research Organization (NARO). The ADC will be staffed and operated by a U.S. contractor and will be linked to the restructured export promotion authority that replaces the Uganda Export Promotion Council. USAID will execute a contract with a U.S. institutional contractor, a separate grant to NARO for applied

research on maize and beans and a grant to the Africa Project Development Facility (APDF) to provide financial advisory services to exporters.

By the end of the project, the following outputs will have been accomplished:

1. Producers of selected commodities will have improved knowledge of techniques to increase crop quality and yields.

2. Exporters will be able to initiate or expand NTAE activities.

3. NTAE exporters and producers will have improved knowledge of agribusiness planning and management and access to sources of financing.

4. Commodity specific market information systems will be established or improved and sustainable.

5. Private/public sector entities will be multiplying and distributing improved maize and bean seeds.

6. Associations will be facilitating growth in NTAEs and acting as effective advocates for a better NTAE policy and regulatory environment.

7. MU Faculty of Agriculture will be able to provide long-term and short-term training to support the growth of NTAEs.

A.I.D. will provide $25 million over six years from the Development Fund for Africa to finance technical assistance, training, commodities, research and extension, small grants, information and project management services and monitoring, evaluation and audit. The GOU contribution to the project is comprised of $17 million in World Bank loans for export promotion and agricultural research and training projects complementary to IDEA and one billion Ugandan shillings in GOU budgetary resources. The GOU and USAID will jointly program Ush 200 million each year beginning in GOU FY94/95 for IDEA activities. The total GOU contribution is 42 percent of the project total.

The Project Review Meeting

The Project Paper was reviewed at a meeting on August 31, 1993 chaired by the Director and attended by the Deputy Director and representatives of ANR, PPD, ECON and CONT. A follow-up meeting was held on September 14 to resolve one remaining issue. Major issues discussed at the meetings and their resolution are summarized below.

<u>Issue 1: A number of budget changes were discussed in order to keep the project budget within $25 million and accomodate the</u>

contractor overhead rates recommended by CONT and the REDSO contracts office. The review committee's decisions are summarized below.

a) Funding for VOCA has been eliminated because VOCA was unwilling to consider anything less than a program of $2.2 million over five years for 100 volunteers, which was more than the project could afford.
b) Funding for APDF is included but at a lower level than that originally anticipated. The ADC will refer export activities meeting APDF's criteria to the APDF office in Nairobi.
c) Modest support for Makerere University's Faculty of Agriculture and Forestry is included because Makerere will play a role in the long term development of Uganda's agricultural export potential.
d) Funding for maize and beans research is somewhat reduced from previously proposed levels but is still adequate to accomplish the project's research objectives; the description of research activities has also been revised to emphasize the applied nature of the IDEA-funded research.
e) A US PSC project manager will be hired for 18 months to assist with project start-up and to help train the FSN in A.I.D. project management.

Issue 2: The USAID design team recommended changing the project purpose from that approved in the PID to one that is the direct result of project activities and within the manageable interest of the project.

The project purpose approved in the PID is "to increase incomes, particularly rural men's and women's incomes, from selected non-traditional agricultural exports." While this statement focuses on the people level impact of the project, there are many other factors beyond the project's control that affect incomes. It was decided to accept the revised purpose and that "increasing incomes" is more appropriate as the IDEA project goal.

Issue 3: Will project implementation be hampered if the new export promotion institution is not established within the next year?

The ADC is autonomous and can proceed with project activities even if the GOU takes longer than expected to create a new export promotion institution. In the meantime, a representative of the Ministry of Trade and Industry will sit on the Project Steering Committee (PSC). The project will be managed by the PSC as a group, and it is unlikely that one organization will be able to control project activities to any significant extent. The EPADU will also have a representative on the PSC; this should facilitate the transfer of project oversight responsibilities from EPADU to the new institution.

Issue 4: It may be difficult to assess the need and commitment of entrepreneurs applying for Small Grants, and the program could be perceived as a means of enriching favored individuals.

While these concerns are valid, USAID's experience with similar programs in ANEPP and CAAS does not support them. During the review, however, participants suggested substituting a loan guarantee. After further research and discussion, it was decided that while a loan guarantee is attractive in terms of encouraging borrower responsibility, it does not suit the purpose for which these resources are intended ("jump-starting" export activities that may be high risk and may produce benefits broader than an individual firm that warrant subsidization) and that small grants are more appropriate. The ADC will establish transparent criteria for evaluating grant requests. Technical advisors will be working closely with potential grantees and should be able to assess exporters' level of commitment and need. Grants will be no more than $10,000, and the program will be assessed after a year of operation to see if changes are needed.

Issue 5: Does it make sense for the project to fund Ugandan technical advisors as "counterparts"?

The Ugandan professional staff of the ADC will benefit from working with the expatriate staff, but they will also provide local knowledge and will, in some cases, be responsible for implementation after expatriate advisors depart. It was suggested that NARO and perhaps other organizations could provide people to fill some of these positions and the Ugandan advisors would then have an institution to return to. This possibility is being explored with NARO, although any individual from a GOU entity cannot receive a government salary or other benefits during the duration of his/her employment with the project.

Issue 6: Provisions in the proposed Agricultural Seeds and Plants Act could delay the introduction of imported seeds.

USAID has expressed its concern about the impact of the seed testing provisions to the Minister of Agriculture and has offered to fund the purchase of laboratory equipment (under ANEPP) for the Plant Protection Division of MAAIF that would obviate the need for lengthy field testing of imported seeds. The ANR Office will continue to monitor developments regarding seed testing regulations.

Other Issues

Technical, Economic and Social Feasibility The analyses conducted as part of the PP demonstrate that the interventions proposed in the IDEA Project are technically, economically and socially

feasible.

Congressional Notification The FY 93 CP contains information on a proposed $1 million obligation for project number 617-0125. A Technical Notification to Congress expired without objection on September 24, 1993. USAID plans to obligate $750,000 in FY 93.

Gray Amendment USAID will encourage the use of entities eligible under disadvantaged enterprises legislation (Gray Amendment) in project implementation. Because of the size and complexity of the proposed institutional contract, USAID staff do not recommend a Gray Amendment firm for the prime contract, but we believe that there will be ample opportunities for the participation of minority owned firms, including 8(a) firms, and historically black colleges and universities, as sub-contractors under the prime contractor. At least ten percent of the prime contract will sub-contracted to Gray Amendment entities.

Initial Environmental Examination Because of the potential negative environmental impacts of this project, a deferral of the IEE was approved by the Bureau Environmental Officer until Environmental Impact Reviews (EIRs) are completed for the five commodity groups targeted in the project and an Environmental Monitoring and Mitigation Plan (EMEMP) is prepared. The EMEMP will be based on the results of the EIRs and will include activities to mitigate any negative environmental impacts. The completion of EIRs and an EMEMP is included as a covenant in the Grant Agreement as specified in the IEE.

Authority

The DAA/AFR delegated authority (92 State 309693) to the Mission Director, USAID/Uganda, to approve the PID and the PP for the IDEA Project in the field. Although that delegation specified an FY94 start, subsequent communication with AID/W resulted in a budget allowance (93 State 281014) permitting an FY93 start. (The foregoing is confirmed in 93 State 294859.)

RECOMMENDATION

That you authorize the Investment in Developing Export Agriculture Project with $25 million in A.I.D. financing and a PACD of September 30, 1999 by signing this Action Memorandum, the Project Authorization (Attachment I) and the Project Data Sheet (Attachment II).

Approved:

Keith W. Sherper Date: 9-28-93

Disapproved:

_____

Attachments: I. Project Authorization
II. Project Data Sheet and Project Paper

Clearances:
LDiaz:D/DIR ____ Date 9/27/93
GBayer:C/ANR ____ Date 9/27
RRwampororo:Ag.Econ ____ Date 27 Sept 93
RPhillips:ECON ____ Date 26 Sept 93
NOlsen:C/PPD ____ Date 9/27
KLizwelicha:CONT ____ Date 9/23
AVodraska:EXO ____ Date 9/27/93
AVance:RLA ____ Date ____

CLEARED BY ROBIN-AVANCE
27 SEPT PS TELCON

PROJECT AUTHORIZATION

Country: Uganda

Project Name: Investment in Developing Export Agriculture (IDEA)

Project Number: 617-0125

1. Pursuant to Section 496 of the Foreign Assistance Act of 1961, as amended, I hereby authorize the Investment in Developing Export Agriculture (IDEA) Project, involving planned obligations of not to exceed twenty-five million United States Dollars ($25,000,000) in grant funds to help financing foreign exchange and local costs for the project. The planned life of the project is six years from the date of initial obligation. These funds are provided subject to the availability of funds in accordance with the A.I.D. OYB/allotment process.

2. The project will increase production and marketing of selected low value and high value non-traditional agricultural exports. For the targeted commodities, the project will support applied research and extension, market information and contacts, business and financial advisory services, and specialized technical assistance and training in production, post-harvest handling and other export-related areas. The project will also strengthen producer and exporter associations, facilitate dialogue between the public and private sector on export policies and regulations and improve Makerere University's capability to support the development of non-traditional agricultural exports in Uganda.

3. The Project Agreement which may be negotiated and executed by the officers to whom such authority is delegated in accordance with A.I.D. regulations and Delegations of Authority shall be subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as A.I.D. may deem appropriate.

Source and Origin of Commodities, Nationality of Services

Commodities financed by A.I.D. under the Project shall have their source and origin in countries included in A.I.D. Geographic Code 935, except as A.I.D. may otherwise agree in writing. Except for ocean shipping, the suppliers of commodities or services shall have A.I.D. Geographic Code 935 as their place of nationality, except as A.I.D. may otherwise agree in writing. Ocean shipping financed by A.I.D. under the project shall be financed only on flag vessels of countries included in A.I.D. Geographic Code 935. This requirement is subject, however, to the 50/50 shipping requirements of the U.S. Cargo Preference Act and the regulations promulgated thereunder which apply to the ocean shipment of commodities furnished by A.I.D. without regard to whether the shipping itself is so financed.

Keith W. Sherper
Keith W. Sherper
Director

9-28-93
Date

Drafted:SFine:PDO:9/20/93
Clearances:
RLA:AVance date
C/PPD:NLOlsen NLO date 9/21/93
CONT:KLizwelicha KL date 9/23/93
EXO:AVodraska AV date 9/24/93
ANR:GBayer GB date 9/21/93
ANR:RRwamororo R For date 9/22/93
ECON:RPhillips RP date 9/23/93
D/DIR:LDiaz LD date 9/27/93

Revised 28 Sep 1993
Telecons w/ A. Vance:
He pointed out a typo,
which I changed
R

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A.I.D. Project Number 617-0125

PROJECT GRANT AGREEMENT

For the

INVESTMENT IN DEVELOPING EXPORT AGRICULTURE

Between

THE GOVERNMENT OF THE REPUBLIC OF UGANDA

and

THE UNITED STATES OF AMERICA,

acting through

THE AGENCY FOR INTERNATIONAL DEVELOPMENT ("A.I.D.")

Date: September 28, 1993

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Attachments: ANNEX 1 - Amplified Project Description
ANNEX 2 - Project Grant Standard Provisions

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A.I.D. Project Number 617-0125

PROJECT GRANT AGREEMENT

For the

INVESTMENT IN DEVELOPING EXPORT AGRICULTURE ("IDEA")

Between

THE GOVERNMENT OF THE REPUBLIC OF UGANDA

and

THE UNITED STATES OF AMERICA,

acting through

THE AGENCY FOR INTERNATIONAL DEVELOPMENT ("A.I.D.")

ARTICLE 1: The Agreement

The purpose of this Agreement is to set out the understandings of the parties named above ("Parties") with respect to the undertaking by the Grantee of the Project described below, and with respect to the financing of the Project by the Parties.

ARTICLE 2: The Project

SECTION 2.1. Definition of the Project.

The Project will finance technical assistance, training, research, commodities and other export development services for exporters, producers, associations and related service firms and institutions such as Makerere University and the National Agricultural Research Organization to increase the production and marketing of selected low value and high value non-traditional agricultural exports. The low value export component will include applied research, seed multiplication and distribution and extension to increase yields and improvements in market information and assistance to commodity exporters in establishing market contacts in order to strengthen the export marketing system. The high value program will work primarily with exporters and, through them, with producers of the selected commodities and will include research activities, development of market contacts and commodity-specific market information systems, assistance in financial planning and management and specialized technical assistance and training in production and post-harvest handling techniques. The Project will be implemented primarily by the Agribusiness Development Center (ADC), an autonomous project-funded implementation unit that will be linked to the restructured export promotion institution that replaces the Uganda Export Promotion Council.

ANNEX 1, ("Project Description") attached, amplifies the above definition of the Project. Elements of the Project Description stated in ANNEX 1 may be changed by written agreement of the authorized representatives of the Parties named in Section 8.2 without formal amendment of this Agreement.

It is anticipated that A.I.D.'s overall contribution to the IDEA Project, over its life will be twenty-five million United States ("U.S") dollars ($25,000,000).

SECTION 2.2. Incremental Nature of the Project.

(a) A.I.D.'s contribution to the Project will be provided in increments, the initial one being made available in accordance with SECTION 3.1 of this Agreement. Subsequent increments will be subject to availability of funds to A.I.D. for this purpose, and to the mutual agreement of the Parties, at the time of each subsequent increment, to proceed.

(b) Prior to the overall Project Assistance Completion Date ("PACD") stated in this Agreement, A.I.D., based upon consultation with the Grantee, may specify in Project Implementation Letters appropriate time periods for the utilization of funds granted by A.I.D. under each individual increment of assistance.

ARTICLE 3: Financing

SECTION 3.1. The Grant.

To assist the Grantee to meet the costs of carrying out the Project, A.I.D., pursuant to the Foreign Assistance Act of 1961, as amended, hereby grants to the Grantee under the terms of this Agreement an amount not to exceed seven hundred and fifty thousand U.S. Dollars ($750,000). This amount is the first increment of planned obligations of up to twenty-five million United States ("U.S.") Dollars ($25,000,000) (the "Grant") as part of the planned multi-year project. The remaining twenty-four million two hundred and fifty thousand U.S. Dollars ($24,250,000) shall be subject to the availability of funds to A.I.D. for this purpose and the mutual agreement of the Parties to proceed at the time of the subsequent increments.

The Grant may be used to finance foreign exchange costs, as defined in SECTION 6.1 of this Agreement, and local currency costs, as defined in SECTION 6.2 of this Agreement, of goods and services required for the Project.

SECTION 3.2. Grantee Resources for the Project.

The Grantee agrees to provide or cause to be provided for the Project all funds, in addition to the Grant, and all other resources required to carry out the Project effectively and in a timely manner.

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SECTION 3.3. Project Assistance Completion Date (PACD).

(a) The PACD, which is September 30, 1999, or such other date as the Parties may agree to in writing, is the date by which the Parties estimate that all services financed under the Grant will have been performed and all goods financed under the Grant will have been furnished for the Project as contemplated in this Agreement.

(b) Except as A.I.D. may otherwise agree in writing, A.I.D. will not issue or approve documentation which would authorize disbursement of the Grant for services performed subsequent to the PACD or for goods furnished for the Project, as contemplated in this Agreement, subsequent to the PACD.

(c) Requests for disbursement, accompanied by necessary supporting documentation prescribed in Project Implementation Letters are to be received by A.I.D. or any bank described in SECTION 7.1 no later than nine (9) months following the PACD, or such other period as A.I.D. agrees to in writing. After such period, A.I.D., giving notice in writing to the Grantee, may at any time or times reduce the amount of the Grant by all or any part thereof for which requests for disbursement, accompanied by necessary supporting documentation prescribed in Project Implementation Letters, were not received before the expiration of said period.

ARTICLE 4: Conditions Precedent

SECTION 4.1. Conditions Precedent to First Disbursement.

Except as A.I.D. may otherwise agree in writing, prior to the first disbursement under the Grant, or to the issuance by A.I.D. of documentation pursuant to which such disbursement will be made, with the exception of project management expenses financed under the Grant to be incurred directly by A.I.D., the Grantee shall furnish or have furnished to A.I.D., in form and substance satisfactory to A.I.D.:

A written statement setting forth the names and titles of persons holding or acting in the Office of the Grantee, as specified in SECTION 8.2, and of any additional representative, and representing that the named person or persons have the authority to act as the representative or representatives of the Grantee, together with a specimen signature of each such person certified as to its authenticity.

SECTION 4.2. Notification.

When A.I.D. has determined that the condition precedent specified in SECTION 4.1 has been met, A.I.D. will promptly so notify the Grantee.

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SECTION 4.3. Terminal Dates for Conditions Precedent.

If the condition specified in SECTION 4.1 has not been met within one hundred and eighty (180) days from the date of this Agreement, or such later date as A.I.D. may agree to in writing, A.I.D., at its option, may terminate this Agreement by written notice to the Grantee.

ARTICLE 5: Special Covenants

SECTION 5.1. Establishment of a New Export Promotion Institution.

The GOU agrees that it will establish a new export promotion institution as a semi-autonomous, full-service, export promotion organization governed by a board of directors with a majority of private sector members and a chairman selected by the board from amongst the private sector representatives, and further agrees that, until such time as this institution is formally established and a director appointed, that the Ministry of Trade and Industry will designate a senior official to serve on the IDEA Project Steering Committee.

SECTION 5.2. Government Personnel and Facilities.

The Grantee agrees to provide sufficient and adequate staff and other resources at Makerere University and the National Agricultural Research Organization to realize the research, education and training objectives of the project as described in Annex 1 of this agreement.

SECTION 5.3. Project Monitoring and Evaluation.

The Parties agree to establish and actively participate in a broad-based monitoring and evaluation program as part of the Project as described in ANNEX 1 of this agreement. Except as the Parties otherwise agree in writing, the evaluation program will include, but not necessarily be limited to:

(a) evaluation of progress towards attainment of the objectives of the Project;

(b) identification, evaluation and mitigation of problems or constraints that would inhibit attainment of Project objectives;

(c) evaluation of the impact of interventions at the "people level";

(d) design and implementation of an appropriate Environmental Monitoring Evaluation and Mitigation Plan for this project as outlined in the Initial Environmental Examination.

(e) evalution of the overall development impact of the Project.

KS

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SECTION 5.4. Duty Free Project Commodities.

The Government of Uganda agrees that all commodities purchased with project funds, whether destined for or consigned to government or private organization(s), will enter Uganda free of duty in accordance with the Economic, Technical and Related Assistance Agreement between the United States of America and Uganda.

SECTION 5.5. Salaries.

The Grantee agrees that no personnel paid salaries from Project funds will draw a government salary or receive government benefits, unless A.I.D. otherwise agrees in writing.

ARTICLE 6: Procurement Source

SECTION 6.1. Foreign Exchange Costs.

Except as A.I.D. may otherwise agree in writing, disbursements pursuant to SECTION 7.1 will be used exclusively as follows:

(a) to finance the costs of goods and services required for the Project having, with respect to goods, their source and origin, and with respect to services, their nationality in the countries included within Code 935 of the A.I.D. Geographic Code Book as in effect at the time orders are placed or contracts entered into for such goods or services, except as provided in the Project Grant Standard Provisions Annex, Section C.1(b) with respect to marine insurance ("Foreign Exchange Costs"). All reasonable efforts will be used to maximize U.S. procurement whenever practicable. Air travel and transportation to and from the U.S. shall be upon certified U.S. flag carriers or in accordance with U.S. Government travel regulations; and

(b) to finance ocean transportation costs under the Grant only on vessels under flag registry of the countries included in A.I.D. Geographic Code 935. This requirement is subject, however, to the 50/50 shipping requirements of the U.S. Cargo Preference Act and the regulations promulgated thereunder, which apply to ocean shipment of commodities furnished by A.I.D. without regard to whether the shipping itself is so financed.

SECTION 6.2. Local Currency Costs.

Disbursements pursuant to SECTION 7.2 will be used exclusively to finance the costs of goods and services required for the Project having their source and, except as A.I.D. may otherwise agree in writing, their origin in Uganda ("Local Currency Costs"). To the extent provided for under this Agreement, "Local Currency Costs" may also include the provision of local currency resources required for the Project.

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ARTICLE 7: Disbursement

SECTION 7.1. Disbursement for Foreign Exchange Costs.

(a) After satisfaction of the conditions precedent set forth in Section 4.1 of this Agreement, the Grantee may obtain disbursements of funds under the Grant for Foreign Exchange Costs of goods or services required for the Project in accordance with the terms of this Agreement, by such of the following methods as may be mutually agreed upon:

(1) by submitting to A.I.D., with necessary supporting documentation as prescribed in Project Implementation Letters, (A) requests for reimbursement for such goods or services, or, (B) requests for A.I.D. to procure commodities or services on the Grantee's behalf for the Project; or,

(2) by requesting A.I.D. to issue Letters of Commitment for specified amounts (A) to one or more U.S. banks, satisfactory to A.I.D., committing A.I.D. to reimburse such bank or banks for payments made by them to contractors or suppliers, under Letters of Credit or otherwise, for such goods or services, or (B) directly to one or more contractors or suppliers, committing A.I.D. to pay such contractors or suppliers for such goods or services.

(b) Banking charges incurred by the Grantee in connection with letters of Commitment and Letters of Credit will be financed under the Grant unless the Grantee instructs A.I.D. to the contrary. Such other charges as the Parties may agree to may also be financed under the Grant.

SECTION 7.2. Disbursement for Local Currency Costs.

(a) After satisfaction of the conditions precedent set forth in Section 4.1 of this Agreement, the Grantee may obtain disbursement of funds under the Grant for local currency costs required for the Project in accordance with the terms of this Agreement, by submitting to A.I.D., with necessary supporting documentation as prescribed in Project Implementation Letters, requests to finance such costs.

(b) The local currency needed for such disbursements may be obtained:

(1) by acquisition by A.I.D. with U.S. dollars by purchase, or from local currency already owned by the U.S. Government; or,

(2) by A.I.D., (A) requesting the Grantee to make available the local currency for such costs, and (B) thereafter making available to the Grantee, through the opening or amendment by A.I.D. of Special Letters of Credit in favor of the Grantee of its designee, an amount of U.S. dollars equivalent to the amount of local currency made available by the Grantee, which dollars

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will be utilized for procurement from the United States under appropriate procedures described in Project Implementation Letters.

(c) The U.S. dollar equivalent of the local currency made available hereunder will be, in the case of subsection (b) (1) above, the amount of U.S. dollars required by A.I.D. to obtain the local currency, in the case of sub-section (b) (2) above, an amount calculated at the rate of exchange specified in the applicable Special Letter of Credit Implementation Memorandum hereunder as of the date of the opening or amendment of the applicable Special Letter of Credit.

SECTION 7.3. Other Forms of Disbursement.

Disbursements of the Grant may also be made through such other means as the Parties may agree upon in writing.

SECTION 7.4. Rate of Exchange.

Except as may be more specifically provided under SECTION 7.2, if funds provided under this Grant are introduced into Uganda by A.I.D. or by any public or private agency for purposes of carrying out obligations of A.I.D. hereunder, the Grantee will make such arrangements as may be necessary so that funds may be converted into Uganda Shillings at the highest exchange rate of Uganda Shillings to U.S. Dollars which is not unlawful at the time of conversion.

ARTICLE 8: Miscellaneous

SECTION 8.1. Communications.

Any notice, request, document, or other communication submitted by either Party to the other under this Agreement will be in writing or by telegram or cable, and will be deemed duly given or sent when delivered to such party at the following addresses:

To the Grantee:	Minister of Finance and Economic Planning
Mail Address:	Ministry of Finance and Economic Planning P.O. Box 8147 Kampala, Uganda
To A.I.D.:	Mission Director
Mail Address:	USAID Mission P.O. Box 7007 Kampala, Uganda
Facsimile Number:	233417

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All such communications will be in English. Other addresses may be substituted for the above upon the giving of notice. The Grantee, in addition, will provide the USAID Mission to Uganda with a copy of each communication sent to A.I.D. Washington, D.C.

SECTION 8.2. Representatives.

For all purposes relevant to this Agreement, the Grantee will be represented by the individual holding or acting in the office of the Minister of Finance and Economic Planning and A.I.D. will be represented by the individual holding or acting in the Office of the Director, USAID Mission to Uganda, each of whom, by written notice, may designate additional representatives for all purposes including exercising the power under SECTION 2.1 to revise elements of the Project Description in ANNEX 1. The names of the representatives of the Grantee, with specimen signatures, will be provided to A.I.D., which may accept as duly authorized any instrument signed by such representatives in implementation of this Agreement, until receipt of written notice of revocation of their authority.

SECTION 8.3. Standard Provisions Annex.

A "Project Grant Standard Provisions Annex" (ANNEX 2) is attached to and forms part of this Agreement.

IN WITNESS WHEREOF, the Government of the Republic of Uganda and the United States of America, each acting through its duly authorized representative, have caused this Agreement to be signed in their names and delivered as of the day and year first above written.

Done at Kampala, Uganda in duplicate, the 28th day of Sept, 1993.

FOR THE GOVERNMENT OF THE REPUBLIC OF UGANDA

Moses R. K. Kintu
MINISTER OF STATE FOR FINANCE AND ECONOMIC PLANNING (CUSTODIAN BOARD) HOLDING THE PORTFOLIO OF MINISTER

FOR THE GOVERNMENT OF THE UNITED STATES OF AMERICA

Keith W. Sherper
Keith W. Sherper
MISSION DIRECTOR
UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

Attachments:
ANNEX 1 - Amplified Project Description
ANNEX 2 - Project Agreement Standard Provisions Annex

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ANNEX 1

AMPLIFIED PROJECT DESCRIPTION

I. Project Summary and Objectives

IDEA is intended to assist Uganda promote and diversify non-traditional agricultural exports (NTAEs), thereby improving incomes for NTAE producers and exporters, increase external earnings and increase employment. The IDEA Project has two major foci:

1) **Expand low value food crop exports (primarily maize and beans) to regional markets** which will increase incomes of a large number of farmers, most of them smallholders, and of marketing agents and exporters. This will have a substantial impact on the national economy; and

2) **Increase production and export of high value crops which** will provide substantial returns to a relatively small number of producers and exporters but will enhance foreign exchange earnings and wage employment. Examples of high-value commodities already identified for project support are:

- Spices and essential oils: vanilla, chillies, ginger, and geranium oil
- Floriculture: roses and field annuals
- Vegetables: snow peas and asparagus.

Over time, IDEA may support other agricultural exports, with special attention to developing products involving postharvest value-added processing, in order to capitalize on Uganda's competitive wage rates and to provide additional employment.

The project strategy is to improve agricultural marketing systems through support to private exporters and traders through a vertically integrated or "commodity systems" approach. Through this method, constraints in the marketing and production systems will be identified, production technology will be introduced through commercial channels with support from the national bean and maize research systems. Some strengthening of Makerere University faculties to produce agribusiness entrpreneurs will also be undertaken. The Project will provide the stimulus to increase trade and, through building a demand for both low and high-value crops, transfer technology and increase productivity of Uganda's farmers and agribusiness entrepreneurs.

II. Project Goal and Purpose

The goal of the IDEA project is "**to increase incomes, particularly those of rural men and women, from non-traditional agricultural exports.**" This goal is similar to USAID/Uganda's Country Program Strategic Plan (CPSP) strategic objective of increasing rural men's and women's income from agricultural exports but also encompasses project benefits that will accrue to others, primarily exporters, who may not live in rural areas. Other activities in the mission's agriculture portfolio, primarily ANEPP and the CAAS Project, also contribute to the strategic objective. In order for rural incomes from NTAEs to increase, rural farmers must be able to increase production of non-traditional crops and sell them at a profit. Whether the farmer can sell at a profit depends on the cost of inputs and getting the product to the market and the price which it fetches. The export price is determined by world market conditions. While the project has no control over market conditions, it can ensure that NTAEs supported by the project are competitive in the world market and it will continually reassess market conditions.

The project **purpose** is "**to increase production and marketing of selected non-traditional agricultural exports.**" IDEA's interventions will lead directly to increased production of specific non-traditional agricultural export crops by rural men and women and will ensure, to the extent possible, that what is produced is exported. Increasing and diversifying NTAEs will contribute to national foreign exchange earnings and increase incomes of men and women producers, exporters and others involved in transportation, processing, and packaging of NTAEs. Farmers who sell their incremental production (the additional amount produced as a result of project interventions) to an exporter at a profit will have increased incomes. While producers of some high value crops will not be smallholders[1], higher production levels of these crops will require an increase in hired labor (which may increase rural wage rates), which will also contribute to the project goal of increasing rural incomes.

Achievement of the project purpose (EOPS) will be measured by:

- increases in export value and farmgate value of maize and beans;
- increases in export value of high value commodities;
- increases in the number of smallholders and hired laborers involved in production of high value commodities;

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[1] Smallholders are considered to be at the lower end of the income distribution, although rural landless people are generally the poorest of the poor.

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- at least 40% of high value producers, outgrowers, hired labor and exporters assisted by the project are women.

The distinction between export value and farmgate value is important because the farmgate value reflects the return to the farmer as opposed to the return to the exporter. Project implementors must continually focus on the link between project activities and increasing producers' incomes to ensure that the project has "people level impact" and contributes to the project goal. Increases in smallholders and hired labor in high value NTAEs are additional indicators of increased production levels and can be assumed to contribute to higher rural incomes. The project will encourage participation of women in production of high value commodities (which men tend to dominate because profits are higher) and this is reflected in the EOPS target of at least 40% women beneficiaries in the high value commodities over the life of the project.

A. Project Strategy

The IDEA project will be implemented primarily by the Agribusiness Development Center (ADC), an autonomous implementation unit funded by the project, which will provide technical assistance and other export development services to targeted NTAE exporters, producers, associations and related service firms and institutions such as Makerere University and the National Agricultural Research Organization (NARO). The ADC will be staffed and operated by an A.I.D.-financed contractor. The staff will be comprised of a Chief-of-Party (COP) and four long-term expatriate technical advisors, five long-term Ugandan technical advisors and administrative support staff. Initially, the ADC will provide most information and services directly to clients. Later in the project, as capacity is developed and support services are institutionalized elsewhere, the ADC will serve in part as a clearinghouse. The ADC will not compete with existing export promotion institutions and will cease to exist with the end of the project. By that time, other institutions in the private and public sector will have been strengthened through this project and other efforts to the point that further assistance in NTAE development is more appropriately channelled through them directly.

While IDEA's primary focus is on production and marketing, the project will also encourage continual improvement in Uganda's export promotion efforts and in the policy and regulatory environment for NTAEs. Producers and exporters will identify new policy and regulatory constraints as they expand and move into new crops and markets. The ADC will serve as one communication channel between the private and public sectors, through a close relationship with the new, restructured export promotion institution and with the Export Policy Analysis Unit (EPAU), and will work to strengthen the ability of private sector associations to take on a policy dialogue function over the life of the project.

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If the new export promotion entity is created along the lines currently being discussed (semi-autonomous with its own governing board and resources), the IDEA Chief-of-Party, who will be the director of the ADC, will spend 10-20 percent of her/his time at the new entity, working with the Director and agribusiness staff on relevant export promotion activities. This will keep the lead GOU export promotion institution well informed of project activities, improve coordination amongst donor and GOU projects and help avoid duplication of effort. The COP will also liaise with EPAU staff on agribusiness-related policy issues. These arrangements are intended to help bridge the gap in information sharing and feedback between private and public sectors and to ensure that regulatory or other roadblocks to the project's export activities are addressed quickly.

III. Project Outputs

By the end of the project, the following outputs will be accomplished:

1. Producers of selected commodities [will] have improved knowledge of techniques to increase crop quality and yields.

2. Exporters [will be] able to initiate or expand NTAE activities.

3. NTAE exporters and producers [will] have improved knowledge of agribusiness planning and management and access to sources of financing.

4. Commodity specific market information systems [will be] established or improved and sustainable.

5. Private/public sector entities [will be] multiplying and distributing improved maize and bean seeds.

6. Associations [will be] facilitating growth in NTAEs and acting as effective advocates for a better NTAE policy and regulatory environment.

7. MU Faculty of Agriculture [will be] able to provide long-term and short-term training to support the growth of NTAEs.

The Projects comprises several components and activities which in concert will accomplish these outputs and hence the project purpose.

IV. Project Components

A. Low Value Commodity Export Development

This component will boost exports of maize and beans to regional markets by increasing yields and area under cultivation by strengthening the export marketing system and linking producers to improved technology through commercial channels. The major constraints to increasing production of

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maize and beans are utilization of low-yielding varieties, lack of access to existing higher yielding varieties, poor cultural practices, inadequate storage facilities and poor or insufficient market information. This component will include research and extension activities, seed multiplication and distribution, improvements in market information and assistance to commodity exporters in establishing market contacts.

A.1 Maize and Bean Research and Extension

IDEA will support aspects of the national maize and bean research programs operating under the auspices of the National Agricultural Research Organization (NARO). These programs are reasonably well established and have a comparative advantage over any other potential implementing entities for maize and bean research but are underfunded from the GOU budget. IDEA-funded research will target screening, on-farm testing, multiplying and disseminating improved maize and bean seed varieties, identifying pest and disease control measures and techniques for reducing postharvest losses. Researchers will develop low-input, sustainable agricultural production technology packages to increase yields and will demonstrate them to farmers and extension agents. Outreach will be an important aspect of the IDEA-funded work. NARO affiliates will actively demonstrate and promote the results of their research efforts through demonstration plots on farms, District Farm Institutes and other sites. While USAID has in the past supported a much broader research program, the emphasis now will be on applied research that will have an immediate impact. This approach will be highly complementary to a World Bank-funded research program that will support longer term varietal breeding efforts as well as major station research on disease and pest control.

A.2 Multiplication and Distribution of Improved Seed

An effective seed multiplication and distribution program would have an immediate impact on yields. Currently, seeds are distributed through the District Agriculture Officers. The system is not commercial and involves no sales promotion. IDEA will provide start-up funding for private sector and/or NGO participation in multiplying and marketing the improved Longe 1 maize seed and improved bean varieties which have the potential to double yields with little additional labor. Several models will be tested: for example, seeds could be distributed by traders and exporters who receive a sales commission, or exporters might arrange for multiplication and distribution of seeds to producers and then deduct the cost of the seed when they purchase the crop (a form of informal credit). Either of these methods will increase farmers' utilization of improved seeds. Later in the project, similar methods may be used to multiply and distribute other varieties that have passed the screening and testing process.

A.3 Extension

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While observers have noted a number of poor cultural practices among Uganda's smallholders that limit yield, labor shortages at peak periods in the growing cycle limit farmers' ability to do much about these. There are, however, other practices that could improve yields without substantial additional labor inputs such as adoption of integrated pest management, more economical use of pesticides and better site selection and preparation. IDEA will support extension of these and similar practices through private extension networks (farmers' associations and other NGOs with close links to smallholders) as well as through the MAAIF extension service, to a limited extent.[2] The project will also investigate the potential for working through the BAT extension system since the 24,000 smallholders it reaches all grow maize and beans as well as tobacco.

A.4 Market Information and Market Contacts

There is a major gap in information dissemination related to the movement of most low-value crops for regional export. With the clear opportunity for increased sales of maize and other low-value products into the regional export markets, a more efficient system is needed to respond to these conditions. The ADC will assess the level of transparency in the various market information systems and improve them where necessary. For example, ADC will coordinate with REDSO/ESA's regional marketing project to track wholesale prices of a set of low-value commodities and semi-finished products in key East African trading centers. Wholesale price information collected in regional centers will be printed weekly in leading regional newspapers and broadcast over commercial radio along with short monthly (100 words or less) narratives on planting dates, crop development, expected harvest dates, etc. Other useful information would include periodic updates on the semi processed food commodities such as oilseed cake, maize meal and flour.

The ADC will also investigate ways of improving utilization of systems established by ministries, the FAO and ITC. The Ministry of Trade and Industry currently operates a basic agricultural market price information service. MTI publishes the farmgate, wholesale and retail prices for low-value commodity crops from five regional centers located around Uganda, as well as the Kampala prices, every Thursday in the newspaper. This service helps traders looking to source these commodities to maximize their profits on a domestic or export transaction.

The ADC will assist bulk commodity processors and exporters to establish market contacts in regional trading centers and to improve their business planning and identify sources of financing.

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[2] The World Bank will be undertaking a major project to reorganize and rejuvenate the MAAIF extension system. Efforts will be coordinated as necessary.

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B. High Value Export Development

The high value commodity program component will work primarily with exporters and, through them, with producers of the selected commodities. Exporter and producer associations will be another conduit of assistance. The high value program will include research activities, development of market contacts and commodity-specific market information systems and specialized technical assistance and training in production and post-harvest handling techniques.

B.1 High Value Commodity Research

The project will fund applied research that is likely to have an immediate impact on overcoming high value export constraints. Multidisciplinary research on a specific crop and/or problem area will be encouraged. The program will emphasize the identification of the best varieties of high value crops for Uganda's conditions, pest and disease control measures to meet export requirements, post harvest handling technologies and appropriate packaging to meet export quality standards. In some cases, research results from other countries may be applied to the development of Ugandan NTAE crops. Special attention will be given to identifying innovations that have been successfully used in similar agro-ecological zones as these may require little or no adaption. Priority will also be devoted to developing environmentally sound and sustainable practices for improved NTAE production and processing.

The research will be demand-driven, i.e., research topics will be determined by the private sector, and the ADC will award research contracts on a competitive basis. Public sector institutions such as NARO affiliates and Makerere University, private sector firms and growers associations will be eligible to compete. IDEA technical advisors and/or NARO, if appropriate, will disseminate research results through associations and other exporter and producer networks.

B.2 Customized Technical Assistance

The ADC will provide highly specialized short-term one-on-one technical assistance to firms and producers to address specific constraints. Such tailored assistance will usually be provided during start-up of a new export crop or during expansion of an operation that involves introducing new technologies and procedures, e.g. rose production or papain processing. Firms receiving this type of assistance will generally have been working with the ADC on several aspects of their business (e.g., identifying financing, establishing market contacts) and their needs will be well known to project advisors. The ADC will determine the types of expertise needed and the level of effort required on a case-by-case basis. If the constraints are related to all firms in a particular subsector, technical assistance will be provided to all. When the assistance is firm-specific, the project will be careful to avoid the appearance of favoritism; to the extent possible, firms at similar levels of development within

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a given commodity group will be assisted equally so that no one firm gains an unfair competitive advantage over others as a result of the project.

Introduction or expansion of NTAE crops with high quality standards using an outgrower system requires constant attention, especially in the early stages. Peace Corps Volunteers (PCVs) cooperating with the IDEA project will provide long-term in-country support to these types of initiatives. In general, a PCV will be assigned to a community where an outgrower system is being developed, and the PCV will work collaboratively with IDEA technical advisors and other extension agents (either private sector or MAAIF-supported) to develop and improve production and postharvest handling techniques. Potential assignments include the Kabale snow pea project and the Kasese papain project.

B.3 Market Information and Market Contacts

High value exporters need a continuous flow of timely market information. Their information needs include prices and quality standards, import regulations, packaging and labelling requirements, the importing country's banking and commercial practices, import and distribution channels, transport and forwarding services and trade promotion and advertising opportunities. The project will support the provision of commodity specific market information. Since a variety of market information activities are already underway, the ADC will conduct a thorough analysis to determine where the gaps are and what market information would be most benefical for project-supported commodities. Where possible, existing systems will be improved where the information services currently in place are unsatisfactory in terms of timeliness, credibility, and relevance to the private sector. Project resources will be available to tap into a variety of information databases and services that provide up-to-the minute price and other information. Any market information systems established or strengthened by the project must incorporate mechanisms for sustainability. For the high value exports, exporter associations might be appropriate vehicles for setting up sustainable specialized market information services.

The ADC will also facilitate introduction of local NTAE firms to potential buyers, service providers, and joint-venture partners. ADC personnel will work closely with the UIA and international trade groups to ensure that NTAE firms are able to maximize their exposure to potentially productive market contacts through such activities as market visits, trade fairs, database development, and follow-up communications. For example, the annual ANUGA trade show, held in Germany, brings together food buyers from all over Europe. It is the single largest food trade show in Europe and is the prime trade show for making deals between producers and buyers.

The ADC will organize a limited number of carefully tailored market tours to the United States, Europe or other regions for Ugandan entrepreneurs. Major world market buyers and

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potential joint-venture partners will be identified and contacted in advance. Detailed customized programs will be prepared for each Ugandan entrepreneur including, where feasible, practical experience and training in appropriate overseas firms.

C. Business and Financial Linkages

Sourcing capital for business start-up and expansion is a problem for many small and medium-size firms in Uganda. Often venture capital and business development loan funds set up by government and donor groups have a minimum capital investment limit that is too high to be accessible to small and medium-size businesses, even though they would be a good investment risk for the financial institution. The objective of the business and financial linkages component is to assist NTAE firms to develop sound business plans and present them to appropriate funding sources in order to bring viable projects to fruition.

The ADC will assist NTAE firms to develop sound business plans and present them to appropriate funding sources. The project will fund contracts with local consulting firms to prepare feasibility studies and business plans and do related financial work. Entrepreneurs will be expected to contribute at least 10 percent of the cost of this work. The ADC's Business/Financial Advisor will work with local and international financial institutions, joint-venture partners and/or venture capital sources to match entrepreneurs with financing sources.

The Africa Project Development Facility (APDF) is a Nairobi-based organization that specializes in facilitating financial linkages (but does not itself provide financing). It prefers projects with a value higher than $500,000, but will consider a minimum value of $250,000. Over the last two years, APDF has provided financial linkage services to eight Ugandan export projects under a grant from ANEPP. IDEA will provide grant funding to continue this relationship on a limited basis for export projects that meet APDF's size requirements.

The ADC will help exporters explore potential joint-venture opportunities in cooperation with existing efforts underway at UIA. A close working relationship between the ADC and UIA will help build UIA's agribusiness capacity to seek and arrange more agribusiness opportunities.

There are a number of emerging NTAE enterprises that are potentially viable, but due to their size are currently unable to properly package and present their program for financing. The ADC will utilize its core staff along with short-term technical expertise and, in some cases, small business grants, to assist these smaller NTAE firms to get a start in business. While the majority of firms receiving this type of assistance are likely to be in the high value export sub-sector, there are also good business opportunities such as grain processing that impact on low-value exports. Firms providing vital goods

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and services (e.g. packaging) to exporters would also be eligible for assistance.

D. Strengthening Associations

IDEA will use exporter, trader, and producer associations as efficient channels for assisting individual farmers and firms and will also strengthen the capacity of these associations to provide services to their members. By the end of the project, these organizations will have developed the capacity to maintain effective support services for their clients, taking over many of the functions initiated by the ADC. This could include market information and contacts, customized technical assistance and training courses, some research/consulting services such as feasibility studies, information exchanges, and government lobbying efforts.

The project will enhance the capacities of the associations in a graduated, responsive fashion. Strong individual farms and firms make strong associations, not vice versa. The nature and level of assistance to individual associations will depend primarily on the degree of member support they enjoy, as well as the extent of their involvement in NTAE development. Associations may submit proposals for assistance to the ADC; activities and funding levels will be approved by the Project Steering Committee.

E. Education and Training

The Faculty of Agriculture and Forestry at Makerere University (MU) is the principal source of professional-level manpower for Uganda's agriculture sector but its programs are heavily oriented towards traditional food and export crops. IDEA will strengthen MU's capacity to prepare students for jobs in the NTAE industry. MU will also conduct some of the in-country training funded by the project. Other training activities will be conducted by project advisors and through other training institutions.

F. Faculty of Agriculture and Forestry

IDEA will assist the departments of Crop Science, Food Technology and Agricultural Economics to strengthen their programs in areas such as postharvest handling, plant protection, horticulture crop production, floriculture, food processing and horticulture marketing. The ADC will provide U.S. university faculty to teach and work with Makerere faculty on curriculum development and M.S. degree training for Makerere faculty in areas such as postharvest handling, plant pathology, general horticulture production/cultural practices, grain/oilseed food technology, horticultural product food technology and horticulture product marketing. The project will also sponsor an internship program for undergraduate students to gain practical experience by working in NTAE operations during their long break.

G. Training

A variety of in-country and short term external training will support the development of NTAEs. Many of the proposed export crops and commodities require highly specialized skills and technologies which are not available in Uganda. Training activities will be tied directly to the needs of the private sector and the emphasis will be on practical and applied training of trainers and preparation of technical information materials, in appropriate languages, for participants. All stages of the chain from planting to marketing will receive attention, including crop specific production practices, pest management, harvesting, postharvest handling, transportation, value-added processing and marketing.

Representatives of NTAE firms and producers as well as appropriate MAAIF extension officers and other public sector officials will participate in workshops, seminars, observation tours, trade shows and associations meetings, and on-farm demonstrations (field days). Short internships may be established for NTAE personnel to work at firms in Kenya, Europe, or the U.S. Farm management training may be provided by regional training centers or business management schools such as ESAMI.

V. Implementation Plan

A. Implementing Entities: Roles and Responsibilities

A.1 GOU Entities

The grant agreement with the GOU will be signed by the Ministry of Finance and Economic Planning. The Ministry of Trade and Industry (MTI) will be the lead GOU implementing ministry; day-to-day contact between the project and MTI will occur through the new GOU export promotion institution once it is established. This institution will have the mandate to oversee all of Uganda's export promotion activities, so it is therefore appropriate that it oversees this project. The director of the new export promotion entity, or his designee, will be a member of the Project Steering Committee (see below) and will communicate the priorities of the GOU.[3] The contractor Chief of Party (COP) will spend 10-20 percent of her/his time at the new export promotion institution and will advise the director and staff on agribusiness-related matters.

The MAAIF will also participate in project implementation through the National Agricultural Research Organization (NARO) and involvement of MAAIF extension officers in certain project activities. Because of the project's focus on agricultural crops, it will be important for activities to be coordinated with those of the MAAIF and other donors working with the MAAIF, especially for maize and beans. For this reason, the Director of Planning in the MAAIF will also be a member of the Project Steering Committee.

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[3] Until such time as the new export promotion entity is established and a director appointed, the MTI may appoint a representative of it's choice.

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A.1a NARO

NARO is the umbrella entity that coordinates and programs public sector agricultural research in Uganda. It is responsible for providing research and training grants and approving research strategies to the individual research institutes and disseminating research results. NARO will receive funding directly from A.I.D. under IDEA to implement the maize and bean research program at Namulonge Agricultural and Animal Production Research Institute (NAARI) and Kawanda Agricultural Research Institute (KARI) respectively. NARO, through KARI, may also compete for research contracts for high-value crops. KARI has responsibility for improving the national capacity to carry out horticultural applied research and improving the productivity of fruits and vegetables for local and export markets. Research on spices and floriculture is also in its mandate. The Director of NARO or his designee will be a member of the Project Steering Committee. This will facilitate integration of the research program with other project activities. The grant to NARO will include adequate funds for annual audits.

A.1b MU Faculty of Agriculture and Forestry (FAF)

The FAF at Makerere University will implement the education component of the project, with assistance from the ADC, and will also implement some portion of the in-country training program. The ADC prime contractor may choose to identify a specific U.S. university to be a subcontractor for the MU activities. MU may also compete for high value crop research contracts since its faculty have capacity and facilities to conduct some research.

A.2 The ADC

The Agribusiness Development Center, a temporary, autonomous project implementation unit established under the project, staffed and operated by the AID contractor and subcontractor(s) will have overall responsibility for implementing all project activities except for NARO maize and bean research, AID buy-ins, APDF activities and evaluations. The contractor must, however, coordinate and integrate ADC activities with those cited above that will not be under direct ADC control. For example, the low value production and marketing advisors will need to work closely with the maize and bean research programs, and the Business/Finance Advisor will need to liaise with APDF.

Day to day operations of the ADC will be the responsibility of the prime AID contractor and subcontractors under the direction of the Chief of Party (COP). The AID contractor, hereafter referred to as the ADC, is responsible for delivering long and short-term technical assistance, long-and short-term training, study tours, project commodities, competitive research contracts, the seed multiplication and distribution and NGO extension programs, the small grants program, market information for both low and high-value non-traditional export commodities, and environmental and

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project impact and performance monitoring. Funds for implementing all the aforementioned activities will be included in the contract and administered by the contractor. USAID will reserve funds for the direct procurement of certain project commodities for contractor support, particularly for vehicles and household furniture that must be procured before the contractor team arrives. Once the contract is let, all commodity procurement will be handled by the contractor.

A.3 Other Implementing Entities

The Africa Project Development Facility (APDF) will provide financial linkage services for a small number of IDEA-assisted exporters. USAID will execute a direct grant to APDF for this purpose. APDF will assign one of its investment officers to work with the ADC and will commit 5 person days of the officer's time each month to IDEA clients. APDF might also engage short-term consultants to assist in the development of a particular project; funding for these consultants will be included in the grant. The grant will also include adequate funds for annual audits.

The US Peace Corps will provide volunteers (PCVs) sited in villages to work on specific extension and agribusiness development activities in the area. For example, a volunteer might assist in establishing an outgrower system for a specific crop. Approximately 10 PCVs will participate over the life of the project. PCVs will have Ugandan counterparts and will be supervised by ADC staff. IDEA will fund housing, furnishings, travel and other necessary costs of supporting the volunteers through the ADC, in accordance with applicable A.I.D. and U.S. Government regulations.

B. Project Management and Coordination

The **Project Steering Committee (PSC)** will provide direction, coordination and approval for all project activities and will be a forum for finding solutions to implementation problems. The PSC reviews and approves annual workplans and budgets, clears all individual long-and short-term trainees sponsored by the project, approves commodities for project procurement and provides general oversight and direction to the ADC. It will be composed of the following individuals:

- Director, new export promotion institution
- IDEA Project Officer, USAID
- Chief-of-Party, IDEA Contractor
- Director, EPAU
- Director, NARO
- Director of Planning, MAAIF

While the PSC is more likely to function well if it is kept small, it may become appropriate to add other members. The PSC will meet on an as-needed basis, but at least once a month.

The **Project Advisory Committee (PAC)** will be an informal group that may be convened by the ADC to provide advice and feedback

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to the ADC and act both as a sounding board and a mechanism for information-sharing and coordination amongst a variety of entities involved in NTAEs. The PAC may include representatives from UIA, GOU ministries, MU, private sector associations, other donors and smallholders. The PAC should have no more than 10-12 members with at least 3-4 of them being women and/or smallholders.

C. AID Project Management

Overall USAID/Uganda responsibility for managing the project will rest with the Agriculture and Natural Resources (ANR) Office. A US Direct Hire Agriculture Development Officer (ADO) will be the project officer with overall responsibility for project supervision and management. The ADO will be assisted by a US Personal Services Contract (PSC) project manager (who will divide her/his time between IDEA and ANEPP) and a Foreign Service National (FSN) PSC assistant project manager. The US PSC project manager will have prior experience managing USAID projects and will be retained for the first year and a half of project implementation. Subsequently, the FSN PSC and ADO will jointly manage the project. The PSC project manager will prepare all project documentation such as PIO/Ts, PIO/Cs, Project Implementation letters and routine correspondence with the grantee and contractor. The FSN project manager shall assist with preparing project documentation and monitoring. The ADO will be a member of the Project Steering Committee and will serve as chairman of the contractor technical selection committee.

D. Implementation Planning and Monitoring

Within three months of contractor mobilization in Uganda, and annually thereafter, the ADC contractor shall prepare an annual work plan which will include activities proposed for each project advisor and project component and a detailed budget estimate. NARO will do the same for the maize and beans research program. Draft workplans will be submitted to USAID and the PSC for review and comment; final workplans will be approved by the PSC. Field activities and subsequent voucher billings to USAID for work performed under the contract/grant will be presented in a manner consistent with the activities and budget contained in the approved work plans.

The workplans described above will be the key project implementation planning and monitoring tool. Monitoring project outputs and impact will be the responsibility of the ADC. The Request for Proposals will stipulate that each technical proposal submitted in response to the RFP shall include a project output and impact monitoring and reporting system consistent with the project goal and purpose and the proposer's technical approach. This system shall be used to guide project implementation and data from this system will be incorporated annually into a larger USAID program impact monitoring and reporting system.

E. Training Plan

A modest amount of long-term M.Sc. academic training in U.S. universities, primarily for faculty in selected academic departments at Makerere University but possibly for research personnel as well, is contemplated as well as formal off-shore short-term technical training, in-country training and workshops and study tours for individuals associated with export agriculture. Six M.Sc. degrees for three MU departments (Crop Science, Food Technology and Agricultural Economics) will be funded. Approximately 15 formal U.S. or third country short-term technical training programs are planned for members of agribusiness exporting and production companies, MU faculty, NARO-affiliated research organizations and perhaps some government export agency personnel. Finally, about five carefully targeted and coordinated study tours per year will be conducted for exporters, producers and others involved in export agriculture to other countries where export agriculture is in a more advanced stage or in particular market countries. All trainee scheduling, selection, placement and monitoring is the responsibility of the project contractor and shall be included as part of the annual work plan. Trainee selection criteria shall be consistent with USAID Handbook 10 and GOU/MU policy and be mutually agreed upon in writing by the Project Steering Committee. All other USAID procedures, allowances and policies stipulated in Handbook 10 shall be followed. The participating academic departments at MU will forward M.S. candidate nominations along with complete documentation to the PSC for review and final selection. A non-funded PIO/P will accompany each nominee. The ADC will handle all logistics and funding except for visa formalities, which shall be the responsibility of the USAID training officer.

Regional, US and other third country short-term training for GOU officials, private sector agribusiness persons and faculty of MU is an important project input. The training plan that is approved as part of the ADC work plan shall identify the types of training planned, number of trainees and training location. Procedures for selecting candidates for short-term training abroad will be similar to those for long-term training. Study tours abroad for agribusiness people including producers, processors, marketing participants and others who would benefit from exposure to particular agricultural production and marketing systems shall also be organized and implemented by the ADC. Candidates for these types of study tours may be asked to cost share their trips based on criteria and procedures developed by the ADC and approved by the PSC.

In-country workshops and seminars for various purposes are planned. These activities will range from project team-building exercises to hands-on computer software applications, the dissemination of project information and promotional meetings on production and marketing of certain commodities. These activities will also be included in the annual workplan and budget, and once the workplan is approved by the PSC, the contractor will proceed to plan and implement these activities without further formal review and approval.

F. Small Grants Program

The ADC will establish a small grant fund for testing the feasibility of and "jump-starting" export-related ideas or activities. The rationale for these grants is that testing or initial start-up of an export activity can entail a high level of risk that makes it difficult for an entrepreneur to find commercial financing and, furthermore, the activity may have benefits that are broader than an individual firm (e.g., if a trial shipment of a commodity establishes that Uganda can produce to certain quality standards, other firms may begin exporting that commodity.) Exporters and/or producers might use grants for activities such as developing market contacts, obtaining seed, planting or packaging materials, testing a new variety or making trial shipments.

The ADC will be responsible for developing clear and transparent criteria and procedures for awarding grants and for evaluating the effectiveness of the grants and, if necessary, revising procedures on a periodic basis. Criteria should include the anticipated value of exports generated, the potential impact of the export activity on rural incomes, the extent to which women will benefit from the proposed activity, the likelihood that other firms will benefit from the findings of the activity and the demonstrated need and commitment of the entrepreneur/firm. The Project Steering Committee will approve the selection criteria and all grant awards. It is anticipated that most grants will be in the range of $5,000-10,000.

G. Competitive Research Contracts

IDEA will support a sizeable demand-driven contract research program in priority agriculture export fields. General research priority areas have been identified in the A.I.D. project paper for this activity; priorities will be further refined by the ADC through consultation with the private sector and NARO. The ADC will develop and the PSC will approve specific research proposals on the priority topics. Given the short life of project, all proposals must be short-term, applied research. Competition will be limited to Ugandan firms and organizations. A.I.D. policy precludes sub-contracting for services with government-owned organizations (e.g. NARO) unless the eligibility of such entities has been established by a waiver. A waiver to make government-owned entities eligible is justified if the competition for obtaining a contract will be limited to host country firms or organizations. Since it is anticipated that NARO will compete for research grants, the Mission Director, USAID/Uganda will be requested to approve a waiver on the grounds cited above to make NARO an eligible sub-contractor for this project.

The ADC will formally advertise requests for proposals. The ADC will evaluate and select proposals on previously established technical and cost criteria; selections will be approved by the PSC (except for the NARO representative if NARO is among the contenders for a given contract). The prime

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contractor will be responsible for executing and funding all research contracts.

H. Procurement Plan

H.1 Responsible Agency

The Prime Contractor, who will be under direct AID contract, will be responsible for procurement of commodities and management of sub-contracts with both local and US institutions. The services of the Prime Contractor will be procured using full and open competition. An advertisement for the Request for Proposals (RFP) will be put in the Commerce Business Daily. The Prime Contractor will be responsible for procurement of all services and equipment for the project office, which will be known as the Agribusiness Development Center (ADC). The implementing agency will be a new export promotion institution, which will be the revitalized Uganda Export Promotion Council (UEPC), with ties to the Ministry of Trade and Industry. The authorized source and origin will be Geographical Codes 000, 935 and 899.

H.2 Commodities

The project will finance vehicles, office equipment, teaching materials and laboratory equipment. Because there are no spare parts and service capabilities in Uganda for U.S. manufactured vehicles, non-U.S. code 935 vehicles for which there are spare parts and service available locally will be financed. If, however, during the course of the project spare parts and service capabilities become available for U.S.-manufactured vehicles meeting the technical specification requirements of the project, such U.S. vehicles will be purchased as needed.

H2.a Technical Equipment/Teaching Materials

The project will fund computers, laboratory equipment and teaching material for Makerere University. This equipment will all be purchased in the second and third years of the project once the needs of the departments involved are assessed.

H2.b National Agricultural Research Organization (NARO)

While much of the support to NARO for high value commodity research will be provided under contract agreements between the Prime Contractor and NARO, it is envisaged that some basic equipment such as a small irrigation system, cold store and nursery green house will be provided to Kawanda Research Station to support all contract research activities.

H.3 Purchasing Entities

Different entities will be purchasing services and commodities for the project. They are:

H.3a Prime Contractor:

The prime contractor will procure all services, furniture and equipment for the project office and technical equipment and teaching material for Makerere University.

A.I.D. encourages the prime contractor to sub-contract with US universities and Ugandan firms for services. At least 10 percent and preferably more of the value of the prime contract will be represented by sub-contracts to Gray Amendment (minority owned) firms, Historically Black Colleges and Universities and/or Small Disadvantaged (8a) firms.

H.3b USAID

Motor vehicles and the household appliances and furniture for the homes used by the Technical Assistance Team Members will be purchased by the USAID. The vehicles will be bought through the US Central Purchasing Office. The household furniture and appliances will be purchased under the same arrangement as that used by USAID with Operating Expenses funds.

VII. Project Financial Plan

$25 million will be granted over a five-year period. A budget summary is presented in Attachment 1A, entitled "Illustrative Summary of Project Costs."

VIII. Government of Uganda Contribution

The GOU's contribution to the IDEA project will exceed the 25 percent required from host country grantees. The GOU will receive a World Bank loan of $12 million for the Uganda Export Promotion Project that will be implemented over the same period of time as IDEA and that will support the new GOU export promotion institution. The IDEA project will have direct links to the new institution, and the activities of the Uganda Export Promotion Project will complement and contribute to the achievement of IDEA's purpose. The GOU will also use World Bank loans amounting to $5 million to strengthen programs at NARO and in-service programs at Makerere University that bear directly on non-traditional agricultural export development. For example, IDEA will use Makerere's enhanced short-term training capacity to implement a major part of its in-country training program. It is therefore appropriate to count the value of these World Bank loans, $17 million in total, as a host country contribution.

The GOU will also provide 1 billion Ugandan shillings over the life of the project to support project activities. The GOU will program Ush 200 million each year beginning in GOU FY 94/95; the nature of the activities to be supported by the GOU contribution will be decided by the Project Steering Committee on an annual basis.

IX. Project Monitoring, Evaluation and Assessment

The IDEA Project Monitoring and Evaluation (M&E) Plan will track and assess project performance and impact. It will provide periodic feedback on progress towards the attainment of the project outputs and purpose. This information will be used by USAID, the implementing contractor, the GOU, and the private sector in adjusting efforts to keep the project on course, as well as for reporting results to AID/Washington.

Monitoring and evaluation of this project focuses on private sector components, but will also include analysis of public sector activities that influence the enabling environment. Increased non-traditional exports will be tracked by the ADC and USAID utilizing their own and external resources where applicable. USAID is responsible for tracking national aggregate people-level impact through increases in rural income. The ADC will also track incomes for people engaged in production/marketing of targeted commodities. Monitoring and evaluation of private sector activities will be led by the ADC with the assistance of Ugandan business and trade associations. USAID will have overall M&E responsibility and will review all reports.

Monitoring will include tracking and reporting end-of-project status (EOPS) indicators and outputs through periodic surveys. Monitoring reports on results achieved will provide the baseline and progression of data required to measure achievement of planned outputs, data for USAID's annual Assessment of Program Impact (API), and information on people-level impact.

The project will identify, monitor and evaluate any significant adverse environmental impacts, i.e., physical, biological and/or chemical effects, resulting from project-related activities. The general rationale and framework for this **Environmental Monitoring, Evaluation and Mitigation Plan (EMEMP)** are provided in the Initial Environmental Examination. The Project EMEMP generally consists of three major activities: (1) Environmental Impacts Reviews (EIRs) of each of the five selected NTAE target sectors to develop accurate baseline information and key environmental indicators for continuing environmental M&E efforts, and to develop general mitigative guidance for future target sector development; (2) a continuing environmental M&E program, closely integrated with the greater project M&E plan described above, to monitor the environmental status of NTAE development in Uganda and effect any required mitigative measures in a timely manner; and (3) a procedure for the Environmental Review of new entrants into the NTAE sector to add to the M&E database and to provide more specific mitigative guidance as development plans and proposals become more definite.

While USAID will retain overall responsibility for successful EMEMP implementation, it will be assisted in this effort by the associated ADC M&E efforts described above, ongoing similar USAID M&E activities associated with its Action Program for the Environment (APE), and greater GOU environmental monitoring and assessment efforts currently

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underway through the National Environmental Action Plan Secretariat.

Monitoring tracks progress towards established objectives. Evaluation goes beyond monitoring to assess impact and effectiveness, and to consider possible design alterations. The Monitoring and Evaluation Plan prescribes two rounds of evaluation, a Mid-term Evaluation in year three, and a Final Evaluation at the end of the project.

USAID will contract for the Mid-term Evaluation at the end of the second full year of project implementation. The Mid-term Evaluation will:

- Summarize progress toward the project purpose and outputs
- Analyze factors facilitating or impeding progress
- Evaluate changes in the Ugandan and World Market environments influencing the IDEA Project
- Analyze implications for project adjustments

Data for the Mid-term Evaluation will be drawn from the monitoring database, the surveys, and contractor reports. The Mid-term Survey will provide the most concrete data on attainment of the project purpose. Evaluators will study the distribution of Project effects on various export sub-sectors, examining the share of benefits reaped by exporters and their employees, distributors, processors and producers.

Evaluators will also analyze the impact of increased exports on small and medium-scale operators within the sector, seeking answers to the following questions: Has the increase in exports resulted in greater concentration within the sector? Has this led to reduced market power for small operators? Have there been structural shifts in production in favor of larger factories or plantations? Have women traders been included, or left behind as the sector develops?

The Final Evaluation will follow the same methodology as the Mid-term Evaluation, with corrections for any mid-term adjustments in the project. The Final Evaluation Team will have the same composition as for the Mid-term Evaluation. It will draw conclusions about the impact of this project and develop lessons learned for others undertaking similar NTAE projects.

ANNEX 2

PROJECT AGREEMENT STANDARD PROVISIONS ANNEX

Project Grant Standard

Provisions Annex

Definitions: As used in this Annex, the "Agreement" refers to the Project Grant Agreement to which this Annex is attached and of which this Annex forms a part. Terms used in this Annex have the same meaning or reference as in the Agreement.

Article A: Project Implementation Letters

To assist Grantee in the implementation of the Project, A.I.D., from time to time, will issue Project Implementation Letters that will furnish additional information about matters stated in this Agreement. The parties may also use jointly agreed-upon Project Implementation Letters to confirm and record their mutual understanding on aspects of the implementation of this Agreement. Project Implementation Letters will not be used to amend the text of the Agreement, but can be used to record revisions or exceptions which are permitted by the Agreement, including the revision of elements of the amplified description of the Project in Annex 1.

Article B: General Covenants

SECTION B.1. Consultation. The Parties will cooperate to assure that the purpose of this Agreement will be accomplished. To this end, the Parties, at the request of either, will exchange views on the progress of the project, the performance of obligations under this Agreement, the performance of any consultants, contractors, or suppliers engaged on the Project, and other matters relating to the Project.

SECTION B.2 Execution of Project. The Grantee will:

(a) carry out the Project or cause it to be carried out with due diligence and efficiency, in conformity with sound technical, financial, and management practices, and in conformity with those documents, plans, specifications, contracts, schedules or other arrangements, and with any modifications therein, approved by A.I.D. pursuant to this Agreement; and

(b) provide qualified and experience management for, and train such staff as may be appropriate for the maintenance and operation of the Project, and, as applicable for continuing activities, cause the Project to be operated and maintained in

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such manner as to assure the continuing and successful achievement of the purposes of the Project.

SECTION B.3 Utilization of Goods and Services

(a) Any resources financed under the Grant will, unless otherwise agreed in writing by A.I.D., be devoted to the Project until the completion or termination of the Project, and thereafter (as well as during any period of suspension of the project) will be used so as to further the objectives sought in carrying out the Project.

(b) Goods or services financed under the Grant, except as A.I.D. may otherwise agree in writing, will not be used to promote or assist a foreign aid project or activity associated with or financed by a country not included in Code 935 of the A.I.D. Geographic Code Book as in effect at the time of such use. (See A.I.D. Handbook 18.)

SECTION B.4. Taxation

(a) This Agreement and the Grant will be free from any taxation or fees imposed under laws in effect in the territory of the Grantee.

(b) To the extent that (1) any contractor, including any consulting firm, any personnel of such contractor financed under the Grant, and any property or transaction relating to such contracts and (2) any commodity procurement transaction financed under the Grant, are not exempt from identifiable taxes, tariffs, duties or other levies imposed under laws in effect in the territory of the Grantee, the Grantee will, as and to the extent provided in and pursuant to Project Implementation Letters, pay or reimburse the same with funds other than those provided under the Grant.

SECTION B.5. REPORTS, ACCOUNTING RECORDS, AUDITS INSPECTIONS

(a) The Grantee shall furnish A.I.D. such information and reports relating to the Project and to this Agreement as A.I.D. may reasonably request.

(b) The Grantee shall maintain accounting books, records, documents, and other evidence relating to the Project and to this

Agreement. Adequate to show, without limitation, all costs incurred under the Grant, the receipt and use of goods and services acquired under the Grant. The costs of the Project supplied from other sources, the nature and extent of

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solicitations of prospective suppliers of goods and services acquired, the basis of award of contracts and orders, and the overall progress of the Project towards completion ("Project books and records"). At the Grantee's option, with approval by A.I.D., Project books and records shall be maintained in accordance with one of the following methods:

(1) Generally accepted accounting principles prevailing in the United States,

(2) Generally accepted accounting principles prevailing in the country of the Grantee,

(3) Accounting principles prescribed by the International Accounting Standards Committee (an affiliate of the International Federation of Accountants),

or (4) Such other accounting principles as the Parties may agree to in writing. Project books and records shall be maintained for at least three years after the date of last disbursement by A.I.D.

(c) If Dollars 25,000 or more is disbursed directly to the Grantee in any one calendar year under the grant, the Grantee, except as the Parties may otherwise agree in writing, shall have financial audits made of the funds disbursed to the Grantee under the Grant in accordance with the following terms:

(1) The Grantee shall select an independent auditor in accordance with the "Guidelines for Financial Audits Contracted by Foreign Recipients" issued by the A.I.D. Inspector General ("Guidelines"), and the audits shall be performed in accordance with the "Guidelines".

(2) An audit of the funds provided under the Grant shall be conducted for each fiscal year of the Grantee. The audit shall determine whether the receipt and expenditure of the funds provided under the Grant are presented in accordance with generally accepted accounting principles agreed to in section (b) above and whether the Grantee has complied with the terms of the Agreement. Each audit shall be completed no later than one year after the close of the grantee's fiscal year.

(d) The Grantee shall submit an audit report to A.I.D. within 30 days after completion of each audit arranged for by the Grantee in accordance with this section. The A.I.D. Inspector General will review each report to determine whether it complies with the audit requirements of the Agreement. Subject to A.I.D. approval, costs of audits performed in accordance with the terms of this section may be charged to the Grant. In cases of continued inability or unwillingness to have an audit performed in accordance with the terms of this section, A.I.D. will

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consider appropriate sanctions which include suspension of all or a portion of disbursements until the audit is satisfactorily completed or A.I. D. performs its own audit.

(e) The Grantee shall submit to A.I.D., in form and substance satisfactory to A.I.D., a plan by which the Grantee will ensure that funds made available to subrecipients that receive dollars 25,000 or more in any one calendar year under the Grant are audited in accordance with this agreement. The plan should describe the methodology to be used by the Grantee to satisfy its audit responsibilities with respect to any subrecipient to which this section applied. Such audit responsibilities with respect to subrecipients may be satisfied by relying on independent audits of the subrecipients or on appropriate procedures performed by the Internal Audit or Program Staff of the Grantee, by expanding the scope of the Independent Financial Audit of the Grantee to encompass testing of subrecipients' accounts, or by a combination of these procedures. The plan should identify the funds made available to subrecipients that will be covered by audits conducted in accordance with other audit provisions that would satisfy the Grantee's audit responsibilities (a non-profit organization organized in the United States is required to arrange for its own Audits; a for-profit contractor organized in the United States that has a direct contract with A.I.D. is audited by the cognizant U.S. Government Agency; A private voluntary organization organized outside the United States with a direct Grant from A.I.D. is required to arrange for its own audits: and a host-country contractor should be audited by the cognizant Grantee contracting agency). The Grantee shall ensure that appropriate corrective actions are taken on the recommendations contained in the subrecipients' audit reports; consider whether subrecipients' audits necessitate adjustment of its own records; and require each subrecipient to permit independent auditors to have access to records and financial statements as necessary.

(f) A.I.D. may, at its discretion, perform the audits required under this agreement on behalf of the grantee by utilizing funds under the grant or other resources available to A.I.D. for this purpose. The grantee shall afford authorized representatives of A.I.D. the opportunity at all reasonable times to audit or inspect the Project. The utilizations of goods and services financed by A.I.D. and books records and other documents relating to the Project and the grant.

SECTION B.6 Completeness of Information. The Grantee confirms:

(a) that the facts and circumstances of which it has informed A.I.D., or cause A.I.D. to be informed, in the course of

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reaching agreement with A.I.D. on the Grant, are accurate and complete, and include all facts and circumstances that might materially affect the Project and the discharge of responsibilities under this Agreement;

(b) that it will inform A.I.D. in timely fashion of any subsequent facts and circumstances that might materially affect, or that it is reasonable to believe might so affect, the Project or the discharge of responsibilities under this Agreement.

SECTION B.7. Other Payments. Grantee affirms that no payments have been or will be received by any official of the Grantee in connection with the procurement of goods or services financed under the Grant, except fees, taxes, or similar payments legally established in the country of the Grantee.

SECTION B.8. Information and Marking. The Grantee will give appropriate publicity to the Grant and the Project as a program to which the United States has contributed, identify the Project site, and mark goods financed by A.I.D., as described in Project Implementation Letters.

Article C: Procurement Provisions

SECTION C.1 Special Rules.

(a) The source and origin of ocean and air shipping will be deemed to be the ocean vessel's or aircraft's country of registry at the time of shipment.

(b) Premiums for marine insurance placed in the territory of the Grantee will be deemed an eligible Foreign Exchange Cost, if otherwise eligible under Section C.7(a).

(c) Any motor vehicles financed under the Grant will be of United States manufacturers, except as A.I.D. may otherwise agree in writing.

(d) Transportation by air, financed under the Grant, of property or persons, will be on carriers holding United States certification, to the extent service by such carriers is available. Details on this requirement will be described in a Project Implementation Letter.

SECTION C.2. Eligibility Date. No goods or services may be financed under the Grant which are procured pursuant to orders or contracts firmly placed or entered into prior to the date of this Agreement, except as Parties may otherwise agree in writing:

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(a) The Grantee will furnish to A.I.D. upon preparation,

(1) any plans, specifications, procurement or construction schedules, contracts, or other documentation relating to goods or services to be financed under the Grant, including documentation relating to the prequalification and selection of contractors and to the solicitation of bids and proposals. Material modifications in such documentation will likewise be furnished by A.I.D. on preparation;

(2) such documentation will also be furnished to A.I.D., upon preparation, relating to any goods or services, which, though not financed under the Grant, are deemed by A.I.D. to be of major importance to the Project. Aspects of the Project involving matters under this subsection (a) (2) will be identified in Project Implementation Letters;

(b) Documents related to the prequalification of contractors, and to the solicitation of bids or proposals for goods and services financed under the Grant will be approved by A.I.D. in writing prior to their issuance, and their terms will include United States standards and measurements;

(c) Contracts and contractors financed under the Grant for engineering and other professional services, for construction services, and for such other services, equipment or materials as may be specified in Project Implementation Letters, will be approved by A.I.D. in writing prior to execution of the contract. Material modifications in such contracts will also be approved in writing by A.I.D. prior to execution; and

(d) Consulting firms used by the Grantee for the Project but not financed under the Grant, the scope of their services and such of their personnel assigned to the Project as A.I.D. may specify, and construction contractors used by the Grantee for the Project but not financed under the Grant, shall be acceptable to A.I.D.

SECTION C.4. Reasonable Price. No more than reasonable prices will be paid for any goods or services financed, in whole or in part, under the Grant. Such items will be produced on a fair and, to the maximum extent practicable, on a competitive basis.

SECTION C.5. Notification to Potential Suppliers. To permit all United States firms to have the opportunity to participate in furnishing goods and services to be financed under the Grant, the Grantee will furnish A.I.D. such information with regard thereto, and at such times, as A.I.D. may request in Project Implementation Letters.

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SECTION C.6. Shipping.

(a) Goods which are to be transported to the territory of the Grantee may not be financed under the Grant if transported either: (1) on an ocean vessel or aircraft under the flag of a country which is not included in A.I.D. Geographic Code 935 as in effect at the time of shipment, or (2) on an ocean vessel which A.I.D., by written notice to the Grantee has designated as ineligible; or (3) under an ocean or air charter which has not received prior A.I.D. approval.

(b) Costs of ocean or air transportation (of goods or persons) and related delivery services may not be financed under the Grant, if such goods or persons are carried: (1) on an ocean vessel under the flag of a country not, at the time of shipment, identified under the paragraph of the Agreement entitled "Procurement Source: Foreign Exchange Costs," without prior written A.I.D. approval or on a non-U.S. flag air carrier if a U.S. flag carrier is available (in accordance with criteria which may be contained in Project Implementation Letters) without prior written A.I.D. approval; or (2 on an ocean vessel which A.I.D., by written notice to the Grantee, has designated as ineligible; or (3) under an ocean vessel or air charter which has not received prior A.I.D. approval.

(c) Unless A.I.D. determines that privately owned United States-flag commercial ocean vessels are not available at fair and reasonable rates for such vessels, (1) at least fifty percent (50%) of the gross tonnage of all goods (computed separately for dry bulk carriers, dry cargo liners and tankers) financed by A.I.D. which may be transported on ocean vessels will be transported on privately owned United States-flag commercial vessels, and (2) at least fifty percent (50%) of the gross freight revenue generated by all shipments financed by A.I.D. and transported to the territory of the Grantee on dry cargo liners shall be paid to or for the benefit of privately owned United States-flag commercial vessels. Compliance with the requirements of (1) and (2) of this sub-section must be achieved with respect to both any cargo transported from U.S. ports and any cargo transported from non-U.S. ports, computed separately.

SECTION C.7. Insurance.

(a) Marine insurance on goods financed by A.I.D. which are to be transported to the territory of the Grantee may be financed as insurance is placed at the lowest available competitive rate, and (2) claims thereunder are payable in U.S. dollars or, as A.I.D. may agree in writing, in the currency in which such goods were financed or in any freely convertible currency. If the Grantee (or government of Grantee), by statute, decree, rule,

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regulation, or practice discriminates with respect to A.I.D.-financed procurement against any marine insurance company authorized to do business in any State of the United States, then all goods shipped to the territory of the Grantee financed by A.I.D. hereunder will be insure against marine risks and such insurance will be placed in the United States with a company or companies authorized to do a marine insurance business in a State of the United States.

(b) Except as A.I.D. may otherwise agree in writing, the Grantee will insure, or cause to be insured, goods financed under the Grant imported for the Project against risks incident to their transit to the point of their use in the Project; such insurance will be issued on terms and conditions consistent with sound commercial practice and will insure the full value of the goods. Any indemnification received by the Grantee under such insurance will be used to replace or repair any material damage or any loss of the goods insured or will be used to reimburse the Grantee for the replacement or repair of such goods. Any such replacements will be of source and origin of countries listed in A.I.D. Geographic Code 935 as in effect at the time of replacement, and, except as the Parties may agree in writing, will be otherwise subject to the provisions of the Agreement.

SECTION C.8. U.S. Government-Owned Excess Property. The Grantee agrees that wherever practicable, United States Government-owned excess personal property, in lieu of new items financed under the Grant, should be utilized. Funds under the Grant may be used to finance the costs of obtaining such property for the Project.

Article D: Termination; Remedies.

SECTION D.1. Termination.

(a) Either party may terminate this Agreement in its entirety by giving the other Party 30 days written notice. A.I.D. also may terminate this Agreement in part by giving the Grantee 30 days written notice, and suspend this agreement in whole or in part upon giving the Grantee written notice. In addition, A.I.D. may terminate this Agreement in whole or in part, upon giving the Grantee written notice, if (i) the Grantee fails to comply with any provision of this Agreement, (ii) an event occurs that A.I.D. determines makes it improbable that the objectives of the project or the assistance program will be attained or that the Grantee will be able to perform its obligations under this Agreement, or
(iii) any disbursement by A.I.D. would be in violation of the legislation governing A.I.D.

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(b) Except for payment which the parties are committed to make pursuant to noncancellable commitments entered into with third parties prior to such suspension or termination, suspension or termination of the entirety or part of this Agreement will suspend (for the period of the suspension) or terminate, as applicable, any obligation of the parties to provide financial or other resources to the Project, or to the suspended or terminated portion of the Project, as applicable. Any portion of this Agreement which is not suspended or terminated shall remain in full force and effect.

(c) In addition, upon such full or partial suspension or termination, A.I.D. may, at A.I.D.'s expense, direct that title to goods financed under the Grant, or under the applicable portion of the Grant, be transferred to A.I.D. if the goods are from a source outside the Grantee's country, are in a deliverable state and have not been offloaded in ports of entry of Grantee's country.

SECTION D.2 Refunds.

(a) In the case of any disbursement which is not supported by valid documentation in accordance with this Agreement, or which is not made or used in accordance with this Agreement, or which was for goods or services not used in accordance with this Agreement, A.I.D., notwithstanding the availability or exercise of any remedies under this Agreement, may require the Grantee to refund the amount of such disbursement in U.S. dollars to A.I.D. within sixty (60) days after receipt of a request thereof.

(b) If the failure of Grantee to comply with any of its obligations under this Agreement has the result that goods or services financed under the Grant are not used effectively in accordance with this Agreement, A.I.D. may require the Grantee to refund all or any part of the amount of the disbursements under this Agreement for such goods or services in U.S. dollars to A.I.D. within sixty days after receipt of a request therefor.

(c) The right under subsection (a) or (b) to require a refund of a disbursement will continue, notwithstanding any other provision of this Agreement, for three years from the date of the last disbursement under this Agreement.

(d) (1) Any refund under subsection (a) or (b), or (2) any refund to A.I.D. from a contractor, supplier, bank or other third party with respect to goods or services financed under the Grant, which refund relates to an unreasonable price for or erroneous invoicing of goods or services, or to goods that did not conform to specifications, or to services that were inadequate, will (A) be made available first for the cost of goods and services requires for the Project, to the extent justified, and (B) the

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remainder, if any, will be applied to reduce the amount of the Grant.

(e) Any interest or other earnings on Grant funds disbursed by A.I.D. to the Grantee under this Agreement prior to the authorized use of such funds for the Project will be returned to A.I.D. in U.S. dollars by the Grantee.

SECTION D.3. Nonwaiver of Remedies. No delay in exercising any right or remedy accruing to a Party in connection with its financing under this Agreement will be constructed as a waiver of such right or remedy.

SECTION D.4. Assignment. The Grantee agrees, upon request, to execute an assignment to A.I.D. of any cause of action which may accrue to the Grantee in connection with or arising out of the contractual performance or breach of performance by a party to a direct U.S. dollar contract with A.I.D. financed in whole or in part out of funds granted by A.I.D. under this Agreement.

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INVESTMENT IN DEVELOPING

EXPORT AGRICULTURE

Project Paper

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EXECUTIVE SUMMARY

The Investment in Developing Export Agriculture (IDEA) Project (617-0125) is a $25 million project to be implemented over six years to assist Uganda in increasing and diversifying non-traditional agricultural exports (NTAEs), thereby improving incomes for NTAE producers, exporters and others providing export-related services. The project will be a grant to the Government of Uganda (GOU) and the GOU will contribute the equivalent of $17.8 million in cash and World Bank loans.

The goal of the IDEA project is **to increase incomes, particularly those of rural men and women, from non-traditional agricultural exports** and is similar to USAID/Uganda's agriculture sector strategic objective. The project purpose is **to increase production and marketing of selected non-traditional agricultural exports** and will be accomplished by targeting:

1) **low value food crop exports (primarily maize and beans) to regional markets** that will increase incomes of a large number of farmers, most of them smallholders, marketing agents and exporters and will be a major benefit to the national economy;

2) **High value exports (cut flowers, spices and essential oils, vegetables and fruits)** that will provide substantial returns to a relatively small number of producers and exporters and will enhance foreign exchange earnings.

Rationale Uganda has a per capita income of $170, making it one of the poorest countries in the world. The balance of payments, with exports covering only about one-third of the import bill, is not viable without substantial external assistance. Uganda desperately needs to increase incomes, particularly rural incomes, and increase exports to generate foreign exchange. Agriculture is the largest productive sector of the economy and is the only sector with the potential to generate substantial and sustainable economic growth in the near future. While macroeconomic constraints to increasing agricultural production have largely been eliminated, a number of infrastructural, institutional, financial, technological and information constraints inhibit rapid growth of NTAEs.

Description The IDEA project will be implemented primarily by the Agribusiness Development Center (ADC), an autonomous, project-funded implementation unit that will provide technical assistance, training and other export development services to targeted NTAE exporters, producers, associations and related service firms and institutions such as Makerere University and the National Agricultural Research Organization. The ADC will be staffed and operated by an A.I.D.-financed U.S. contractor and will be linked to the restructured export promotion authority that replaces the Uganda Export Promotion Council.

The low value export development component includes research and extension and seed multiplication and distribution to increase

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yields and improvements in market information and assistance to commodity exporters in establishing market contacts in order to strengthen the export marketing system. By the end of the project, export value of maize and beans will increase to $12.6 million p.a. from $6.6 million p.a. currently.

The high value program will work primarily with exporters and, through them, with producers of the selected commodities and will include research activities, development of market contacts and commodity-specific market information systems and specialized technical assistance and training in production and post-harvest handling techniques. By the end of the project, export value of the selected commodities will reach $7.5 million p.a. The project will encourage the participation of women in high value exports.

A strategy of promoting NTAEs makes sense for Uganda. Increasing both high value and low value NTAEs will diversify the export base and increase foreign exchange earnings, thereby enhancing macroeconomic stability, and will assist in poverty alleviation by generating rural employment and increasing incomes. The IDEA Project will complement initiatives by the GOU and other donors to alleviate the constraints to increasing non-traditional agricultural exports.

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LIST OF ACRONYMS

ADC	Agribusiness Development Center
ANEPP	Agricultural Non-traditional Export Promotion Program
APDF	The Africa Project Development Facility
ANR	Agriculture and Natural Resources
BAT	British American Tobacco
CDC	Commonwealth Development Corporation
COP	Chief of Party
CPSP	Country Program Strategic Plan
EEC	European Economic Community
EPAU	Export Policy Analysis Unit
EPADU	Export Policy Analysis and Development Unit
ERP	Economic Recovery Program
FAF	Faculty of Agriculture and Forestry
FAO	Food and Agriculture Organization (UN)
GOU	Government of Uganda
IDEA	Investment in Developing Export Agriculture
ITC	International Trade Center
KARI	Kawanda Agricultural Research Institute
LOP	Life of Project
MAAIF	Ministry of Agriculture, Animal Industries and Fisheries
MFEP	Ministry of Finance and Economic Planning
MTI	Ministry of Trade and Industry
MU	Makerere University
NAARI	Namulonge Agricultural and Animal Production Research Institute
NARO	National Agricultural Research Organization
NTAE	Non-Traditional Agricultural Export
PMB	Produce Marketing Board
PSC	Project Steering Committee
PTA	Preferential Trade Area
UEDB	Uganda Export Development Board
UEPC	Uganda Export Promotion Council
UIA	Uganda Investment Authority
UNDP	United Nations Development Program
USAID	United States Agency for International Development
USh	Uganda Shilling
VOCA	Voluntary Overseas Cooperative Assistance

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SECTION I: PROJECT RATIONALE AND DESCRIPTION

A. Project Rationale

Uganda has a per capita income of $170[1], a reflection of nearly two decades of civil strife and economic decline that have made what was once known as the "Pearl of Africa" one of the poorest countries of the world. The balance of payments, with exports covering only about one-third of the import bill, is not viable without substantial external assistance. Uganda desperately needs to increase incomes, particularly rural incomes,[2] and increase exports to generate foreign exchange.

The National Resistance Movement (NRM) government has made impressive strides towards creating political stability and a macroeconomic environment conducive to economic growth. Average annual GDP growth since 1988 (the start of the Economic Recovery Programme) is roughly three times that of the 1965-90 period. Tighter fiscal and monetary control and increased food production have assisted in reducing the inflation rate, a key indicator of stability. Foreign exchange controls have been virtually eliminated. The government is making advances in creating an appropriate policy environment and economic and social infrastructure to stimulate rapid private sector-led growth. The GOU has identified expanded and diversified export earnings as a prerequisite to achieving its economic objectives of 5 percent annual GDP growth, under 10 percent annual inflation and a significant reduction in the debt burden and donor dependence. A key element of this development strategy is expansion of agriculture-based, non-coffee exports.

Agriculture is the largest productive sector of the economy, accounting for 72 percent of GDP and 67 percent of export earnings, and is the only sector with the potential to generate substantial and sustainable economic growth in the near future. Approximately 85 percent of Uganda's population, most of them smallholders, live in rural areas and are engaged in agriculture, primarily food crop production. Uganda is self-sufficient in basic food requirements with the exception of edible oil and produces surplus cereals and pulses that are competitive in regional markets. The traditional export crops are coffee, cotton, tea and tobacco. Only coffee remains a major export, but with the drastic fall in world coffee prices, Uganda's dependence on coffee exports is no longer tenable. Cotton and tea production is slowly being rehabilitated but cannot be counted on to make up the foreign exchange gap.

Uganda has yet to capture the wealth that lies in its agriculture

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[1] World Bank Atlas. 1991

[2] Poverty is more prevalent in rural areas: 57 percent of the rural population vs. 38 percent of the urban population.

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sector. Recent studies have demonstrated that, with fertile soils, plentiful water resources, a variety of climatic conditions, several growing seasons a year and inexpensive labor, Uganda has the ability to grow a number of high value crops at costs that compete favorably in overseas markets. The regional market for exports of low-value, bulk commodities such as maize and beans has barely been tapped. While macroeconomic constraints to increasing agricultural production have largely been eliminated, a number of infrastructural, institutional, financial, technological and information constraints inhibit rapid growth of non-traditional agricultural exports[3] (NTAEs).

A strategy of promoting NTAEs makes sense for Uganda. Increasing both high value and low value NTAEs will diversify the export base and increase foreign exchange earnings, thereby enhancing macroeconomic stability, and will assist in poverty alleviation by generating rural employment and increasing incomes. The IDEA Project will complement initiatives by the GOU and other donors to support this strategy by seeking to alleviate some of the technological, informational and financial constraints to increasing non-traditional agricultural exports.

The next sections will review the constraints to expanding NTAEs, describe activities of the GOU, USAID and other donors to address these constraints and, finally, provide a detailed description of the IDEA project.

B. Constraints to Growth of NTAEs

There are a number of technical, infrastructural, financial and human resource constraints to the start-up and expansion of Uganda's NTAE industry. These constraints are summarized below and discussed in detail in Annex C. At the same time, Uganda has been largely successful in removing the macroeconomic constraints that have to be addressed before NTAE development is even viable. Foreign exchange is freely available, the exchange rate has stabilized, and the inflation rate has fallen to reasonable levels. A dual exchange rate system is still maintained, but the GOU intends to unify the system in 1994. The GOU retains some residual controls on and intervention in the private sector, primarily through the parastatals. The World Bank is assisting the GOU in a large privatization effort. The Uganda Investment Authority is also engaged in a major revision and rationalization of the Investment Code. USAID, through the Agricultural Non-traditional Export Promotion Program (ANEPP), and other donors will continue to support policy and regulatory reforms that affect the viability of the NTAE sector.

B.1 Transport and Other Infrastructure

The road network in Uganda, while fairly extensive, is in disrepair in many places. Most major trunk highways have been

[3] Defined here as anything but coffee, tea, cotton and tobacco.

recently widened and repaved, but farm-to-market roads are far less developed. Farmers report that there is little or no competition among farmgate buyers because the condition of rural feeder roads is so bad. USAID and other donors continue to fund improvement of the feeder road system in order to ameliorate these problems.

Historically, the rail connection to Mombasa was Uganda's key link to international markets. Today, exporters rarely ship by rail to Mombasa as service is cumbersome and unreliable. Most high-value exports are shipped by air. Air freight rates are favorable and currently there is excess capacity.

The absence of a modern cold chain is a serious constraint to the development of floricultural and perishable horticultural exports. Keeping products at proper temperature and humidity is essential to maintaining freshness. Unfortunately, on site pre-cooling and cold storage is virtually non-existent. Most products are harvested, set by the roadside for pickup and shipped in open-bed trucks. Many commodities would benefit from either pre-cooling, cold storage, or on-farm drying before shipping. The failure to remove field heat immediately after harvest reduces the quality and shelf life of most high value crops.

Conditions do not improve further down the marketing chain. Refrigerated stores in Kampala are unsuitable for fresh produce. Airport air cargo handling capacity is inadequate for large shipments of perishable commodities. The three cold rooms at Entebbe Airport were not designed for storing produce, and the doors are too narrow for aircraft cargo pallets. USAID has agreed to fund construction of a cold storage facility under the ANEP Project; the facility should be operational in 1994 and will solve some but not all of the problems.

A reliable cold chain will depend upon a reliable supply of electricity. Uganda is blessed with abundant water for hydropower, although this resource remains largely untapped. Electricity rates are low (US$.015/kwh compared to US$.07-.09/kwh in the U.S.), although power service is erratic. According to UIA, utility supplies are a major concern of potential investors. A donor-financed extension of the primary power source, Owens Falls Dam, is in the offing.

The country's domestic telephone service is expensive and unreliable. Ugandan exporters complain that they must drive to regional towns to obtain market information because telecommunications are poor. The World Bank is currently funding efforts to improve the system, but most business informants are not optimistic about short-term improvements. If the system is privatized it may become more cost-competitive, efficient, and oriented to customer service.

Even at the producer level, infrastructure is needed. Reliable year-round horticultural production depends on irrigation systems

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which are rarely available. Extensive irrigation infrastructure is needed, especially in areas that are most suitable for horticultural export production. Lack of adequate on-farm storage for grains and pulses results in substantial losses or deterioration in quality of output. Village-level marketing agents also lack access to storage facilities.

B.2 Agronomic Constraints

Smallholder farmers generally have low crop yields resulting from pests and diseases, poor cultural practices and use of low-yielding varieties. Improved seeds are not widely available and are more expensive. Many farmers plant Kawanda Composite maize seed, but higher yielding Longe 1 seed was distributed for the first time to 3,000 farmers last year. Along the Kenyan border, well-off farmers use Kenyan hybrid seeds. So far, USAID's attempts to interest Western seed manufacturers in Uganda have not borne fruit, but widespread distribution of high quality seeds would result in substantial increases in Ugandan maize and bean production.

Increasing land area under cultivation and improving cultural practices such as extra weeding and pest or disease management is difficult because virtually all the work is done by hand. There are very few working tractors and in the north and northeast districts where oxen were traditionally employed for animal traction, animals stocks were depleted during the years of civil strife and restocking efforts are hampered by cattle rustling. A forthcoming World Bank project in the Ministry of Agriculture, Animal Industries and Fisheries (MAAIF) will seek to rebuild stocks and reintroduce animal traction.

GOU expenditures on agricultural research are very low (0.2 percent of GDP) and most have gone to food crops research (especially maize and beans) rather than potential high-value export crops. For the past five years, however, UNDP and FAO have sponsored horticultural research at Kawanda Research Station, including vanilla, fruits, vegetables, and some floriculture. They have tested various exotic cultivars and expect to make some official releases shortly. Unfortunately, funding for this program has lapsed and a gap of one to two years is anticipated before a second phase is initiated.

B.3 Agricultural Extension

The GOU agricultural extension system is weak due to factors such as low salaries, which result in extension agents being poorly motivated, insufficient transport, lack of training, and poor organization. Traditionally, major export crops such as coffee, cotton, and tea had their own extension services. The World Bank is beginning to assist in the reorganization and revitalization of a "unified" extension service under the Agriculture Extension Project. Such an undertaking is necessary but will require substantial resources and time to overcome the inertia from years of neglect.

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Private sector-based agricultural extension services represent an attractive alternative or complementary approach for some NTAE crops. Vanilla exporters, for example, are already providing such services to their outgrowers in conjunction with planting materials, watering cans, and wheelbarrows on credit. Chilli exporters also are providing seeds and technical assistance on nursery management. For growers, a major advantage of such arrangements is having a guaranteed buyer for their products. Exporters also benefit by ensuring the quantity and quality of product required by world markets. They can be sure of receiving payment for advanced seeds and equipment because the costs can be deducted from payments for crops delivered. At present, such contract farming is at a very early stage of development in Uganda. Contracts are more often informal arrangements than legal agreements, and both exporters and producers sometimes find their expectations are not met.

An impressive model of a successful, large-scale private sector extension system is that of the British American Tobacco Company (BAT). The system incorporates 24,000 smallholders who are producing tobacco; all of them also produce maize and beans. BAT employs over 250 people in their smallholder support system. Support includes inputs, credit, and technical advice. Extension agents are well trained and properly organized through an impressive radio network. Such systems should be analyzed to draw lessons for successful private sector extension initiatives.

B.4 Postharvest Constraints

After harvest, under the best circumstances, the quality of perishable export products can only be maintained, not improved. Grade standards that define quality, condition, size, and maturity are fundamental to a modern industry's structure and discipline. Carton standardization, with accurate labeling, consistent count, and weight, can build industry integrity and consumer confidence.

Postharvest management covers the handling, packing, grading, cooling, storage, transportation, and distribution of the crop between the time of harvest and its final consumption. Farmers often do not understand what measures must be taken to ensure that their produce arrives at the point of export in merchantable condition, nor do they realize why proper handling is important to ensure quality. The postharvest system for NTAE crops grown in Uganda reflects the following deficiencies:

- Improper harvesting and field selection
- Lack of know-how and facilities for postharvest handling
- Lack of cooling and a network of cold storage facilities (on farm, in centralized locations and at Entebbe airport)
- Improper packaging for export markets
- Inadequate infrastructure at Entebbe airport for perishables (e.g. no pallet weighing machine,

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antiquated equipment, poor lighting)

- Lack of knowledge of international market standards
- Inadequate product quality control and uniformity
- Lack of facilities for postharvest anti-fungal and pest treatment

Compliance with improved standards of quality and more vigorous grading procedures will require continuous education and supervision of the labor force. Improper picking, handling, and packing procedures increase the incidence of physical damage and product bruising.

The UNDP has been funding a program with the Bureau of Standards, and the EEC will pick up the funding in 1993. While the exact nature of the work to be carried out under the Bureau is still being determined, the development of the Bureau of Standards needs to go hand in hand with the development of the NTAE industry.

B.5 Capital and Investment

Lack of capital is a major constraint to building Uganda's NTAE industry. Producers need working capital to cover production costs (such as seeds, fertilizers, pesticides, tools, and labor) before they realize a return on production. Processors need capital to buy equipment to upgrade or expand their operations. Exporters need transactional financing to cover procurement, handling, and transport costs. A flexible and efficient financial system is essential to building Uganda's comparative advantage as an exporting country. Most entrepreneurs are, however, effectively shut out of the financial system. Loan interest rates are too high and loan procedures are lengthy and cumbersome. Even though large sums are supposedly available, Dale Adams (1993) concludes that elevated borrowing costs and stringent loan security requirements will likely dissuade most new export entrepreneurs from using formal loans, especially for long-term investments.

USAID and/or the World Bank in conjunction with the Commonwealth Development Corporation (CDC), plan to establish a venture capital fund in Uganda within the foreseeable future. These venture capital developments, if they come to fruition, will provide a much wider range of options when considering the total financial/investment package requirements for NTAE entrepreneurs.

Joint-venture arrangements with external investors are also a promising approach to financing NTAE investments. The 1991 Investment Code made significant improvements in the overall investment climate, especially for export-oriented industries. Because attracting investment is so highly competitive, the GOU's investment incentives must continuously differentiate opportunities in Uganda from those in other developing countries. A review of the Investment Code is currently underway.

B.6 Market Information

Commodity markets are complex and dynamic, and if agro-entrepreneurs are to accurately read market signals and make efficient decisions, clear communication of vital information is essential. To meet this need the Market News Service operated by the Ministry of Trade and Industry attempts to help keep farmers, traders, and consumers better informed about current domestic market conditions for basic agricultural commodities. But traders and exporters of maize, beans, and other commodities are still not receiving adequate timely information on market conditions. According to Sergeant and Macartney,[4] a major constraint reported by primary traders was the lack of information on demand and prices. Smallholder producers also lack basic market information that could enable them to adapt more appropriately to market demands.

High-value exporters also need timely market information. The International Trade Center (ITC) has recently put in place a market information data link to connect all Preferential Trade Area (PTA) markets, and a long-term advisor to the Uganda Export Promotion Council (UEPC) is being recruited to improve the market information system. In sum, many useful market databases now exist, but to date there is no entity in Uganda attempting to "...put it in the hands of the exporter," as one exporter described it.

B.7 Agribusiness Management

The lack of agribusiness management skills limit the growth and development of NTAEs. NTAE business leaders need management training in such areas as long-range planning, financial management, marketing strategies, and operations. Management information systems are also lacking within agribusiness firms. One vanilla exporter, for example, now deals with over 5,000 outgrowers, but does not have adequate systems to manage these accounts. An organized, long-term management information system is needed because properly managed vanilla plantations can continue to produce over twenty years.

Makerere University's agriculture programs, which are the main source of professionals for the public sector and, to a lesser extent, the private sector, are not oriented towards NTAEs. In order to provide future public and private sector leadership for NTAE development, MU's programs need a greater emphasis on production and marketing of non-traditional agricultural commodities.

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[4] Andrew Sergeant and John Macartney, "Opportunities for Non-Traditional Agricultural Exports from Uganda, Vol.4, Cereals, Beans and Oil Crops," Uxbridge, UK, High Value Horticulture, May 1993, p.64.

B.8 Institutional and Organizational Environment

Uganda's efforts to promote exports and to undertake export-related policy analysis has been characterized by poorly defined, overlapping, and conflicting institutional roles and responsibilities. This together with inadequate and irregular financial support have resulted in mediocre export promotion. The institutional structure for export and investment promotion has not been fully rationalized, and a clearly-defined strategy and has not yet been developed.

Three major GOU entities are currently engaged in export promotion:

- The Uganda Export Promotion Council (UEPC) under the Ministry of Trade and Industry (MTI)
- The Export Policy Analysis and Development Unit (EPADU) of the Ministry of Finance and Economic Planning (MFEP)
- The Uganda Investment Authority (UIA), a quasi-independent unit under MFEP

The UEPC has primary responsibility for export promotion. It was mandated in 1983 and became operational in 1985, but has suffered from low-level funding and long-term neglect. UEPC's board of directors has not met since 1987, and the council is widely viewed by the private sector as ineffective and unresponsive. A fundamental flaw in UEPC's design is that it is essentially a government body under the discretionary power of the minister. No matter how good their intentions, UEPC staff have little understanding of or rapport with private sector entrepreneurs. Furthermore, UEPC's scant resources are thinly scattered. It has not targeted specific market subsectors or identified promising potential exporters. As a public enterprise, UEPC feels compelled to respond to all exporter's requests.

The GOU is currently working on a proposal to restructure the UEPC along the lines of the UIA (see below), giving it more autonomy as well as more resources. Consultants have recommended that the restructured UEPC be re-named to emphasis its new character; while the GOU has not yet made a formal decision on this matter, the Ministry of Trade and Industry has suggested the "Uganda Export Development Board" as a name that would reflect the institution's greater autonomy. To distinguish the new institution from the UEPC, it is hereafter referred to as the UEDB in this document. The UEDB will be responsible for coordinating and overseeing all export promotion activities. The GOU has already reached preliminary ministerial agreement on this reorganization. At this time, however, there is less agreement within the GOU and among donors who might support UEDB as to what its responsibilities should be. The World Bank is working with the GOU on finalizing the institutional framework for export promotion and is expected to be the lead donor to UEDB through its Export Promotion Project.

The Export Policy Analysis and Development Unit (EPADU) was

created in 1988 as the executing agency for, and is funded by, USAID's ANEPP. EPADU conducts studies and recommends policy, regulatory and infrastructure developments to improve the macro-economic environment for non-traditional exports. Recently it conducted the market opportunity studies on which the IDEA subsector selection was based. In addition, over the past year and a half EPADU has worked directly with potential exporters, bridging initial macro-economic policy interventions and forthcoming IDEA project technical assistance. The GOU has decided that the policy analysis functions of EPADU will be retained under the Ministry of Finance and Economic Planning (MFEP) and that the export promotion function will move to UEDB. Consistent with that decision, EPADU will, henceforth be referred to in this document as the Export Policy Analysis Unit (EPAU).

The Uganda Investment Authority (UIA), established in 1991, is the primary organization responsible for promoting local and foreign investment. UIA does this by promoting a relatively liberal investment code, providing investor services, and alleviating constraints to investment. UIA is now shifting emphasis from its regulatory function to focus more on investor promotion, facilitation, and registration. Although linked to MFEP, UIA is housed separately and is directed by an active board of directors with a majority private sector membership. As of April 1993, UIA had approved almost 400 applications, many of them from Kenyan investors, with actual investment of approximately US$ 200-300 million.

UIA's institutional structure is unique. It is organized and operates largely like a private sector entity, but retains key linkages to high-level policy makers in MFEP and elsewhere in government. This apparently effective organizational structure is proposed as the model for restructuring and revitalizing the UEPC. The costs of this structure are, however, high. USAID has been the major financier of UIA operations until now, but the GOU is now seeking greater involvement of other donors. Until the GOU has adequate revenues to support UIA, its sustainability will continue to be an issue.

B.9 Conclusion

The GOU has made much progress in alleviating constraints to NTAE development at the macro-economic policy level and it is now beginning to tackle legal and regulatory restrictions. The infrastructural and capital constraints discussed above and the institutional framework for export promotion are being dealt with to varying degrees by the GOU with support from other donor projects (including USAID's ANEP Program). The IDEA Project will address agronomic, postharvest, marketing and management constraints to the extent that they bear directly on the commodities targeted for support. With respect to capital and credit constraints, IDEA will help entrepreneurs develop sound business plans and identify potential sources of financing, but the project itself will not provide credit.

C. Overview of Project Purpose and Approach

IDEA is a $25 million project to be funded over five years (LOP of six years) to assist Uganda in promoting and diversifying non-traditional agricultural exports (NTAEs), thereby improving incomes for NTAE producers and exporters. For the promising commodity groups identified below, IDEA will transfer technology, facilitate marketing linkages and provide other services to help Ugandan entrepreneurs initiate and expand NTAE activities. The IDEA Project has two major foci:

1) **low value food crop exports (primarily maize and beans) to regional markets** that will increase incomes of a large number of farmers, most of them smallholders, marketing agents and exporters and will have a substantial impact on the national economy; and

2) **high value exports** that will provide substantial returns to a relatively small number of producers and exporters and will enhance foreign exchange earnings; commodities identified for project support are:

- Spices and essential oils: vanilla, chillies, ginger, and geranium oil
- Floriculture: roses and field annuals
- Vegetables: snow peas and asparagus.

Over time, IDEA may identify and support other agricultural exports, with special attention to developing products involving postharvest value-added processing, in order to capitalize on Uganda's low wage rates and to provide additional employment.

C.1 Project Goal and Purpose

The **goal** of the IDEA project is "**to increase incomes, particularly those of rural men and women, from selected non-traditional agricultural exports.**" This goal is similar to USAID/Uganda's Country Program Strategic Plan (CPSP) strategic objective of increasing rural men's and women's income from agricultural exports but also encompasses project benefits that will accrue to others, primarily exporters, who may not live in rural areas. Other activities in the mission's agriculture portfolio, primarily ANEPP and the CAAS Project, also contribute to the strategic objective. In order for rural incomes from NTAEs to increase, rural farmers must be able to increase production of non-traditional crops and sell them at a profit. Whether the farmer can sell at a profit depends on the cost of inputs and getting the product to the market and the price which it fetches. The export price is determined by world market conditions. While the project has no control over market conditions, it can ensure that NTAEs supported by the project are competitive in the world market and it will continually reassess market conditions.

The project **purpose** is "**to increase production and marketing of**

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selected non-traditional agricultural exports." IDEA's interventions will lead directly to increased production of specific non-traditional agricultural export crops by rural men and women and will ensure, to the extent possible, that what is produced is exported. Increasing and diversifying NTAEs will contribute to national foreign exchange earnings and increase incomes of men and women producers, exporters and others involved in transportation, processing, and packaging of NTAEs. Farmers who sell their incremental production (the additional amount produced as a result of project interventions) to an exporter at a profit will have increased incomes. While producers of some high value crops will not be smallholders[5], higher production levels of these crops will require an increase in hired labor (which may increase rural wage rates), which will also contribute to the project goal of increasing rural incomes.

Achievement of the project purpose (EOPS) will be measured by:

- increases in export value and farmgate value of maize and beans;
- increases in export value of high value commodities;
- increases in the number of smallholders and hired laborers involved in production of high value commodities;
- at least 40% of high value producers, outgrowers, hired labor and exporters assisted by the project are women.

The distinction between export value and farmgate value is important because the farmgate value reflects the return to the farmer as opposed to the return to the exporter. Project implementors must continually focus on the link between project activities and increasing producers' incomes to ensure that the project has "people level impact" and contributes to the project goal. Increases in smallholders and hired labor in high value NTAEs are additional indicators of increased production levels and can be assumed to contribute to higher rural incomes. The project will encourage participation of women in production of high value commodities (which men tend to dominate because profits are higher) and this is reflected in the EOPS target of at least 40% women beneficiaries in the high value commodities over the life of the project.

C.2 Conceptual Approach

The IDEA project is designed from a private sector, market-driven perspective. It is based on four design principles derived from analyses of similar efforts and the Ugandan NTAE context:

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[5] Smallholders are considered to be at the lower end of the income distribution, although rural landless people are generally the poorest of the poor.

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exporter emphasis, vertical integration, demand driven and capacity building.

C.2a Exporter Emphasis

IDEA will help exporters to make their projects technically and financially viable. Technical assistance will be provided to firms that are either current or potential exporters of the selected high- and low-value crops; assistance to producers will largely be channelled through exporters. The project will also assist private sector associations and firms that provide services to these firms. AID-funded projects in Swaziland, Guinea, and Ghana have adopted similar approaches. The Swaziland project, which assists private sector marketing firms to service smallholder horticulturalists, has found that there is a danger of overburdening small firms with production programming and agricultural extension responsibilities and is now redirecting some extension and production support activities through farmers' associations. The Guinea project, implemented through a parastatal, reaffirms the importance of an enabling macro-economic and judicial environment and highlights the importance of keeping interventions in the private sector. Despite promising feasibility studies, investors were unwilling to risk capital in a non-transparent system and after four years, results were so unsatisfactory that a new project is being designed to be executed through a private sector NGO. The Ghana Trade and Investment Program has just begun implementation.

C.2b Vertical Integration

The IDEA project will address all production and marketing elements necessary to accomplish successful NTAE exports. Beginning with direct assistance to exporting firms, project activities will encourage the development of vertical linkages between firms and their producer suppliers such as extension training, contract growing, and input supplies. At this level, vertical integration will help to ensure that producers have a reliable market and are able to obtain appropriate inputs.

Project interventions will also encourage firms to participate in private sector associations to address such mutual concerns as infrastructure, transport services, lobbying the government on policy and regulatory constraints, international market information and contacts, sharing of experiences, and targeted research and training.

Finally, through a link to the UEDB, the project will facilitate communication between the private sector and the government about constraints to NTAE production and exports that require policy, legal, administrative, or regulatory action.

C.2c Demand Driven

Project resources will be concentrated on commodities with a demonstrated market in which Uganda has a comparative advantage.

Through EPADU, USAID recently commissioned a series of opportunity studies on five potential export commodity areas which identified both high- and low-value crops with significant export potential and the project's target crops are derived from these studies.

Because Uganda is landlocked, potential NTAE enterprises aimed at world markets must focus on very high-value products such as spices, which can be profitably exported by air and in some cases by land and sea. Uganda's vanilla is of the highest quality, equal to that of Madagascar. Two exporters are currently organizing widespread plantings and the crop is gaining considerable popularity. Uganda's Bird's Eye chillies have very high capsaicin content and are in great demand in Japan for industrial uses. Ginger and geranium oil also offer considerable untapped potential. These are all smallholder crops, open to both men and women, that promise widespread benefits.

Roses are a high-profit, high-risk venture for the wealthy investor. They are produced in high-tech greenhouses to rigorous world market standards. Uganda has excellent year-round growing conditions and competitive air freight rates, but must compete with Kenya's years of experience. Two Ugandan entrepreneurs are about to begin exporting and others are seriously considering new ventures. There is very limited opportunity in rose production for smallholders. There may ultimately be some opportunity for smallholder production of field annuals, once the necessary infrastructure has been established for roses.

It is difficult to identify fruits and vegetables with a sufficiently high rate of return to justify the air freight to Europe. Current exports are limited to small ethnic markets. For large-scale export, initial analysis identified only snow peas and asparagus as promising; trials are currently underway. Other crops such as raspberries and mushrooms warrant further attention.

Perhaps surprisingly, low-value food exports within the region such as grains, beans and oilseed products promise greater economic benefits in aggregate than the high-value commodities. In the short run, political upheavals and famines in the neighboring countries of Sudan, Somalia, and Rwanda have led to a high demand for maize and beans brokered by international donors such as the World Food Program[6]. Even in the longer run, Kenyan maize and bean production will continue to fall short of demand (due to rapid population growth), providing Uganda with a relatively secure market. Although of low value, these crops are already produced in large quantities by Ugandan smallholders, and benefits from their export will be widespread.

Focusing on high-potential crops should yield immediate benefits

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[6] The World Food Program (WFP) is expected to purchase at least 100,000 MT of maize and 30,000 MT of beans per year for regional relief efforts.

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while at the same time permitting practical learning from experience. In the meanwhile, development efforts such as field trials and research will be undertaken on other potential exports such as pyrethrum, papain, berries, mangoes, and mushrooms.

In reviewing proposed crops, participants in the IDEA design workshop asked why crops such as cotton or non-crop agricultural products including hides, fish, or honey are not included. Traditional export crops such as cotton and tea are currently being dealt with separately through privatization efforts, and while other commodities may have good export potential, project resources are more likely to have impact if they are targeted at a few exports. The project will also encourage value-added products, attempting to add to Uganda's comparative advantage through use of its relatively inexpensive labor supply.

C.2d Capacity Building

The Vice-President of the World Bank for Africa recently emphasized the importance of capacity building, arguing that dependence on expatriate technicians has undermined the development of local capacity. He proposed a policy of discontinuing project implementation units and resident expatriate advisors. While his criticism is valid, his prescription may not be, at least in the case of export projects such as IDEA. Initiating export activities requires intimate knowledge of international market procedures and contacts, for which expatriate advisors can be enormously helpful. Especially at the outset, non-traditional export production and marketing demands extensive knowledge, intensive efforts and daily supervision by people with previous "hands-on" experience. Such expertise is currently rare in Uganda. IDEA's expatriate technical advisors will transfer skills both to Ugandan technical advisors with some background but less experience and to exporters and producers themselves. As Ugandan exporters become familiar with international markets, they will be able to perform these functions for themselves.

While pursuing increased exports of specific crops, the project will simultaneously develop capacity within the private sector and UEDB to support the development of mechanisms that will remain sustainable after the end of the project. This will be accomplished by practical "learning by doing" and an extensive training component in addition to appropriate programs at Makerere University and within the NARO research system. Capacity building will be integrated into all facets of project implementation and is reflected in the project outputs.

C.3 Delivery Mechanism - ADC

The IDEA project will be implemented primarily by the Agribusiness Development Center (ADC), an autonomous implementation unit funded by the project, which will provide technical assistance and other export development services to targeted NTAE exporters, producers, associations and related

service firms and institutions such as Makerere University and the National Agricultural Research Organization (NARO). The ADC will be staffed and operated by an A.I.D.-financed contractor. The staff will be comprised of a Chief-of-Party (COP) and four long-term expatriate technical advisors, five long-term Ugandan technical advisors and administrative support staff. Initially, the ADC will provide most information and services directly to clients. Later in the project, as capacity is developed and support services are institutionalized elsewhere, the ADC will serve in part as a clearinghouse. The ADC will not compete with existing export promotion institutions and will cease to exist with the end of the project. By that time, other institutions in the private and public sector will have been strengthened through this project and other efforts to the point that further assistance in NTAE development is more appropriately channelled through them directly.

While IDEA's primary focus is on production and marketing, the project will also encourage continual improvement in Uganda's export promotion efforts and in the policy and regulatory environment for NTAEs. Producers and exporters will identify new policy and regulatory constraints as they expand and move into new crops and markets. The ADC will serve as one communication channel between the private and public sectors, through a close relationship with the new UEDB and with the EPAU, and will work to strengthen the ability of private sector associations to take on a policy dialogue function over the life of the project.

If the UEDB is created along the lines currently being discussed (semi-autonomous with its own governing board and resources), the IDEA Chief-of-Party, who will be the director of the ADC, will spend 10-20 percent of her/his time at the UEDB, working with the UEDB Director and agribusiness staff on relevant export promotion activities. This will keep the UEDB, the lead GOU institution on export promotion, well informed of project activities, improve coordination amongst donor and GOU projects and help avoid duplication of effort. The COP will also liaise with EPAU staff on agribusiness-related policy issues. These arrangements are intended to help bridge the gap in information sharing and feedback between private and public sectors and to ensure that regulatory or other roadblocks to the project's export activities are addressed quickly.

C.3a Rationale for ADC

In deciding on an appropriate delivery mechanism for IDEA, project designers considered factors such as the management and financial capabilities of existing institutions, the private-sector oriented nature of the project, the dual focus on high-value and low-value crops and the presence of equity objectives (special efforts to increase participation of women and rural smallholders.) The alternatives considered were:

- Non-governmental associations (membership organizations)

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- Government entity (UEPC or its successor)
- A private foundation or firm
- A project implementation unit

Although there are many trade associations and other membership organizations in Uganda, none of them presently have the broad-based support and mandate nor do they have the institutional capacity, even with project assistance, to take on broad responsibility for handling NTAE promotion. Strong associations develop from a strong membership. As the NTAEs begin to expand, producer and exporter associations are expected to grow stronger. The IDEA project will be able to facilitate this growth and increase the capacities of membership groups to assume more responsibility for export development in the future.

The UEDB, proposed successor institution to the UEPC, was examined carefully to determine whether it would be a suitable implementing entity. While the UEDB will have an important role to play in fostering the expansion of the NTAE industry through such activities as coordinating GOU and donor support and providing generalized market information, there can be conflicts of interest when such an entity is intimately involved with individual business activities and has access to proprietary information. It is also more difficult for such an entity to restrict participation in its programs by virtue of its public sector status. Last but not least, lack of confidence in the UEPC is widespread in the private sector, and all private sector informants argued forcefully against using a government entity, even a semi-autonomous export promotion institution, as a delivery mechanism.

Consideration was also given to establishing a private non-profit foundation to carry out the NTAE program. Although such an organization is attractive because it could address equity objectives and would have no "institutional baggage," a significant amount of project funds and energy would be devoted to institution-building, and making the operation sustainable without donor funding would be extremely difficult. In addition, it would be isolated from the high-level policy making needed to develop and maintain an enabling environment. In the end, no one consulted in the public or private sector wanted to create a new institution.

A consulting or business service firm, functioning on the basis of bottom-line profit motive, would not give the desired attention to smallholder producers and women's groups, or invest sufficient energy in building the capacities of the private sector associations and service organizations. Such a firm would have to charge substantial fees, which would make services unavailable to many potential exporters who lack strong financial backing.

A project implementation unit functioning like a private sector institution but retaining linkages to policy makers and able to address equity objectives seems to offer the best solution,

channelling important information and feedback back and forth between the private and public sectors. Such an entity does not need to concern itself with its own sustainability since it is not intended to continue after the project. Rather, sustainability is achieved through strengthening the capabilities of Ugandan entrepreneurs, private sector associations, service firms, and public sector support agencies to promote NTAE production and marketing. This project is aimed at developing exports, not bureaucracies.

D. Detailed Project Description

D.1 Outputs

By the end of the project, the following outputs will be accomplished:

1. Producers of selected commodities will have improved knowledge of techniques to increase crop quality and yields.

2. Exporters will be able to initiate or expand NTAE activities.

3. NTAE exporters and producers will have improved knowledge of agribusiness planning and management and access to sources of financing.

4. Commodity specific market information systems will be established or improved and sustainable.

5. Private/public sector entities will be multiplying and distributing improved maize and bean seeds.

6. Associations will be facilitating growth in NTAEs and acting as effective advocates for a better NTAE policy and regulatory environment.

7. MU Faculty of Agriculture will be able to provide long-term and short-term training to support the growth of NTAEs.

The rest of this section describes how the project will accomplish these outputs and hence the project purpose. The first two components outline activities specific to low value and high value exports. The last three components, business and financial linkages, strengthening associations and education and training, support both low value and high value export development but are not readily divisible by commodity group and have thus been described as separate components.

D.2 Low Value Export Development

This component will boost exports of maize and beans to regional markets by: 1) strengthening the linkages between farmers, exporters and markets so that farmers are more aware of market demand; and 2) transferring technology to enable farmers to increase production in response to demand. The major constraints

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to increasing production of maize and beans are utilization of low-yielding varieties, lack of access to existing higher yielding varieties, poor cultural practices, inadequate storage facilities and poor or insufficient market information. This component includes research and extension activities, seed multiplication and distribution, improvements in market information and assistance to commodity exporters in establishing market contacts.

D.2a Maize and Bean Research and Extension

IDEA will support aspects of the national maize and bean research programs operating under the auspices of the National Agricultural Research Organization (NARO). These programs are reasonably well established and have a comparative advantage over any other potential implementing entities for maize and bean research but are underfunded from the GOU budget. IDEA-funded research will target screening, on-farm testing, multiplying and disseminating improved maize and bean seed varieties, identifying pest and disease control measures (e.g., integrated pest management) and techniques for reducing postharvest losses. Researchers will develop a low-input technology package that results in environmentally sustainable increases in yields and will demonstrate it to farmers and extension agents. Outreach will be an important aspect of the IDEA-funded work. NARO affiliates will actively demonstrate and promote the results of their research efforts through demonstration plots on farms, District Farm Institutes and other sites. While USAID has in the past supported a much broader research program, the emphasis now will be on applied research that will have an immediate impact. This approach will be highly complementary to a World Bank-funded research program that will support longer term varietal breeding efforts as well as major station research on disease and pest control.

D.2b Multiplication and Distribution of Improved Seed

An effective seed multiplication and distribution program would have an immediate impact on yields. Currently, seeds are distributed through the District Agriculture Officers. The system is not commercial and involves no sales promotion. IDEA will provide start-up funding for private sector and/or NGO participation in multiplying and marketing the improved Longe 1 maize seed and improved bean varieties which have the potential to double yields with little additional labor. Several models will be tested: for example, seeds could be distributed by traders and exporters who receive a sales commission, or exporters might arrange for multiplication and distribution of seeds to producers and then deduct the cost of the seed when they purchase the crop (a form of informal credit). Either of these methods will increase farmers' utilization of improved seeds. Later in the project, similar methods may be used to multiply and distribute other varieties that have passed the screening and testing process.

D.2c Extension

While observers have noted a number of poor cultural practices among Uganda's smallholders that limit yield, labor shortages at peak periods in the growing cycle limit farmers' ability to do much about these. There are, however, other practices that could improve yields without substantial additional labor inputs such as adoption of integrated pest management, more economical and environmentally sound use of pesticides and better site selection and preparation. IDEA will support extension of these and similar practices through private extension networks (farmers' associations and other NGOs with close links to smallholders) as well as through the MAAIF extension service, to a limited extent.[7] The project will also investigate the potential for working through the BAT extension system since the 24,000 smallholders it reaches all grow maize and beans as well as tobacco.

D.2d Market Information and Market Contacts

There is a major gap in information dissemination related to the movement of most low-value crops for regional export. With the clear opportunity for increased sales of maize and other low-value products into the regional export markets, a more efficient system is needed to respond to these conditions. The ADC will assess the level of transparency in the various market information systems and improve them where necessary. For example, ADC will coordinate with REDSO/ESA's regional marketing project to track wholesale prices of a set of low-value commodities and semi-finished products in key East African trading centers. Wholesale price information collected in regional centers will be printed weekly in leading regional newspapers and broadcast over commercial radio along with short monthly (100 words or less) narratives on planting dates, crop development, expected harvest dates, etc. Other useful information would include periodic updates on the semi processed food commodities such as oilseed cake, maize meal and flour.

The ADC will also investigate ways of improving utilization of systems established by ministries, the FAO and ITC. The Ministry of Trade and Industry currently operates a basic agricultural market price information service. MTI publishes the farmgate, wholesale and retail prices for low-value commodity crops from five regional centers located around Uganda, as well as the Kampala prices, every Thursday in the newspaper. This service helps traders looking to source these commodities to maximize their profits on a domestic or export transaction.

The ADC will assist bulk commodity processors and exporters to establish market contacts in regional trading centers and to

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[7] The World Bank will be undertaking a major project to reorganize and rejuvenate the MAAIF extension system. Efforts will be coordinated as necessary.

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improve their business planning and identify sources of financing (see section D.4 below).

Major Inputs: One long term expatriate low value commodity production and marketing advisor (3 1/2 years) and one long term Ugandan low value commodity production and extension advisor (5 years) will have principal responsibility for implementing this component. They will have two field assistants. The long-term expatriate research, education and training advisor will oversee the research activities and coordinate with the other advisors on training. In addition, the following amounts are budgeted for activities in this component: $1,400,000 for maize and bean research, $300,000 to initiate the seed multiplication and distribution program and $200,000 for developing NGO/private sector extension programs. A portion of short term technical assistance, in-country and external short-term training and commodities will also be used for this component.

D.3 High Value Export Development

The high value program will work primarily with exporters and, through them, with producers of the selected commodities. Exporter and producer associations will be another conduit of assistance. The high value program will include research activities, development of market contacts and commodity-specific market information systems and specialized technical assistance and training in production and post-harvest handling techniques.

D.3a High Value Research

The project will fund applied research that is likely to have an immediate impact on overcoming high value export constraints. Multidisciplinary research on a specific crop and/or problem area will be encouraged. The program will emphasize the identification of the best varieties of high value crops for Uganda's conditions, pest and disease control measures to meet export requirements, post harvest handling technologies and appropriate packaging to meet export quality standards. In some cases, research results from other countries may be applied to the development of Ugandan NTAE crops. Special attention will be given to identifying innovations that have been successfully used in similar agro-ecological zones as these may require little or no adaption. Priority will also be given to developing environmentally sound and sustainable practices for improved NTAE production and processing.

The research will be demand-driven, i.e., research topics will be determined by the private sector, and the ADC will award research contracts on a competitive basis. Public sector institutions such as NARO affiliates and Makerere University, private sector firms and growers associations will be eligible to compete. IDEA technical advisors and/or NARO, if appropriate, will disseminate research results through associations and other exporter and producer networks.

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D.3b Customized Technical Assistance

The ADC will provide highly specialized short-term one-on-one technical assistance to firms and producers to address specific constraints. Such tailored assistance will usually be provided during start-up of a new export crop or during expansion of an operation that involves introducing new technologies and procedures, e.g. rose production or papain processing. Firms receiving this type of assistance will generally have been working with the ADC on several aspects of their business (e.g., identifying financing, establishing market contacts) and their needs will be well known to project advisors. The ADC will determine the types of expertise needed and the level of effort required on a case-by-case basis. If the constraints are related to all firms in a particular subsector, technical assistance will be provided to all. When the assistance is firm-specific, the project will be careful to avoid the appearance of favoritism; to the extent possible, firms at similar levels of development within a given commodity group will be assisted equally so that no one firm gains an unfair competitive advantage over others as a result of the project.

Introduction or expansion of NTAE crops with high quality standards using an outgrower system requires constant attention, especially in the early stages. Peace Corps Volunteers (PCVs) cooperating with the IDEA project will provide long-term in-country support to these types of initiatives. In general, a PCV will be assigned to a community where an outgrower system is being developed, and the PCV will work collaboratively with IDEA technical advisors and other extension agents (either private sector or MAAIF-supported) to develop and improve production and postharvest handling techniques. Potential assignments include the Kabale snow pea project and the Kasese papain project.

D.3c Market Information and Market Contacts

High value exporters need a continuous flow of timely market information. Their information needs include prices and quality standards, import regulations, packaging and labelling requirements, the importing country's banking and commercial practices, import and distribution channels, transport and forwarding services and trade promotion and advertising opportunities. The project will support the provision of commodity specific market information. Since a variety of market information activities are already underway, the ADC will conduct a thorough analysis to determine where the gaps are and what market information would be most benefical for project-supported commodities. Where possible, existing systems will be improved where the information services currently in place are unsatisfactory in terms of timeliness, credibility, and relevance to the private sector. Project resources will be available to tap into a variety of information databases and services that provide up-to-the minute price and other information. Any market information systems established or strengthened by the project must incorporate mechanisms for sustainability. For the high

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value exports, exporter associations might be appropriate vehicles for setting up sustainable specialized market information services.

The ADC will also facilitate introduction of local NTAE firms to potential buyers, service providers, and joint-venture partners. ADC personnel will work closely with the UIA and international trade groups to ensure that NTAE firms are able to maximize their exposure to potentially productive market contacts through such activities as market visits, trade fairs, database development, and follow-up communications. For example, the annual ANUGA trade show, held in Germany, brings together food buyers from all over Europe. It is the single largest food trade show in Europe and is the prime trade show for making deals between producers and buyers.

The ADC will organize a limited number of carefully tailored market tours to the United States, Europe or other regions for Ugandan entrepreneurs. Major world market buyers and potential joint-venture partners will be identified and contacted in advance. Detailed customized programs will be prepared for each Ugandan entrepreneur including, where feasible, practical experience and training in appropriate overseas firms.

Major Inputs: A long-term expatriate high value production and marketing advisor (5 years) and a long-term Ugandan high-value production and marketing advisor (5 years) will have principal responsibility for implementing this component. They will have two field assistants. The research, education and training advisor will manage the competitive research program and organize in-country training. The following amounts are budgeted for activities in this component: $570,000 for competitive research contracts, $200,000 for market information systems and commercial databases, and $71,000 for in-country support costs for PCVs. A portion of short term technical assistance, in-country and external short-term training and commodities will also be used for this component.

D.4 Business and Financial Linkages

Sourcing capital for business start-up and expansion is a problem for many small and medium-size firms in Uganda. Often venture capital and business development loan funds set up by government and donor groups have a minimum capital investment limit that is too high to be accessible to small and medium-size businesses, even though they would be a good investment risk for the financial institution. The objective of the business and financial linkages component is to assist NTAE firms to develop sound business plans and present them to appropriate funding sources in order to bring viable projects to fruition.

The ADC will assist NTAE firms to develop sound business plans and present them to appropriate funding sources. The project will fund contracts with local consulting firms to prepare

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feasibility studies and business plans and do related financial work. Entrepreneurs will be expected to contribute at least 10 percent of the cost of this work. The ADC's Business/Financial Advisor will work with local and international financial institutions, joint-venture partners and/or venture capital sources to match entrepreneurs with financing sources.

The Africa Project Development Facility (APDF) is a Nairobi-based organization that specializes in facilitating financial linkages (but does not itself provide financing). It prefers projects with a value higher than $500,000, but will consider a minimum value of $250,000. Over the last two years, APDF has provided financial linkage services to eight Ugandan export projects under a grant from ANEPP. IDEA will provide grant funding to continue this relationship on a limited basis for export projects that meet APDF's size requirements.

The ADC will help exporters explore potential joint-venture opportunities in cooperation with existing efforts underway at UIA. A close working relationship between the ADC and UIA will help build UIA's agribusiness capacity to seek and arrange more agribusiness opportunities.

There are a number of emerging NTAE enterprises that are potentially viable, but due to their size are currently unable to properly package and present their program for financing. The ADC will utilize its core staff along with short-term technical expertise and, in some cases, small loan guarantees, to assist these smaller NTAE firms to get a start in business. While the majority of firms receiving this type of assistance are likely to be in the high value export sub-sector, there are also good business opportunities such as grain processing that impact on low-value exports. Firms providing vital goods and services (e.g. packaging) to exporters would also be eligible for assistance.

The ADC will establish a small grant fund for testing the feasibility of and "jump-starting" export-related ideas or activities. The rationale for these grants is that testing or initial start-up of an export activity can entail a high level of risk that makes it difficult for an entrepreneur to find commercial financing and, furthermore, the activity may have benefits that are broader than an individual firm (e.g., if a trial shipment of a commodity establishes that Uganda can produce to certain quality standards, other firms may begin exporting that commodity.) Exporters and/or producers might use grants for activities such as developing market contacts, obtaining seed, planting or packaging materials, testing a new variety or making trial shipments.

The ADC will be responsible for developing clear and transparent criteria and procedures for awarding grants and for evaluating the effectiveness of the grants and, if necessary, revising procedures on a periodic basis. Criteria should include the anticipated value of exports generated, the potential impact of

the export activity on rural incomes, the extent to which women will benefit from the proposed activity, the likelihood that other firms will benefit from the findings of the activity and the demonstrated need and commitment of the entrepreneur/firm. The Project Steering Committee (see Section IIB, Project Management) will approve the selection criteria and all grant awards. It is anticipated that most grants will be in the range of $5,000-10,000.

Major Inputs: The long term expatriate agribusiness and finance advisor (3 years) and the long term Ugandan business advisor (5 years) will have principal responsibility for implementing this component. APDF will receive a grant of approximately $740,000 to work on financial linkages for larger firms. $250,000 is budgeted for the small grant fund. A portion of local and external short term technical assistnce will be used for this component.

D.5 Strengthening Associations

IDEA will use exporter, trader, and producer associations as efficient channels for assisting individual farmers and firms and will also strengthen the capacity of these associations to provide services to their members. By the end of the project, these organizations will have developed the capacity to maintain effective support services for their clients, taking over many of the functions initiated by the ADC. This could include market information and contacts, customized technical assistance and training courses, some research/consulting services such as feasibility studies, information exchanges, and government lobbying efforts.

The project will enhance the capacities of the associations in a graduated, responsive fashion. Strong individual farms and firms make strong associations, not vice versa. The nature and level of assistance to individual associations will depend primarily on the degree of member support they enjoy, as well as the extent of their involvement in NTAE development. Associations may submit proposals for assistance to the ADC; activities and funding levels will be approved by the Project Steering Committee.

There is a plethora of private associations in Uganda. In the IDEA project design workshop, association representatives suggested that they should form a loose consultative council to permit coordination and information exchange among these various organizations without adding to bureaucracy. IDEA will encourage such rationalization of the association structure as it develops from the bottom up.

Major Inputs: All the long-term technical advisors will work with associations as appropriate, although one will be designated as the lead advisor for this component. Short-term technical assistance and training will be available to association leaders and staff in areas such as planning and management. $60,500 is

budgeted to purchase computers, printers and other commodities that will help associations provide better member services. No vehicles, staff salaries, office space or other recurrent costs for associations will be financed by the project.

D.6 Education and Training

The Faculty of Agriculture and Forestry at Makerere University (MU) is the principal source of professional-level manpower for Uganda's agriculture sector but its programs are heavily oriented towards traditional food and export crops. IDEA will strengthen MU's capacity to prepare students for jobs in the NTAE industry. MU will also conduct some of the in-country training funded by the project. Other training activities will be conducted by project advisors and through other training institutions.

D.6a Faculty of Agriculture and Forestry

IDEA will assist the departments of Crop Science, Food Technology and Agricultural Economics to strengthen their programs in areas such as postharvest handling, plant protection, horticulture crop production, floriculture, food processing and horticulture marketing. The ADC will provide U.S. university faculty to teach and work with Makerere faculty on curriculum development and M.S. degree training for Makerere faculty in areas such as postharvest handling, plant pathology, general horticulture production/cultural practices, grain/oilseed food technology, horticultural product food technology and horticulture product marketing. The project will also sponsor an internship program for undergraduate students to gain practical experience by working in NTAE operations during their long break.

Major inputs: The following amounts are budgeted for assistance to MU: $423,000 for faculty training (approximately 6 M.S. degrees), $588,000 for U.S. faculty to work at MU, $180,000 for teaching-related commodities and supplies and $33,000 for the student internship program. Faculty who have already received one Masters level degree will not be eligible for degree training and PhD programs will not be funded.

D.6b Training

A variety of in-country and short term external training will support the development of NTAEs. Many of the proposed export crops and commodities require highly specialized skills and technologies which are not available in Uganda. Training activities will be tied directly to the needs of the private sector and the emphasis will be on practical and applied training of trainers and preparation of technical information materials, in appropriate languages, for participants. All stages of the chain from planting to marketing will receive attention, including crop specific production practices, pest management, harvesting, postharvest handling, transportation, value-added processing and marketing.

Representatives of NTAE firms and producers as well as appropriate MAAIF extension officers and other public sector officials will participate in workshops, seminars, observation tours, trade shows and associations meetings, (UFFVA, PMA, ANUGA) and on-farm demonstrations (field days). Short internships may be established for NTAE personnel to work at firms in Kenya, Europe, or the U.S. Farm management training may be provided by regional training centers or business management schools such as ESAMI.

Major Inputs: The training program will be developed and managed by the long-term expatriate research, education and training advisor (3 years) and the long-term Ugandan research and training specialist (5 years). These individuals will work closely with low and high value production advisors to develop annual training plans. $845,000 is budgeted for in-country training and workshops and short-term external training and study tours.

SECTION II: IMPLEMENTATION PLAN

A. Implementing Entities: Roles and Responsibilities

A.1 GOU Entities

The grant agreement with the GOU will be signed by the Ministry of Finance and Economic Planning. The Ministry of Trade and Industry (MTI) will be the lead GOU implementing ministry; day-to-day contact between the project and MTI will occur through the restructured UEPC (referred to here as the Uganda Export Development Board or UEDB[8]), once it is established. MTI/UEDB has the mandate to oversee all of Uganda's export promotion activities, so it is therefore appropriate that MTI/UEDB oversees this project. The director of the UEDB, or his designee, will be a member of the Project Steering Committee (see below) and will communicate the priorities of UEDB/MTI.[9] The contractor Chief of Party (COP) will spend 10-20 percent of her/his time at UEDB working with the UEDB director and staff on agribusiness-related matters.

The MAAIF will also participate in project implementation through the National Agricultural Research Organization (NARO) and involvement of MAAIF extension officers in certain project activities. Because of the project's focus on agricultural crops, it will be important for activities to be coordinated with those of the MAAIF and other donors working with the MAAIF, especially for maize and beans. For this reason, the Director of Planning in the MAAIF will also be a member of the Project

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[8] The GOU has not formally decided to re-name UEPC; the name "UEDB" is used here to distinguish the yet-to-be-created institution from the UEPC.

[9] Until such time as the UEDB is established and a director appointed, the MTI may appoint a representative of it's choice.

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Steering Committee.

A.1a NARO

NARO is the umbrella entity that coordinates and programs public sector agricultural research in Uganda. It is responsible for providing research and training grants and approving research strategies to the individual research institutes and disseminating research results. NARO will receive funding directly from A.I.D. under IDEA to implement the maize and bean research program at Namulonge Agricultural and Animal Production Research Institute (NAARI) and Kawanda Agricultural Research Institute (KARI) respectively. NARO, through KARI, may also compete for research contracts for high-value crops. KARI has responsibility for improving the national capacity to carry out horticultural applied research and improving the productivity of fruits and vegetables for local and export markets. Research on spices and floriculture is also in its mandate. The Director of NARO or his designee will be a member of the Project Steering Committee. This will facilitate integration of the research program with other project activities. The grant to NARO will include adequate funds for annual audits.

A.1b MU Faculty of Agriculture and Forestry (FAF)

The FAF at Makerere University will implement the education component of the project, with assistance from the ADC, and will also implement some portion of the in-country training program. The ADC prime contractor may choose to identify a specific U.S. university to be a subcontractor for the MU activities. MU may also compete for high value crop research contracts since its faculty have capacity and facilities to conduct some research.

A.2 The ADC

The Agribusiness Development Center, a temporary, autonomous project implementation unit established under the project, staffed and operated by the AID contractor and subcontractor(s) will have overall responsibility for implementing all project activities except for NARO maize and bean research, AID buy-ins, APDF activities and evaluations. The contractor must, however, coordinate and integrate ADC activities with those cited above that will not be under direct ADC control. For example, the low value production and marketing advisors will need to work closely with the maize and bean research programs, and the Business/Finance Advisor will need to liaise with APDF.

Day to day operations of the ADC will be the responsibility of the prime AID contractor and subcontractors under the direction of the Chief of Party (COP). The AID contractor, hereafter referred to as the ADC, is responsible for delivering long and short-term technical assistance, long-and short-term training, study tours, project commodities, competitive research contracts, the seed multiplication and distribution and NGO extension programs, the small loan guarantee fund, market information for

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both low and high-value non-traditional export commodities, and environmental and project impact and performance monitoring. Funds for implementing all the aforementioned activities will be included in the contract and administered by the contractor. USAID will reserve funds for the direct procurement of certain project commodities for contractor support, particularly for vehicles and household furniture that must be procured before the contractor team arrives. Once the contract is let, all commodity procurement will be handled by the contractor.

A.3 Other Implementing Entities

The Africa Project Development Facility (APDF) will provide financial linkage services for a small number of IDEA-assisted exporters. USAID will execute a direct grant to APDF for this purpose. APDF will assign one of its investment officers to work with the ADC and will commit 5 person days of the officer's time each month to IDEA clients. APDF might also engage short-term consultants to assist in the development of a particular project; funding for these consultants will be included in the grant. The grant will also include adequate funds for annual audits.

The US Peace Corps will provide volunteers (PCVs) sited in villages to work on specific extension and agribusiness development activities in the area. For example, a volunteer might assist in establishing an outgrower system for a specific crop. Approximately 10 PCVs will participate over the life of the project. PCVs will have Ugandan counterparts and will be supervised by ADC staff. IDEA will fund housing, furnishings, travel and other necessary costs of supporting the volunteers through the ADC.

B. Project Management and Coordination

The **Project Steering Committee (PSC)** will provide direction, coordination and approval for all project activities and will be a forum for finding solutions to implementation problems. The PSC reviews and approves annual workplans and budgets, clears all individual long-and short-term trainees sponsored by the project, approves commodities for project procurement and provides general oversight and direction to the ADC. It will be composed of the following individuals:

- Director, UEDB
- IDEA Project Officer, USAID
- Chief-of-Party, IDEA Contractor
- Director, EPADU
- Director, NARO
- Director of Planning, MAAIF

While the PSC is more likely to function well if it is kept small, it may become appropriate to add other members. The PSC will meet on an as-needed basis, but at least once a month.

The **Project Advisory Committee (PAC)** will be an informal group

that may be convened by the ADC to provide advice and feedback to the ADC and act both as a sounding board and a mechanism for information-sharing and coordination amongst a variety of entities involved in NTAEs. The PAC may include representatives from UIA, GOU ministries, MU, private sector associations, other donors and smallholders. The PAC should have no more than 10-12 members with at least 3-4 of them being women and/or smallholders.

C. AID Project Management

Overall USAID/Uganda responsibility for managing the project will rest with the Agriculture and Natural Resources (ANR) Office. A US Direct Hire Agriculture Development Officer (ADO) will be the project officer with overall responsibility for project supervision and management. The ADO will be assisted by a US PSC project manager (who will divide her/his time between IDEA and ANEPP) and a FSN PSC assistant project manager. The US PSC project manager will have prior experience managing USAID projects and will be retained for the first year and a half of project implementation. Subsequently, the FSN PSC and ADO will jointly manage the project. The PSC project manager will prepare all project documentation such as PIO/Ts, PIO/Cs, Project Implementation letters and routine correspondence with the grantee and contractor. The FSN project manager will assist with preparing project documentation and monitoring. The ADO will be a member of the Project Steering Committee and will serve as chairman of the contractor technical selection committee.

An IDEA Project Management Committee comprised of the ANR Office Chief, the ADO, the Controller, the PPD Office Chief, the GDO Office Chief and the Deputy Director will be established to review progress and facilitate prompt mission actions and decisions related to project implementation. Such a committee may improve efficiency, particularly in the start-up phase of the project, and will meet regularly (approximately once a month) as long as it continues to be useful.

The USAID training officer in the Program and Project Development Office will process visa applications and advise the contractor on AID Handbook 10 policies and procedures, but the contractor will be ultimately responsible for following AID rules and regulations.

D. Implementation Planning and Monitoring

Within three months of contractor mobilization in Uganda, and annually thereafter, the ADC contractor shall prepare an annual work plan which will include activities proposed for each project advisor and project component and a detailed budget estimate. NARO will do the same for the maize and beans research program. Draft workplans will be submitted to USAID and the PSC for review and comment; final workplans will be approved by the PSC. Field activities and subsequent voucher billings to USAID for work performed under the contract/grant will be presented in a manner

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consistent with the activities and budget contained in the approved work plans.

The workplans described above will be the key project implementation planning and monitoring tool. Monitoring project outputs and impact will be the responsibility of the ADC. The Request for Proposals will stipulate that each technical proposal submitted in response to the RFP shall include a project output and impact monitoring and reporting system consistent with the project goal and purpose and the proposer's technical approach. This system shall be used to guide project implementation and data from this system will be incorporated annually into a larger USAID program impact monitoring and reporting system (see Section IV, Monitoring and Evaluation Plan for details.)

E. Implementation Schedule

Month 1	Project Paper Approved - USAID/Uganda Grant Agreement Prepared and signed
Month 2	RFP Prepared PIO/T for Institutional Contractor Issued CPs Met
Month 3	RFP Issued - REDSO PIO/Cs for vehicles and res. furniture prepared Position for US PSC advertised - REDSO Position for FSN PSC Advertised - USAID
Month 4	Vehicles ordered Residential furniture ordered Environmental Impact Reviews of commodities completed Res. Leased for US PSC and make ready contracts awarded
Month 5	Bid Proposals Received Proposals Reviewed FSN and US PSCs hired
Month 6	Contract Negotiations
Month 7	Office Space rented/Short term TA Apt. Leased Contract Awarded Residences for TA leased; upgrades begun
Month 9	Vehicles & Household Furniture Arrives Grant to APDF Executed Grant to NARO Executed
Month 10	Contract team arrives Orientation Workshop Held PSC Monthly Meetings Begin ADC support staff and field assistants hired
Month 11	Makerere U./NARO Commodity Plan Developed Workplans and training plan developed

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Refine M & E Plan for IDEA

Month 12	Workplans Approved Makerere Univ. & NARO Equipment Ordered Plan Developed For Seed Multiplication Program Outreach Program with NGOs organized Establish MIS System
Month 13	Carry Out Targeted Commodity Baseline Survey U.S. Professor Arrives at MU
Month 14	First In-Service Workshops Organized Quarterly review meetings begin
Month 16	MU/NARO Equipment Arrives
Month 17	First Msc candidates depart for external training
Month 22	Second Annual Plan Developed (Plans Developed Annually) First Annual Progress Review Held Peace Corps Volunteers Arrive
Month 23	Second Group of MSc Candidates departs
Month 34	Conduct Mid Term Evaluation Second Annual Review Held
Month 35	Third Group of MSc Candidates departs
Month 46	Third Annual Review
Month 58	Fourth Annual Review
Month 59	All long-term training completed
Month 68	Final Project Evaluation
Month 70	ADC Contract Completed; TA Departs
Month 72	PACD

F. Training Plan

A modest amount of long-term M.Sc. academic training in U.S. universities, primarily for faculty in selected academic departments at Makerere University but possibly for research personnel as well, is contemplated as well as formal off-shore short-term technical training, in-country training and workshops and study tours for individuals associated with export agriculture. Six M.Sc. degrees for three MU departments (Crop Science, Food Technology and Agricultural Economics) will be funded. Approximately 15 formal U.S. or third country short-term technical training programs are planned for members of

agribusiness exporting and production companies, MU faculty, NARO-affiliated research organizations and perhaps some government export agency personnel. Finally, about five carefully targeted and coordinated study tours per year will be conducted for exporters, producers and others involved in export agriculture to other countries where export agriculture is in a more advanced stage or in particular market countries. All trainee scheduling, selection, placement and monitoring is the responsibility of the project contractor and shall be included as part of the annual work plan. Trainee selection criteria shall be consistent with USAID Handbook 10 and GOU/MU policy and be mutually agreed upon in writing by the PSC. All other USAID procedures, allowances and policies stipulated in Handbook 10 shall be followed. The participating academic departments at MU will forward M.S. candidate nominations along with complete documentation to the PSC for review and final selection. A non-funded PIO/P will accompany each nominee. The ADC will handle all logistics and funding except for visa formalities, which shall be the responsibility of the USAID training officer.

Regional, US and other third country short-term training for GOU officials, private sector agribusiness persons and faculty of MU is an important project input. The training plan that is approved as part of the ADC work plan shall identify the types of training planned, number of trainees and training location. Procedures for selecting candidates for short-term training abroad will be similar to those for long-term training. Study tours abroad for agribusiness people including producers, processors, marketing participants and others who would benefit from exposure to particular agricultural production and marketing systems shall also be organized and implemented by the ADC. Candidates for these types of study tours may be asked to cost share their trips based on criteria and procedures developed by the ADC and approved by the PSC.

In-country workshops and seminars for various purposes are planned. These activities will range from project team-building exercises to hands-on computer software applications, the dissemination of project information and promotional meetings on production and marketing of certain commodities. These activities will also be included in the annual workplan and budget, and once the workplan is approved by the PSC, the contractor will proceed to plan and implement these activities without further formal review and approval.

G. Small Grants

The contractor will manage a small grant fund that is designed to support high-risk and innovative export agriculture initiatives by private sector firms, groups or individuals. Grants will usually be between $5,000 and $10,000 each but exceptional circumstances may justify larger grants. The PSC will approve all grants and no entity will receive more than one grant during the course of the project. Funds for this purpose will be included in the prime contract and the contractor will be

responsible for setting up grant application and review procedures, establishing appropriate selection criteria and monitoring the activities funded by the grants. All approved proposals will be subject to environmental review prior to award, in accordance with applicable A.I.D. and (soon to be established) GOU requirements.

H. Competitive Research Contracts

IDEA will support a sizeable demand-driven contract research program in priority agriculture export fields. General research priority areas have been identified in this PP; priorities will be further refined by the ADC through consultation with the private sector and NARO. The ADC will develop and the PSC will approve specific research proposals on the priority topics. Given the short life of project, all proposals must be short-term, applied research. Competition will be limited to Ugandan firms and organizations. A.I.D. policy precludes sub-contracting for services with government-owned organizations (e.g. NARO) unless the eligibility of such entities has been established by a waiver. A waiver to make government-owned entities eligible is justified if the competition for obtaining a contract will be limited to host country firms or organizations. Since it is anticipated that NARO will compete for research grants, the Mission Director, USAID/Uganda will be requested to approve a waiver on the grounds cited above to make NARO an eligible sub-contractor for this project.

The ADC will formally advertise requests for proposals. The ADC will evaluate and select proposals on previously established technical and cost criteria; selections will be approved by the PSC (except for the NARO representative if NARO is among the contenders for a given contract). The prime contractor will be responsible for executing and funding all research contracts.

I. Procurement Plan

I.1 Responsible Agency

The Prime Contractor, who will be under direct AID contract, will be responsible for procurement of commodities and management of sub-contracts with both local and US institutions. The services of the Prime Contractor will be procured using full and open competition. An advertisement for the Request for Proposals (RFP) will be put in the Commerce Business Daily. The Prime Contractor will be responsible for procurement of all services and equipment for the project office, which will be known as the Agribusiness Development Center (ADC). The implementing agency will be the new, semi-autonomous export promotion institution linked to the Ministry of Trade and Industry. The authorized source and origin will be Geographical Codes 000, 935 and 899.

I.2 Services:

These will consist of:

i) Long-term Expatriate Advisors

- Chief of Party, 5 years
- High Value Specialist, 5 years
- Low Value Production & Marketing Advisor, 3 1/2 yrs
- Research/University/Training Specialist, 3 years
- Agribusiness/Finance Specialist, 3 years

ii) Long-term Local Advisors

- High Value Horticulture Specialist, 5 years
- Maize/Bean Production/Marketing Specialist, 5 years
- Research/Training Specialist, 5 years
- Business Advisor, 5 years
- Monitoring/MIS Specialist, 5 years
- Field Assistants (6)

iii) Short-term Technical Experts

iv) Training

- Long term training in the US
- Short term training in authorized countries
- Study tours
- Local training courses and workshops

v) Other services:

- Contract Research on NTAEs

I.3 Commodities

The project will finance vehicles, office equipment, teaching materials and laboratory equipment. Because there are no spare parts and service capabilities in Uganda for U.S. manufactured vehicles, non-U.S. Code 935 vehicles for which there are spare parts and service available locally will be financed. If, however, during the course of the project spare parts and service capabilities become available for U.S.-manufactured vehicles meeting the technical specification requirements of the project, such U.S. vehicles will be purchased as needed.

The project will also finance furniture and appliances for the household use of the long-term technical assistance contractors. These items (washing machines and clothes dryers, generators, refrigerators, freezers, ranges and other kitchen and household appliances) are listed as ineligible or only eligible for industrial, institutional or educational use in the A.I.D. Commodity Eligibility Listing (Handbook 15, Appendix B). However, pursuant to paragraph 4A1C(1)(a) of Handbook 1, Supplement B, "Commodities which are ineligible under the 'AID Commodity Eligibility Listing' may be financed if included in the

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project approval document." Therefore, upon approval of this Project Paper, the financing of furniture and appliances for the technical assistance team members' houses will be authorized under the project.

The following is an illustrative list of commodities and the anticipated Source/Origin of the commodities which will be needed to reach project objectives.

	Qty	Enduser	Source/O	Est. Cost $	Yr. of Purch.
a. Vehicles:					
.2WD & 4WD field vehicles for Contractors	8	As determined by ADC	Code 899	190,000	FY94
.Sedan car	1	ADC	Code 899	19,000	FY94

				209,000	
b. Office Equipment for ADC					
.Computers	8	ADC	Code 000	20,000	FY94
.Laser Print.	3	ADC	Code 000	5,400	FY94
.Photocopier	2	ADC	Code 935	20,000	FY94
.Facsimile	1	ADC	Code 935	3,000	FY94
.Software		ADC	Code 000	8,000	FY94
.Filing Cab.	4	ADC	Code 935	2,000	FY94
.Desks&Chairs	25	ADC	Code 935	30,000	FY94
.Typewriters	4	ADC	Code 935	4,000	FY94
.Calculators	4	ADC	Code 935	600	FY94
.Conf.table & .20 chairs	1	ADC	Code 935	7,000	FY94

				100,000	
c. Household Furniture & Equipment for the TAs*					
.Generators 16KVA (sets)	6	ADC	Code 935	90,000	FY94
.Furnishings & Appliances	6	ADC	Code 935	270,000	FY94

				360,000	

*Note: Up to three sets of furnishings and appliance sets may be available from MFAD inventory.

d. Technical Equipment/Teaching Materials

The project will fund $180,000 worth of computers, laboratory equipment and teaching material for Makerere University. This equipment will all be purchased in the second and third years of the project once the needs of the departments involved are assessed. An illustrative list of commodities is provided in Annex J.

e. National Agricultural Research Organization (NARO)

While much of the support to NARO for high value commodity

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research will be provided under contract agreements, it is envisaged that some basic equipment such as a small irrigation system, cold store and nursery green house will be provided to Kawanda Research Station to support all contract research activities. $100,000 is budgeted for this purpose.

I.4 Purchasing Entities

Different entities will be purchasing services and commodities for the project. They are:

i) **Prime Contractor:**

Will be procuring all services, furniture and equipment for the project office and technical equipment and teaching material for Makerere University.

A.I.D. encourages the Prime Contractor to sub-contract with US universities and Ugandan firms for services. At least 10 percent and preferably more of the value of the prime contract will be represented by sub-contracts to Gray Amendment (minority owned) firms, Historically Black Colleges and Universities and/or Small Disadvantaged (8a) firms.

ii) **USAID**

Motor vehicles and the household appliances and furniture for the homes used by the Technical Assistance Team Members will be purchased by the USAID. The vehicles will be bought through a US Regional Procurement Services Officer. The household furniture and appliances will be purchased under the same arrangement as that used by USAID with Operating Expenses funds.

I.5 Procurement Procedures

i) Services

Expert Technical Assistance - A PIO/T will be issued with detailed scopes of work. The PIO/T will seek to obtain a contract for services. A fully competitive RFP will be issued and advertised in the CBD and AID Bulletin.

I.6 Source/Origin

The authorized source/origin for commodities and commodity-related services for the project is AID Geographic Code 935. Under the Foreign Assistance legislation, projects funded under the Development Fund for Africa are exempted from AID's normal source/origin restrictions. However, the legislation also provides that preference be given to goods and services from the US and then from other Code 935 source/origin countries. All data processing equipment will be purchased in the US.

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I.7 Receipt and Utilization

All commodities purchased under the project will be consigned to the Prime Contractor/IDEA project. The Prime Contractor will enter into an agreement with a freight forwarder/clearing agent in Kampala to clear and physically receive all project consignments. USAID will assist the Prime Contractor in obtaining the necessary customs clearances for these project commodities. All goods purchased will be titled to IDEA project. Receiving reports acknowledging receipt will be prepared by the appropriate ADC official, for all AID financed commodities purchased for the project. At the completion of the project, ownership of the goods which will be purchased for the use of the technical assistance team will be negotiated with the appropriate ministries.

I.8 Shipping

Project commodities will be shipped on any Code 941 flag vessel except for consignments shipped from US Gulf of Mexico ports. At least 50% of the consignments shipped form those ports will be shipped on US Flag vessels. PIO/Cs will indicate the authorized flag registry for each particular order.

SECTION III: COST ESTIMATE AND FINANCIAL PLAN

A.I.D. will provide $25 million from the Development Fund for Africa over the six year life of the project. The GOU's contribution to the project will be $17 million in World Bank loans for activities directly related to the project, Ush 1 billion (approximately $845,000) in cash. The GOU will therefore contribute 42 percent of the total project cost of $42,845,000.

A. A.I.D. Financial Plan

Table 1 contains a summary of the A.I.D. Project Budget. A detailed budget, including a breakdown between dollar and local currency costs, is provided in Annex B. Table 2 provides a summary of estimated obligations and expenditures by U.S. fiscal year. Table 3 illustrates the proposed methods of implementation and financing.

TABLE 1: SUMMARY AID BUDGET
($000)

Agribusiness Development Center (includes tech.assistance, operations, overhead, other costs)	$17,948
Training	1,302

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Commodities	691
Research & Extension	2,570
Buy-Ins to AID Projects	300
Impact and Environ. Monitoring	500
Audit and Evaluation	385
APDF	744
USAID Project Management	560
TOTAL:	$25,000

TABLE 2: OBLIGATIONS AND EXPENDITURES BY FY
(in $000)

FY	93	94	95	96	97	98	99
Oblig	1,000	4,500	4,500	6,000	6,000	3,000	
Expend		3,187	5,149	5,129	4,777	4,377	2,381

TABLE 3: METHODS OF IMPLEMENTATION AND FINANCING

Project Element	Method of Implementation	Method of Financing	Amount ($000)
ADC -Tech.Assist. -Training -Commodities -Hi Value Res. -Seed Mult/Dist -NGO Exten. -Sm. Loan Fund -Mkt. Info. -Impact/Environ Monitoring	Contract -sub-contracts -sub-contracts -sub-cont/grant -sub-grants	Direct Pay	20,742
NARO -Maize/Beans Research	Grant	Direct Pay	1,559*
APDF	Grant	Direct Pay	803*
AID Buy-ins	Contract	Direct Pay	300
USAID Proj.Mngt	PSCs	Direct Pay	560
EIRs, Evaluation	IQCs	Direct Pay	467
Commodities Purchased by AID	Purchase Order and Contracts	Direct Pay	569

* Grant totals include $59,000 per grant for audits.

B. Host Country Financial Contribution

The GOU's contribution to the IDEA project will exceed the 25

percent required from host country grantees. The GOU will receive a World Bank loan of $12 million for the Uganda Export Promotion Project that will be implemented over the same period of time as IDEA and that will support the Uganda Export Development Authority, the key GOU export institution. The IDEA project will have direct links to UEDA, and the activities of the Uganda Export Promotion Project will complement and contribute to the achievement of IDEA's purpose. The GOU will also use World Bank loans amounting to $5 million to strengthen programs at NARO and in-service programs at Makerere University that bear directly on non-traditional agricultural export development. For example, IDEA will use Makerere's enhanced short-term training capacity to implement a major part of its in-country training program. It is therefore appropriate to count the value of these World Bank loans, $17 million in total, as a host country contribution.

The GOU will also provide 1 billion Ugandan shillings over the life of the project to support project activities. The GOU will program Ush 200 million each year beginning in GOU FY 94/95; the nature of the activities to be supported by the GOU contribution will be decided by the Project Steering Committee on an annual basis.

The private sector will contribute to the project through fees and cost sharing of some activities although it is not USAID's intent to formally count these resources as part of the host country contribution.

SECTION IV: MONITORING AND EVALUATION PLAN

A. Introduction

The IDEA Project Monitoring and Evaluation (M&E) Plan will track and assess project performance and impact. It will provide periodic feedback on progress towards the attainment of the project outputs and purpose. This information will be used by USAID, the implementing contractor, the GOU, and the private sector in adjusting efforts to keep the project on course, as well as for reporting results to AID/Washington.

Monitoring and evaluation of this project focuses on private sector components, but will also include analysis of public sector activities that influence the enabling environment. Increased non-traditional exports will be tracked by the ADC and USAID utilizing their own and external resources where applicable. USAID is responsible for tracking national aggregate people-level impact through increases in rural income. The ADC will also track incomes for people engaged in production/marketing of targeted commodities. Monitoring and evaluation of private sector activities will be led by the ADC with the assistance of Ugandan business and trade associations. USAID will have overall M&E responsibility and will review all reports. The hierarchy of M&E

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responsibilities is shown in Exhibit IV-1 below.

Exhibit IV-1

Monitoring and Evaluation Responsibilities	
Who:	**USAID/Kampala**
What:	* Increased Income (national aggregate) * Increased NTAEs * Environmental Monitoring and Mitigation
How:	* Household expenditure Survey * Supervise M & E * Improved Enabling Environment * Evaluations * GOU Monitoring/Public sector export data * Environment Impact Reviews (EIRs)
Who:	**ADC** Assisted by Trade/Business Associations
What:	* Improved Capacity of Firms to Export * Increased export of targeted commodities * Increased income from targeted commodities
How:	* Establish MIS for tracking ADC clients * Targeted commodity Baseline & Follow-up Surveys * Socio-Economic studies of commodity groups * Border trade studies * Environment Assessments * Quarterly reporting

This monitoring and evaluation plan is intended as a flexible guide rather than a strict recipe for M&E activities. As the project progresses, understanding of the non-traditional export environment and the best means to measure and assess it will develop together. Adjustments to the indicators and the methodology should be expected and indeed encouraged as a means of keeping in tune with project realities.

B. Monitoring

Monitoring will include tracking and reporting End-of-Project status (EOPS) indicators and outputs through conducting periodic surveys. Monitoring reports on results achieved will provide the baseline and progression of data required to measure achievement of planned outputs, data for USAID's annual Assessment of Program Impact (API), and information on people-level impact.

The project goal is **"to increase incomes, particularly those of rural men and women, from non-traditional agricultural exports."** The impact of export expansion will be assesed mainly through three goal level logical framework indicators:

* Increases in rural men's and women's household expenditure

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* Increases in incomes from production of agricultural non-traditional commodities actually exported
* Increases in value of non-traditional agricultural exports

USAID has completed a pilot baseline survey of household expenditures and will expand it to provide the baseline for rural men's and women's household expenditures. This survey is part of USAID's program monitoring and will be funded from other sources. The IDEA Project includes funding for Targeted Commodity Baseline Surveys that will establish initial levels of production, employment and personal income for the specific commodities IDEA will support. Follow-up surveys in the middle and at the end of the project will provide the necessary information to measure changes in income and returns to labor for men and women engaged in production of the targeted NTAEs.

The project purpose is **"to increase production and marketing of selected non-traditional agricultural exports."** Achievement of the purpose level indicators will be tracked through ADC records, GOU export and other relevant statistics and the Target Commodity Surveys mentioned above. The End-of-Project-Status (EOPS) indicators are:

* **Increase in farmgate value and export value of low value crops over the life of project.**

a. farmgate value of maize and bean exports increases to $4.6 million p.a. in 1999 from $2.5 million p.a. in 1993.

b. export value of maize and beans increases to $12.6 million p.a in 1999 from $6.6 million p.a. in 1993.

* **Increase in production and export values of high value crops over the life of project.**

a. export value increases as follows by 1999: cut flowers increase to $6 million p.a., vegetables increase to $370,000 p.a., essential oils and spices increase to $1.1 million p.a.

b. the number of smallholders and hired labor involved in production of high value commodities increases as follows: cut flowers by 1,400; vegetables by 1,000; essential oils and spices by 5,000.

* **At least 40% of high value producers, outgrowers, hired labor, and exporters are women.**

B.1 USAID and ADC Monitoring Responsibilities

The USAID ANR Office will conduct the rural household expenditure surveys and will track GOU export statistics. The office will develop a computerized database to track NTAE statistics in project year one. USAID will collect monthly data from various ministries particularly the Customs and Statistics Departments under the Ministry of Finance and Economic Planning. Reports will be designed to include data

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necessary for measuring IDEA goal and purpose-level indicators.

The ADC will conduct the Targeted Commodity Surveys, preferably through a sub-contract with a U.S. or Ugandan firm. For the sake of continuity, the baseline, mid-term and final surveys should be done by the same firm, if the performance remains satisfactory.

Fieldwork for the baseline survey should be completed within six months of the award of the technical assistance contract and the final report should be completed within eight months. Significant participation of GOU and private organizations should be expected. The mid-term survey should be conducted in the first half of year three, to permit analysis and report writing before the USAID API submission in October. Fieldwork for the final survey should be carried out in time for the results to be used in the final evaluation of the project. Details on the design of the Targeted Commodity Surveys are provided in Annex M.

The ADC will track accomplishment of outputs and output indicators as set forth in logical framework with the cooperation of the various relevant business and trade associations and the assistance of long-term technical assistance personnel. The ADC will contract a short term management information system (MIS) specialist to assist it in setting up a reporting system and database and and provide training for ADC personnel in database maintenance and modification. The ADC will have a long term local monitoring specialist who will be responsible for continuous data collection and maintenance of the MIS.

B.2 Environmental Monitoring

The monitoring plan described above tracks the project's progress towards the achievement of its stated economic development goals and objectives. The IDEA Project will also identify, monitor and evaluate any significant adverse environmental impacts, i.e., physical, biological and/or chemical effects, resulting from project-related activities. The general rationale and framework for the **Environmental Monitoring, Evaluation and Mitigation Plan (EMEMP)** are provided in the Initial Environmental Examination (IEE; see Annex I).

The EMEMP consists of three major activities: (1) Environmental Impacts Reviews (EIRs) of each of the five selected NTAE target sectors to develop accurate baseline information and key environmental indicators for continuing environmental M&E efforts, and to develop general mitigative guidance for future target sector development; (2) a continuing environmental M&E program, closely integrated with the greater project M&E plan described above, to monitor the environmental status of NTAE development in Uganda and effect any required mitigative measures in a timely manner; and (3) a procedure for the Environmental Review of new entrants into the NTAE sector to add to the M&E database and to provide more specific mitigative guidance as development plans and

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proposals become more definite.

USAID has overall responsibility for successful EMEMP implementation, but the technical assistance contract will include funds for assessment of environmental impact. The inital EIRs will be conducted prior to the award of the contract, but follow-up activities will be integrated into ADC activities. Ongoing USAID M&E activities associated with its Action Program for the Environment (APE) and greater GOU environmental monitoring and assessment efforts currently underway through the National Environmental Action Plan (NEAP) Secretariat will contribute to USAID and ADC environmental monitoring efforts. This joint approach to meeting project environmental M&E requirements provides for an efficient and effective application of resources by allowing IDEA Project staff to concentrate on the plan's NTAE-related information requirements, with the APE/NEAP staff meeting the bulk of the plan's environmental and natural resources-related information requirements. Successful implementation of this joint environmental M&E program will require close oversight and careful coordination by concerned Mission staff.

C. Evaluation

Monitoring tracks progress towards established objectives; evaluation goes beyond monitoring to assess impact and effectiveness, and to consider possible design alterations. The IDEA Project will have a mid-term evaluation in year three and a final evaluation at the end of the project.

The primary purpose of the mid-term evaluation is to assess whether the project is on track in achieving its objectives and determine whether any corrections in project design and means of implementation are necessary in order to achieve the project purpose. The mid-term evaluation will answer, at a minimum, the following questions:

- Are the assumptions made at the time the project was designed still valid?
- Are the approaches and delivery mechanisms (ADC, NARO, APDF) selected at the design stage operating effectively? How can they be improved?
- Is the project providing an appropriate combination of technical assistance and other inputs? Should adjustments be made?
- Is the project having the anticipated impact on rural incomes, particularly those of women? If not, what changes should be made?
- Are there unanticipated factors impeding implementation? How well have they been addressed?

Data for the mid-term evaluation will be drawn from the monitoring database, the surveys, and contextual reports. Ideally, the mid-term Targeted Commodity Survey will be completed prior to the evaluation to provide concrete data on progress towards the project goal and purpose, but the ADC may determine that the time between the baseline and the mid-term survey is insufficient to demonstrate much change. USAID will contract for the mid-term evaluation at the end of the second

full year of project implementation; this timing will allow changes to the project to be incorporated during the third year and executed over approximately the latter half of the project.

The final evaluation will be conducted during the last six months of project implementation and will draw conclusions about the impact of this project and develop lessons for others undertaking similar NTAE projects. The results of the third round of Targeted Commodity Surveys will provide data for impact assessment.

D. Special Studies

The Monitoring and Evaluation Plan includes two types of special studies: socio-economic studies of the targeted commodity groups and a study of border traders. Both of these will be conducted by the ADC, probably through a sub-contractor.

D.1 Socio-economic Studies of Targeted Commodity Groups

The main purpose of these studies is to understand the socio-economic characteristics of production and marketing systems for each commodity group. They will also be used as checklists to track changes in socio-economic set-ups of the targeted commodity groups over the project life.

An important initial task is to develop a gender disaggregated description of these sectors in terms of the enterprises and activities in the chain linking producer and exporter. This is needed to understand the potential impact of IDEA on incomes of men and women engaged in each sector and to identify opportunities for increasing women's participation in the project. Impact can be expected to vary greatly from sectors dominated by a few vertically integrated firms to those involving a plethora of small operators.

Information from the initial socio-economic studies will provide a baseline description of each sector and assist in finalizing the sampling design for the Targeted Commodity Baseline Survey. Follow-up surveys in years three and five will assist in evaluating the impact of the IDEA Project.

D.2 Border Traders

The second special study focuses on men and women traders marketing low value commodities to neighboring countries, including both formal and informal trade. It will assess:

* The potential impact on the income of border traders marketing goods overland to neighboring countries.

* The relationship of further inclusion of these traders in interventions to increasing exports and GOU foreign exchange earnings.

* Potential policy and administrative reform and projectized interventions to facilitate non-traditional

exports by border traders.

Most NTAE policy reforms focus on facilitating formal trade and investment through Kampala to developed markets such as Europe. This places Uganda in the mainstream of strong competition from other African and Asian countries, in a situation where transportation costs are considerable and international market prices fluctuate greatly according to supply. Within the East African region, however, Uganda stands out as an excess producer of cereals and beans which are in strong demand in neighboring countries. This cross-border study is designed to evaluate the potential contribution to objectives which could be realized by capitalizing on this regional situation and on the incorporation of informal border traders in NTAE efforts.

The Border Trade study will be conducted three times, in project years one, three and five. The study needs to be repeated because border trade will fluctuate radically depending on the relative economic conditions in Uganda and the neighboring countries. The three repetitions of the study should permit assessment of the impact of policy and regulatory changes on border traders.

E. Work Plan

The Monitoring and Evaluation Work Plan, which details tasks, responsibilities and scheduling is shown in Exhibit IV-2. USAID has overall supervisory responsibility and will coordinate monitoring of GOU activities, access data from various government agencies for updating their annual reports. ADC will lead private sector monitoring and evaluation activities, with assistance from Ugandan professional and trade associations and will report to USAID quarterly.

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Exhibit IV-2: MONITORING AND EVALUATION WORK PLAN

PRINCIPLE TASKS AND DELIVERABLES	RESPONSIBLE AGENCY	SCHEDULE				
		YEAR 1: 1 1 1 1 2 3 4 5 6 7 8 9 0 1 2	YEAR 2: 1 1 1 1 2 3 4 5 6 7 8 9 0 1 2	YEAR 3: 1 1 1 1 2 3 4 5 6 7 8 9 0 1 2	YEAR 4: 1 1 1 1 2 3 4 5 6 7 8 9 0 1 2	YEAR 5: 1 1 1 1 2 3 4 5 6 7 8 9 0 1 2
Supervise Monitoring and Evaluation	USAID	———	———	———	———	———
Develop Reporting System and Database	ADC/USAID	— —				
Socio-economic studies	ADC Contractor	—		—		—
Targeted Commodity Baseline Survey	ADC Contractor	—				
Border Traders Study	ADC Contractor	—		—		—
ADC Quarterly Progress Reports to USAID	ADC	▪ ▪ ▪ ▪	▪ ▪ ▪ ▪	▪ ▪ ▪ ▪	▪ ▪ ▪ ▪	▪ ▪ ▪ ▪
Private Sector Business/Trade Associations Quarterly Progress Reports (Assisted by ADC)	ADC	▪ ▪ ▪ ▪	▪ ▪ ▪ ▪	▪ ▪ ▪ ▪	▪ ▪ ▪ ▪	▪ ▪ ▪ ▪
IDEA Annual Report	ADC					
Project Implementation Report	USAID	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
Input for API to AID/W	USAID	▪	▪	▪	▪	▪ ▪
Mid-term Survey	ADC Contractor			—▪		▪
Mid-term Evaluation	USAID Contractor			—▪		
Final Survey	ADC Contractor					—▪
Final Evaluation	USAID Contractor					—▪
Environmental Assessments	ADC Contractor	- - - -				
Environment Impact Reviews	USAID Contractor	- - - -				

Symbols: ——— continuous activity, ▪ due date.

SECTION V: SUMMARY OF ANALYSES

A. Institutional Analysis

Uganda's efforts to promote exports and investments and to undertake policy analysis have had mixed effectiveness. The institutional structure for export and investment promotion has not been fully rationalized, nor has a clearly-defined strategy and framework been developed. However, a number of developments now underway should set the stage for establishing a fully functioning, integrated framework for export and investment promotion and policy analysis.

First, a national "Export Development Committee" (EDC) was established this year to assist in developing a coordinated national export program. Second, the GOU has approved a major World Bank export promotion effort focussed on institutional capacity building. Third, the GOU is formally clarifying the roles that various institutions play in investment promotion, export development, and export policy. Finally, the GOU has agreed to re-structure the Uganda Export Promotion Council (UEPC), drawing a majority of its board members from the private sector and giving the Council greater autonomy.

Once the above developments have been fully executed, a coordinated, complementary approach to investment promotion, export development and policy analysis can be initiated. More dynamic growth of NTAE industries should result.

The following private and public sector groups also have a role in future NTAE development:

- Industry associations, including:
  - Uganda Chamber of Commerce and Industry
  - Uganda Manufacturers Association
  - Northern Uganda Manufacturers Association
- Exporter associations, including:
  - Uganda Horticulture Exporters Association
  - Uganda Grain Exporters Association
  - Uganda Flower Association
- Producer associations, including:
  - Uganda National Farmers Association
  - Uganda Commercial Farmers Association
  - Uganda Progressive Farmers Association
- Financial institutions
- Local consulting firms
- Service providers
- NARO and other research organizations
- Makerere University
- MAAIF extension service

The roles of these associations and institutions are expected to evolve over time. As their institutional capacities are

enhanced throughout the life of the project, it is anticipated that they will take on greater responsibility for the services provided through the ADC.

A.I.D. agricultural export promotion activities are currently underway in a number of countries around the world. An AID/PPC study carried out in 1991 distilled five basic, "lessons learned":

- Macro-economic policies must be in place.
- A project implementation unit is best able to provide the specialized technical knowledge needed by local exporters.
- Export promotion institutions can make an important contribution to building NTAEs, especially if the investment is made in a sector poised for take-off.
- The potential for most export promotion programs to be self-sustaining is not realistic, although charging for services is a good idea.
- Most promotional institutions only reach a small proportion of total export firms.

The design team approached the Institutional/Organizational analysis by first conducting extensive interviews with over 100 individuals in Uganda. Second, the team thoroughly reviewed literature on export promotion to determine the best approaches to promoting exports based on models which have worked well in other countries. Third, USAID and the design team opened up the project design process to all interested parties by establishing the IDEA Advisory Group, which met regularly to review and discuss the development of the project. Finally, a design workshop for the IDEA project was held. Having taken the above steps, the design team feels that the following "preferred option" recommendation for organizing and structuring the IDEA project is also the "best" option for Uganda.

B. Technical Analysis of Selected Export Commodities

Uganda has a small but growing spice industry. Major spice and essential oil export opportunities include: vanilla, chillies, ginger, geranium oil, pyrethrum, paprika, cumin, coriander, dill, and fennel. These are discussed in detail in Annex C. Many of the sub-markets in spices and essential oils are shallow and sensitive to changes in the world economy. Thus, Ugandan spice producers and processors generally form links with major world industry forces to ensure markets, receive technical assistance and maximize returns.

Vanilla is currently considered to be one of the most profitable crops for both the grower and exporter. There are only two companies exporting this crop, but given its profit levels it is expected that more companies will enter the business in the next few years. Generally speaking, days of plant operation is a very important variable in determining plant operating profits. For this reason the vanilla

processing/export firm must focus on increasing throughput to maximize profits.

Exports of dried Bird's Eye chillies are increasing from Uganda. The size of firms which have entered this business varies from small, low-overhead exporters to some of the largest international companies doing business in Uganda. In the company cited as an example in Annex C both the exporter and grower share in the crop risk. If hail, insects, or pathogens damage the crop, both the grower and the exporter can lose part or all of their investment. One of the greatest risks that the exporter faces is the chance that the grower will sell the crop to another buyer/exporter once the crop is in. The exporter then stands to lose both the seed money and income from the planned sale.

Uganda's vegetable export sector is small but growing. Exporters usually grow vegetables and purchase them from farmers or have smallholders produce them under out-grower systems. Uganda has excellent agronomic resources for producing high-quality vegetables year round, but production for export to the world market is relatively new. Currently, Uganda's vegetable export industry is centered around the Kampala region to take advantage to the short hauling distance to the international airport and the humid climate in this region, which is suitable for year-round production of tropical fruits and vegetables. Okra, sweet potato, pink yam, eggplant and raw sugar cane make up the major exports. The primary target market is in the England. If Uganda is to expand into the mainstream EC vegetable market, growers and exporters will have to develop relations with major EC supermarket chains.

Production of cut flowers is both capital- and labor-intensive, requiring an extremely high level of technical, logistical, and business management. It is a high-risk business, but the potential for large profits are also great. Currently, only one export-oriented operation exists in Uganda, but a second flower farm is in the development phase.

Uganda is in a good position to increase cereal grain exports. Endowed with fertile soils and predictable rainfall, the country could increase cereal, pulse, and oilseed production to help meet regional demands. Regional demand for Ugandan grain is high. Kenya import demand is estimated to import up to one million tons of cereals per year, and the United Nations World Food Program plans to purchase 100,000 tons of cereals from Uganda in 1993 to supply regional production short-falls in Sudan, Somalia, Rwanda, and Zaire. One of the most challenging aspects of the low-value export subsector will be reaching large numbers of producers and traders distributed over a wide geographic are.

Dry beans and other colored beans make up the large majority of the pulse subsector. International markets for single color beans are broad and deep. This in itself does not

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completely protect growers and traders from world price variation. However, Uganda with its geographic location close to high-demand regions should be somewhat insulated from variations in the world price due to its comparative advantage in freight cost to regional markets. With improved varieties and cultural practices, bean yields could be doubled. Pest and disease problems as well as storage issues will need to be addressed in this subsector.

Low-value commodity exporters are also described in Annex C, specifically a leading grain miller and bulk commodity exporter located in the southeast of the country, in a good location to service the large domestic market around Kampala as well as export raw grain and finished products to Kenya. The company has four operational groups: drum wheat flour, animal feed production, maize milling, and bread baking. The GOU is a minority shareholder in the firm, along with other financial institutions and organizations. The firm's management is trying to convince the GOU to divest itself of its stock in the company. The company faces problems in the areas of purchasing, quality control, storage facilities, marketing information, personnel, and finance. In addition to GOU divestment, many of these problems can be addressed directly through training and technical assistance.

There are a number of other crops that may have potential as NTAEs, including mushrooms, berries, and, depending on the market windows in Europe, tropical fruits like mangos. These and other potential NTAE crops are discussed in more detail in Annex C.

C. Research, Education, and Training

The constraints to NTAE development in Uganda impact at many different levels. An applied research, education, and training program that is integrated and multi-faceted should be used to overcome the network of constraints. Four major constraints must be overcome if the NTAE sector is to mature and play a significant role in the economic development of Uganda: plant protection (pest management), production (seed quality, cultural practices), postharvest (cooling, packing, storage, processing), and transportation (domestic, international).

The IDEA project will address the above constraints by providing focused research, education, and training in these areas. Demand-driven, private sector-oriented applied research, coupled with intensive in-the-field technical assistance and strengthening of MU faculty, will serve to ensure long-term sustainability of the NTAE industry. Currently, the research and extension service for NTAE crops are completely inadequate, lacking capacity, productivity, and credibility.

The IDEA project should encourage NTAE crop research to develop more active linkages with the private sector. One

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option is to set funds aside for private sector contract research, which would be conducted at government research institutes or stations. Private sector funded research contracts would ensure that the research conducted at public sector units meets a specific demand in Uganda. It also ensures that the research results will be applied and disseminated. In some cases, research results from other countries may be applied to the development of Uganda NTAE crops. Linkages with external sources of knowledge will be strengthened and expanded through the project.

Strengthening MU's human resource capacity will support the long-term educational and training needs of the NTAE industry. This institution building will come about through enrolling MU faculty in graduate programs at U.S. universities and establishing a U.S. university linkage with MU, specifically focused on NTAE crops. Long-term U.S. university and/or private sector expatriates will work closely with MU students and faculty in research, teaching, and extension programs designed to enhance NTAE crop knowledge.

IDEA should provide intensive, in-the-field technical assistance, training, and applied research to tackle the technological constraints. In-field demonstrations, supervised production activities, and topical training sessions should be conducted at government institutions (i.e. MU, NARO research institutes and stations, DFIs) and on private farms. In-field assistance will enable farmers assimilate these technologies to more easily ensuring timely production and quality produce.

The IDEA project should provide short-term consultants as needed in the following areas: floriculture, tropical disease control, tropical entomology, postharvest handling, grain crops, plant nutrition, specialty crops, irrigation, international marketing, food processing, general horticulture crop production, spice and essential oil production and processing.

A pool of well-trained extension personnel must be in place to provide technical advice to growers, in order to sustain the NTAE industry. The technical information will come from local, regional, and international sources. This extension program will have the support of a focused, private sector, demand-driven applied research program. It will be necessary for extension workers at all levels to get up-to-date training on an ongoing basis, affording them access to the latest technologies. Training for extension workers should be practical and attuned to the opportunities, problems, and constraints of Ugandan NTAE crops.

D. Social Soundness Analysis

The social soundness analysis examines the social characteristics and forces in the Ugandan agricultural and agribusiness sectors that influence the potential for

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developing NTAE exports.

Socio-economic context. Uganda's socio-economic context is characterized by agronomic potential, physical remoteness, social diversity, and colonial legacies that affect exports and religion. Uganda is a very fertile country, receiving abundant, regular rainfall (1250-1500 mm per year). Uganda has a distinct comparative advantage for year-round production of quality grains, spices, oilseeds, and horticultural export crops demanded by international markets.

There is considerable cultural diversity within Uganda—over 37 tribes, each with its own language. While this represents a rich cultural heritage, differences in ethnicity, language, and religion underlie most of the political disruptions and armed conflicts that have plagued Uganda. Today, however, the government has taken pains to ensure an open, representative administration. Widespread relief among the public is resulting from the resurgence of peace, and people are eager to get on with the long-overdue task of economic development.

Characteristics of agricultural production. Agricultural production in Uganda is overwhelmingly smallholder, quasi-commercial, market responsive, and labor constrained. Almost all of Uganda's agricultural output is produced by smallholders, 80 percent of whom have 2 ha or less. Agricultural output has been growing rapidly since 1986, but due to years of armed conflict and disintegration, is just now reaching the levels of the late 1970s. Most smallholders are not purely subsistence farmers, producing enough to eat as well as something to sell, and are therefore quasi-commercial. This, in addition to Uganda's favorable climate, make smallholders the primary potential producers of NTAE exports.

Ugandan smallholders have shown a remarkable ability to respond to market signals. In 1990 and 1991, when disruptions in southern Sudan led to an opening in the sesame export market, Ugandan smallholders quickly jumped in to fill the gap. When southern Sudan re-joined the sesame market, however, Ugandan smallholder production continued high and created a glut on the market. This exemplifies the need for better, faster market intelligence.

In addition to insufficient market information, Ugandan smallholders are challenged with increasing production when entering fresh export sectors. Available labor, rather than land tenure, is the main constraint to increasing production. Labor demands exceed supply at the peak periods of weeding and harvesting, and escalating labor costs are placing considerable constraints on smallholder employers.

Smallholder opportunities. Several opportunities for increasing production and earnings are available to smallholders. Animal traction is one of them. In the wide level plateau areas of the north and east, smallholders overcame labor constraints by using the ox plow. During

recent disruptions, however, their oxen have been decimated. Minister of State for the North, Betty Bigombe, urges restocking oxen as a key element in any agricultural development program for this area, because smallholders cannot afford to maintain mechanical tractors and animal traction is a technology that farmers already know and can afford.

Improved cultural practices and improved seed will also increase smallholder production. Extension services encouraging innovative cultural practices are needed. But significant improvements in production will also depend on helping small farmers overcome labor constraints and improving input supply. By simply giving small farmers access to improved seeds, yields can be raised by 20 to 30 percent with little additional labor. If an effective multiplication and distribution system could be established, it would have an immediate impact on yields without the major expenditures necessarily involved in revamping the extension service.

On-farm storage offers another opportunity for increased small farmer production. Smallholders have found farmgate prices to be significantly lower than town prices. Part of this is attributed to a lack of competition among buyers at the farmgate and poor feeder roads, which translate into high transportation costs. Lack of on-farm storage is another contributing factor. If farmers could build on-farm storage facilities, they would be able to hold most of their maize for six months after harvest. Belaying sale of the maize, the farmer could realize a 20 percent higher price.

High-value exports including vanilla, chillies, snow peas, and other crops appear to promise substantial rewards for Ugandan smallholders. Farmers show extreme eagerness to participate in high-value export crops, but are probably unaware of the risks involved. To avoid raising false hopes, NTAE development projects must be carefully test marketed with a few growers before extensively involving smallholders.

Market structures. Ugandan market structure possesses special characteristics to be considered. The most unique aspect of the Ugandan non-traditional export market is that it is almost entirely based on smallholder producers. This assures that benefits will be widely distributed throughout the population. Economically, however, it requires additional expenditures for collection of produce over a wide area. These costs must be considered when calculating Uganda's comparative advantage.

The competition within Ugandan markets also deserves special consideration. In general, adequate competition is required in market systems to keep prices adjusted fairly. In some Ugandan subsectors (e.g. the vanilla market), however, the number of players in the market is limited. Under such conditions, it is important that strong vertical linkages and teamwork be developed between exporters, traders, and producers. Relationships of mutual trust must be developed, and the concept of contract growing should be explored as a

means of further institutionalizing these vertical arrangements. Trusting relationships are difficult to establish because they generally cut across traditional clan, tribe, political, and religious membership groups.

Social factors influencing NTAE exports. Successful NTAE export initiatives are dependant on political stability, a key factor underlying Uganda's recent economic resurgence. Since President Yoweri Museveni came to power in 1986, he has implemented a program of political inclusiveness and economic liberalization that has been paving the way for peace and progress. The return of political stability to Uganda has enabled investment from abroad as well as re-vitalization of agricultural production.

Associations and vertical integration of fresh export sectors also influence the success of NTAE export initiatives. As discussed above, relationships of mutual trust and assistance among producers, traders, and exporters in a vertically integrated marketing system are necessary for efficient market operation. Voluntary associations are proving very effective in developing the economies of scale necessary for production and export in Uganda.

In conclusion, NTAE interventions are not only socially feasible, but highly desirable. Smallholders have proven their responsiveness to market signals and are currently enthusiastic about NTAE exports. The smallholder nature of Ugandan agriculture ensures that benefits will be widespread, and the earning opportunities for smallholders are unparalleled elsewhere.

E. Gender Considerations

Annex F analyzes gender considerations constraining NTAE production and marketing. It identifies constraints to Ugandan women's advancement in agricultural production, marketing, and exporting, and examines opportunities for overcoming them.

Women in Ugandan society. Traditionally, women in Ugandan society were treated more as laborers or property than as equal partners. Despite recent progress toward social equality, women still face constraints, particularly in the rural smallholder sector where traditional values remain strong. In traditional Ugandan society, women were expected to cultivate fields, harvest crops, maintain the home, and raise children. It is widely held that girls do not need education for these tasks, so among the poor, daughters are often kept home from school.

While such customs remain strong among the rural poor, progress toward women's equality is being made with the help of official government and popular social support. The Government of Uganda is promoting women's rights and has vowed to formalize them in the forthcoming constitution. The

Ministry of Justice is revising statues affecting women, and the Uganda Women Lawyers Association is reviewing the draft legislation. Many discriminatory laws are expected to change. Women are found in high positions in both the public and private sectors. Uganda's Minister of Agriculture is a woman, and women are found throughout the production and marketing chain as major exporters, traders, laborers, and as the primary smallholder producers of food crops.

Women in agribusiness. Women smallholders traditionally have primary responsibility for producing crops such as grains, beans, and vegetables. Women provide 68 percent of the labor for food crop and 53 percent of the labor for cash crop cultivation. Traditional rural values, however, may prevent benefits from accruing to woman in proportion to their efforts. At least half of traders are women; women own many small businesses in urban areas and play a major role in weekly village markets which often constitute the first stage of collection for low-value crops. Women are also well represented in agro-based industries such as food processing, poultry, and pig farming.

Constraints. Land ownership is a constraint faced by Ugandan women. There are no statutes that prevent women from acquiring property, but according to custom, property acquired during marriage belongs to the husband. In the event of the husband's death, the wife is not the automatic heir. Lack of land ownership places severe constraints on women's ability to provide collateral and secure loans through the formal banking system.

Women's agricultural labor contributions far exceed their level of control over the income generated. Furthermore, women are increasingly responsible for meeting household expenses that were once paid by men's cash crop income, e.g. maintenance of the home and support for the children. Female wage labor supply is limited by the demands of domestic food production, household maintenance, child care, and health care. And the percentage of functional illiteracy among women is much higher than that of men, contributing to women's restricted bargaining power and contractual inferiority in the labor market.

Opportunities. Women's groups provide a simple answer to the question of how to ensure that women producers keep control over the proceeds of their labors. Group earnings never enter the family coffers, over which men have almost exclusive control, so they never run the risk of being expropriated by husbands. There are many kinds of women's groups, but an important characteristic common to all is that they are voluntary. These are small groups of women who know and trust each other and band together out of common interests. They are not at all like government-organized cooperatives. Reasons for forming women's groups can vary widely, but earning money is always near the top of the list. Non-traditional agricultural exports are a popular women's group

activity.

Groups interested in non-traditional exports are very entrepreneurial and will readily approach the ADC once it advertises its services. However, success of women's producer groups in the NTAE sector will require concentrated assistance in extension, training, management, and marketing. These groups will require extension in new cultural practices and training in postharvest handling, marketing, transportation, and literacy. Women's groups will also need to learn such basic skills as how to calculate their production costs. An effective way of providing all of the above is through establishing a "contract buying" type of relationship with a trader/exporter who will provide the extension, training, management assistance, and will purchase the crop.

Roughly half of Ugandan traders are women, many of whom are small merchants rather than major exporters. NTAE promotion efforts should attempt to identify dynamic women entrepreneurs and traders at relatively high levels, who could become major exporters with a little bit of assistance. These activities would support women at all levels of the production and marketing chain.

In conclusion, women are primary actors in the production and marketing chain. They constitute about half of all traders, and half of NTAE support activities should be targeted to them. At the producer level, initiatives to assist women should be targeted through women's groups.

F. Economic Analysis

The IDEA project proposes to increase production and export of non-traditional agricultural commodities. This analysis evaluates the costs and benefits of the project in terms of household and national income. It calculates the incremental net export revenue stream generated from the project, estimates the value of exports going to "rural households" and to the rest of the economy, and calculates the standard internal rate of return (IRR). This analysis also develops a sensitivity analysis, varying costs of production, yields, and area of production.

The analysis differentiates returns between the farmgate and the rest of the economy. This approach was taken to delineate the smallholder benefit, primarily in production of low value crops, from benefits accrued to the entrepreneur in high value crops. The rest of the economy benefit is the incremental benefit as the product travels from the farmgate to the border. Export activity expands beyond the farmgate so rural incomes other than of farmers will rise. Transport and packaging are examples of value added activities, whether urban or rural, that are included in the benefit stream for the rest of the economy IRR. However, rural households, for this analysis, are defined as the farmer who is producing the commodity or working as a hired labor and doesn't include

rural laborers in other export related activities. The benefit to those in production is the benefit at the farmgate.

The internal rate of return for the Net Farmgate Benefit is 9 percent and 93 percent for the Net Benefit to the Rest of the Economy. The Rest of the Economy is all benefits earned as the commodity travels from the farmgate to the border. This includes profit to exporters and all income earned in input supply activities such as packaging and transport. The economic viability increases dramatically when the border price-determined returns to production for export is measured (the Rest of the Economy Benefit). The project is therefore economically viable given the high IRR for the Rest of the Economy Benefit, but the project would not be economically sound if the benefits are measured solely at the farmgate.

A sensitivity analysis was developed that examined how the internal rates of return fell when specified assumptions were made less favorable. A reduction in yields of maize and beans and area of production of all crops has the largest impact on both internal rates of return. Different labor rates and freight rates for cut flowers and vegetables only had marginal impacts. The Net Farmgate IRR became negative as yields and area were reduced. The Farmgate IRR was more sensitive to changes in yields than it was to changes in area of production. Overall, increasing yields for maize and beans is very important at the farmgate level but also to a high return in the Rest of the Economy IRR.

G. Environmental Analysis

The Initial Environmental Examination (IEE) for this project (included as Annex I) identified several potentially significant adverse environmental impacts which could occur as a result of planned project activities, i.e., expansion of NTAE production into environmentally significant or sensitive areas, increased incidence of agro-chemical contamination, etc. To address these concerns, an Environmental Monitoring, Evaluation and Mitigation Plan, or EMEMP, will be implemented as an integral part of greater project implementation and M&E plans. The general rationale and framework for this EMEMP is presented in the IEE. Detailed EMEMP implementation plans will be developed during the course of the final design and implementation of the other planned project M&E/implementation arrangements. If properly implemented, this EMEMP will serve to ensure that this project is executed in an environmentally sound and sustainable manner, in full accordance with all salient Agency and GOU policies and procedures.

SECTION VI: CONDITIONS AND COVENANTS

The Grant Agreement between USAID and the GOU will contain the standard condition precedent to first disbursement relating to signatories. No additional CPs are anticipated, but several covenants will be included in the Grant Agreement.

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1. Establishment of a New Export Promotion Institution

The GOU agrees that it will establish a new export promotion institution as a semi-autonomous, full-service export promotion organization governed by a board of directors with majority of private sector members and a chairman selected by the board from amongst the private sector representatives, and further agrees that, until such time as this institution is formally established and a director appointed, that the Ministry of Trade and Industry will designate a senior official to serve on the IDEA Project Steering Committee.

Discussion USAID intends to establish the ADC as a semi-autonomous arm of the new export promotion institution, referred to in this paper as the Uganda Export Development Agency. The restructuring of the present UEPC into the UEDA will require revising the UEPC Act. It is anticipated that, following reorganization, UEDA will remain part of MTI but will function primarily according to private sector principles. The director of the UEDA or his designee will be a member of the IDEA Project Steering Committee and will be the counterpart to the ADC Chief-of-Party. Since the UEDA will not be formally created at the start of the IDEA project, an interim arrangement with the MTI will be necessary to ensure adequate coordination.

2. Government Personnel and Facilities

The Grantee agrees to provide sufficient and adequate staff and other resources at Makerere University and the National Agricultural Research Organization to realize the research, education and training objectives of the project as described in this agreement.

3. Project Monitoring and Evaluation

The Parties agree to establish and actively participate in a broad-based monitoring and evaluation program as part of the Project as described in ANNEX 1 of this agreement. Except as the Parties otherwise agree in writing, the evaluation program will include, but not necessarily be limited to:

(a) evaluation of progress towards attainment of the objectives of the Project;

(b) identification, evaluation and mitigation of problems or constraints that would inhibit attainment of Project objectives;

(c) evaluation of the impact of interventions at the "people level";

(d) design and implementation of an appropriate Environmental Monitoring, Evaluation and Mitigation Plan

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for this project as outlined in the Initial Environmental Examination;

(e) evalution of the overall development impact of the Project.

4. Duty Free Project Commodities

The Government of Uganda agrees that all commodities purchased with project funds, whether destined for or consigned to government or private organization(s), will enter Uganda free of duty.

5. Salaries

The Grantee agrees that no personnel paid salaries from Project funds will draw a government salary or receive government benefits, unless A.I.D. otherwise agrees in writing.

SECTION VII: BUMPERS AMENDMENT CONCERNS

The Bumpers Amendment prohibits A.I.D. from providing assistance for "the growth or production in a foreign country of an agricultural commodity for export which would compete with a similar commodity grown or produced in the United States." It does not, however, prohibit "activities designed to increase food security in developing countries where such activities will not have a significant impact in the export of agricultural commodities of the United States."

The IDEA Project will provide assistance for the export of maize and beans to Kenya, Rwanda, Sudan and possibly other countries in the region. These exports will increase food security in the importing countries but the quantities involved (increments of approximately 11,000 tons of maize and 7,500 tons of beans over five years) will not be enough to have a significant impact on U.S. exports of these same commodities, because these amounts are insignificant compared to the volume of U.S. exports.

IDEA will also support exports of a variety of spices, essential oils, cut flowers and fruits and vegetables. Of the high value crops identified for assistance, asparagus is one that the U.S. also exports. In 1991, the U.S. shipped 1,700 tons of asparagus to Europe. It is estimated that Uganda could develop the capacity to export as much as 250 tons of asparagus, which would be about 15 percent of 1991 U.S. asparagus exports to Europe (USAID has no data on current export levels and total U.S. export quantities). It is not clear, however, that Ugandan exports would compete with U.S. exports because Uganda would export during the U.S. and European winter. Prior to initiating project activities to support asparagus production and any other crop that the U.S. exports (aside from maize and beans mentioned above), the ADC

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will obtain the most recent U.S. export statistics and assess whether the commodity has the potential to compete with U.S. exports in the same market. That analysis will be shared with USAID/Uganda, which will confer with REDSO/ESA/RLA prior to the initiation of project activities in this area.

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Annex A

IDEA Project Logframe

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NARRATIVE	VERIFIABLE INDICATORS	VERIFICATION MEANS	ASSUMPTIONS
PROJECT GOAL: To increase incomes, particularly those of rural men and women, from agricultural non-traditional exports.	(1) rural men's and women's household expenditures increase at least as fast as the growth of agricultural production, over the project period, (2) rural incomes from production of agricultural non-traditional commodities actually exported increase at least as fast as the growth rate of those exports, over the project period, and (3) the value of non-traditional agricultural exports increases at an average annual rate of growth of at least ten percent over the project period	(1) A.I.D.-financed household survey and GOU household budget survey, updated periodically. (2) export value data from GOU customs, various data from project-funded commodity surveys, and farm budget data from Agricultural Secretariat. (3) export value data from GOU customs, and various data from project-funded commodity surveys.	Price signals continue to be transmitted through the economy in a transparent manner. World market prices for Uganda's exports do not fall dramatically Other donors and GOU continue programs to expand NTEs produced by rural farmers
PROJECT PURPOSE: To increase production and marketing of selected non-traditional agricultural exports.	End-of-Project Status (EOPS): (1) farmgate value and export value increase for low value crops over the life of the project a. farmgate value of maize and bean exports increases to $7.5 million p.a. in 1999 from $2.5 million p.a. in 1993 b. export value of maize and beans increases to $20 million p.a. in 1999 from $6.6 million p.a. in 1993 (2) production and export values increase for high value crops over the life of the project a. export values increase as follows by 1999: cut flowers increase to $5 million p.a.; vegetables increase to $370,000 p.a.; essential oils and spices increase to $1.1 million p.a. b. the number of smallholders and hired labor involved in production of high value commodities increases as follows: cut flowers by 1,400; vegetables by 1,000; essential oils and spices by 5,000 (3) At least 40% of high value produers, outgrowers, hired labor, and exporters, are women.	(1) Agricultural Secretariat farm budget data and GOU customs export data. (2) Project-funded surveys and GOU customs data. (3) GOU customs export data; project records.	Uganda continues to liberalize policy and regulatory environment Selected crops can be exported profitably Markets for inputs and for selected commodities are competitive GOU continues to allow export of maize and beans to neighboring countries GOU establishes and supports appropriate institutional framework for promoting non-traditional exports

OUTPUTS:		Project records	Inputs procured and delivered on a timely basis
1) Producers of selected commodities have improved knowledge of techniques to increase crop quality and yields.	1a) 15 high value crop research contracts completed; b) high input and low input technology packages for maize and beans developed and demonstrated at six sites per year, reaching 1800 farmers and extension agents per year.		Ugandan firms and institutions able to carry out research activities and provide technical assistance
2) Exporters able to initiate or expand NTAE activities.	2) Over the LOP, the following # of firms assisted in each commodity group: flowers - 8, spices and oil - 20, vegetables and fruits - 12, maize and beans - 25.		
3) NTAE exporters and producers have improved knowledge agribusiness planning and management and access to sources of financing.	3a) 10 firms per year receive 1-on-1 assistance with business planning and financial contacts; b) 150 people/year (750 over LOP) trained in agribusiness planning and management.		
4) Commodity-specific market information systems established or improved.	4a) Information on high value commodities collected and disseminated; b) regional market information on grains and pulses collected and disseminated.	NARO/MAAIF records	
5) Private/public sector entities multiplying and distributing improved maize and bean seeds.	5a) 6 private firms/NGOs/public entities multiplying improved seeds; b) volume of improved maize/bean seeds sold increases by 5-10% per year.		
6) Associations facilitating growth in NTAEs and acting as effective advocates for a better NTAE policy and regulatory environment.	6a) 6-10 associations strengthened; b) associations conduct 7-10 studies on policy/regulatory issues discuss findings with GOU.		
7) MU Fac. of Agriculture providing LT and ST training to support growth of NTAEs.	7a) 4 depts strengthened thru faculty training, curriculum development and provision of teaching materials; b) MU arranges 60 student internships in agribusiness firms (approx. 12/year); c) MU implements in-country training program in NTAE production/marketing: 25 courses, 750 trained over LOP.		

Inputs: Technical assistance to producers, exporters, associations, NARO, Makerere Univ. Training: short term for producers, exporters, extension agents, GOU personnel long term for MU faculty Commodities for MU, NARO, associations, ADC office Peace Corps Volunteers Research grants/contracts for maize, beans, high value crops Buy-in to regional marketing project, other market information data bases Monitoring and evaluation USAID project management GOU local currency	19 person yrs expatriate technical assistance 25 person yrs Ugandan technical assistance 4 person yrs faculty exchange 80 person months expatriate technical assistance 100 person months Ugandan technical assistance short courses, seminars, workshops, study tours 6 M.Sc degrees vehicles, computers, lab equipment 10 volunteers midterm, final evaluations, commodity baseline surveys, environmental impact assessments, other studies US PSC, FSN PSC Ush 1 billion over LOP	Project records	USAID funding continues as planned Peace Corps funding continues as planned Technical assistance team works effectively

Logframe Notes

The indicators for the goal are chosen specifically to identify different beneficiaries. Number 1, rural men's and women's household expenditures, addresses the gender split, enabling project evaluators to determine whether incomes are rising, particularly women's incomes. Household expenditures are used as a proxy for incomes given the difficulty in obtaining figures for incomes. Number 2, rural incomes from production of agricultural non-traditional commodities actually exported, verifies that there is a positive correlation between production of NTEs and incomes increasing. Number 3 determines the value of non-traditional agricultural exports in order to capture the incomes, other than rural, that will rise with increased production in NTEs.

For the indicators for the purpose, the farmgate and export values for low value crops are chosen to identify the income gain to smallholder producers and exporters respectively. The sectors were kept separate due to the difficulty in aggregating units for the different commodities (ie. stems for cut flowers and kilograms of vegetables). The export and farmgate values are taken from the Benefit/Cost Analysis. The incremental export value and farmgate value attributed to the project (provided in the Benefit/Cost Analysis) are added on to the export value and farmgate value without the project. The without project values are calculated at a 2 percent growth rate. The export value and farmgate value will increase by approximately 20 percent with and without the project.

For the high value indicators under the purpose statement, the export value represents the benefit accrued to exporters. The number of smallholders and hired labor captures the rural income gain. The number of smallholders and hired labor is derived from the following assumptions: for cut flowers, the target for the end of the project is 40 to 50 cut flower farms, growing 78 hectares, and employing 1,400 workers; for vegetables the production target is projected at 200 ha or 1,000 persons employed on their own farms or directly employed by farmers; and for essential oils and spices an additional 5,000 smallholders are expected to be involved in production given that vanilla exporters already involve over 50,000 outgrowers.

Number 3 under the indicators for the project purpose stresses the importance of targeting women in this project. This is measured as the number of women and give equal weight to women as smallholder producers, hired labor, and exporters.

ANNEX B

IDEA PROJECT BUDGET – USD 25 million
COST ELEMENT

	Project Year 1		Project Year 2		Project Year 3		Project Year 4		Project Year 5		Project Year 6		TOTAL		GRAND
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	TOTAL
I. ADC															
A. Technical Assistance															
a. Long-term expatriates															
1. Chief of Party	177,349	0	248,348	0	251,215	0	238,150	0	259,975	0	127,931	0	1,302,965	0	1,302,965
2. High Value Specialist	161,713	0	217,177	0	220,196	0	207,329	0	229,403	0	112,797	0	1,148,615	0	1,148,615
3. Low Value Specialist	161,713	0	217,177	0	220,196	0	103,665	0	114,701	0	0	0	817,452	0	817,452
4. Research/ Training Specialist	161,713	0	217,177	0	220,196	0	103,665	0	0	0	0	0	702,750	0	702,750
5. Financial Marketing	161,713	0	217,177	0	220,196	0	103,665	0	0	0	0	0	702,750	0	702,750
SUBTOTAL, U.S. TA	824,201	0	1,117,052	0	1,131,999	0	756,473	0	604,079	0	240,728	0	4,674,532	0	4,674,532
6. Faculty Exchange	0	0	147,012	0	147,012	0	147,012	0	147,012	0	0	0	588,047	0	588,047
7. Local Administration Support Staff	0	56,932	0	113,863	0	124,214	0	134,566	0	144,917	0	80,336	0	654,827	654,827
8. Local Professional Staff	0	81,239	0	162,479	0	177,250	0	192,020	0	206,791	0	133,767	0	953,546	953,546
SUBTOTAL, Long-term TA	824,201	138,171	1,264,064	276,342	1,279,011	301,464	903,484	326,586	751,090	351,708	240,728	214,103	5,262,579	1,608,374	6,870,952
b. Short-term TA															
1. Peace Corps Volunteers															
i. rent	0	0	0	3,326	0	8,883	0	11,391	0	10,148	0	3,908	0	37,656	37,65
ii. furnishing	0	0	0	550	0	881	0	942	0	671			0	3,044	3,04
iii. travel allowance	0	0	0	2,640	0	7,050	0	9,041	0	8,054	0	3,222	0	30,006	30,00
SUBTOTAL	0	0	0	6,516	0	16,814	0	21,373	0	18,873	0	7,129	0	70,706	70,70
2. External TA	0	0	309,760	77,440	322,432	80,608	335,674	83,919	349,512	87,378	181,987	35,002	1,499,365	364,347	1,863,71
3. Local TA	0	0	0	22,000	0	25,650	0	29,574	0	33,792	0	19,163	0	130,179	130,17
SUBTOTAL, Short-term TA	0	0	309,760	105,956	322,432	123,072	335,674	134,866	349,512	140,043	181,987	61,295	1,499,365	565,232	2,064,59
SUBTOTAL, TOTAL TA	824,201	138,171	1,573,824	382,298	1,601,443	424,536	1,239,159	461,452	1,100,603	491,751	422,715	275,397	6,761,944	2,173,605	8,935,54
B. Operational Costs															
1. Apartment for ST Consultants	0	13,750	0	29,375	0	31,391	0	33,557	0	35,887	0	19,195	0	163,155	163,15
2. TA/Assistance – Field Activities	0	5,500	0	11,750	0	12,556	0	13,423	0	14,355	0	7,678	0	65,262	65,26
3. Misc.															
a. Office Rental, Services, Utilities	0	35,000	0	82,250	0	87,894	0	93,961	0	100,483	0	53,747	0	453,334	453,33
b. Utilities/Communications/Postage	0	25,000	0	58,750	0	62,781	0	67,115	0	71,773	0	38,391	0	323,810	323,81
c. Fuel, Oil, Lube, Maintenance	0	15,000	0	35,250	0	37,669	0	40,269	0	43,064	0	23,034	0	194,286	194,28
d. Insurance, Repairs, Petty Cash	0	8,500	0	19,975	0	21,346	0	22,819	0	24,403	0	13,053	0	110,095	110,09
e. Local Subsistence Travel	0	8,000	0	18,800	0	20,090	0	21,477	0	22,966	0	12,285	0	103,619	103,61
SUBTOTAL	0	110,750	0	256,150	0	273,726	0	292,621	0	312,932	0	167,384	0	1,413,563	1,413,56
C. Small Grant Program	15,000	15,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	22,000	125,000	125,000	250,0
D. Market Information System (commercial databases)	10,000	10,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	10,000	10,000	100,000	100,000	200,0
E. Contractor's Overhead	936,446	0	1,501,172	0	1,358,203	0	1,429,688	0	1,266,703	0	650,508	0	7,142,721	0	7,148,4
SUBTOTAL, ADC	1,785,646	273,921	3,116,996	680,448	3,001,646	740,263	2,710,847	796,072	2,409,306	846,683	1,105,223	474,781	14,129,664	3,812,168	17,947,5

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	Project Year 1		Project Year 2		Project Year 3		Project Year 4		Project Year 5		Project Year 6		TOTAL		GRAND TOTAL
	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	FX	LC	
II. Training															
a. Makerere, long-term	66,000	0	137,940	0	144,147	0	75,317	0	0	0	0	0	423,404	0	423,404
b. Short-term	0	0	38,500	0	44,888	0	47,992	0	51,328	0	0	0	182,707	0	182,707
c. Local in-country training	0	0	0	55,000	0	58,750	0	62,781	0	67,115	0	35,887	0	279,533	279,533
d. Internships	0	3,300	0	6,600	0	6,600	0	6,600	0	6,600	0	3,300	0	33,000	33,000
e. Workshops	0	0	4,125	12,375	4,406	13,219	4,709	14,126	5,034	15,101	20,220	16,149	38,493	70,969	109,462
f. Study Tours	0	0	55,000	0	58,750	0	62,781	0	63,115	0	33,887	0	273,533	0	273,533
SUBTOTAL, TRAINING	66,000	3,300	235,565	73,975	252,191	78,569	190,798	83,507	119,477	88,816	54,106	55,336	918,138	383,502	1,301,640
III. Commodities															
A. ADC/UEPC Office															
a. UEPC COP Office	0	11,000	0	2,200	0	2,200	0	2,200	0	2,200	0	2,200	0	22,000	22,000
b. Vehicles	121,000	0	0	0	0	0	88,000	0	0	0	0	0	209,000	0	209,000
c. Office Equipment/Furniture	55,000	55,000	0	0	0	0	0	0	0	0	0	0	55,000	55,000	110,000
d. Supplies	0	11,000	0	22,000	0	22,000	0	22,000	0	22,000	0	11,000	0	110,000	110,000
SUBTOTAL	176,000	77,000	0	24,200	0	24,200	88,000	24,200	0	24,200	0	13,200	264,000	187,000	451,000
B. Limited Support to Private Sector Associations	2,750	8,250	2,750	8,250	2,750	8,250	2,750	8,250	2,750	8,250	1,375	4,125	15,125	45,375	60,500
C. Makerere University Equipment/ Supplies	0	30,000	0	30,000	0	30,000	0	30,000	0	30,000	0	30,000	0	180,000	180,000
SUBTOTAL, COMMODITIES	178,750	115,250	2,750	62,450	2,750	62,450	90,750	62,450	2,750	62,450	1,375	47,325	279,125	412,375	691,500
IV. Research & Extension															
a. High Value															
i. High Value Contract	7,000	63,000	10,000	90,000	10,000	90,000	10,000	90,000	10,000	90,000	10,000	90,000	57,000	513,000	570,000
iii. Institutional Support (Kawanda)	1,000	9,000	2,000	18,000	2,000	18,000	2,000	18,000	2,000	18,000	1,000	9,000	10,000	90,000	100,000
b. Low Value (NARO)															
i. maize	9,000	81,000	18,000	162,000	18,000	162,000	18,000	162,000	18,000	162,000	9,000	81,000	90,000	810,000	900,000
ii. beans	5,000	45,000	10,000	90,000	10,000	90,000	10,000	90,000	10,000	90,000	5,000	45,000	50,000	450,000	500,000
c. Seed Multiplication Distribution Program	30,000	30,000	30,000	30,000	30,000	30,000	20,000	20,000	20,000	20,000	20,000	20,000	150,000	150,000	300,000
d. NGO Outreach Program	10,000	10,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	10,000	10,000	100,000	100,000	200,000
SUBTOTAL, RESEARCH & EXTENSION	62,000	238,000	90,000	410,000	90,000	410,000	80,000	400,000	80,000	400,000	55,000	255,000	457,000	2,113,000	2,570,000
V. Buy-ins	30,000	0	60,000	0	60,000	0	60,000	0	60,000	0	30,000	0	300,000	0	300,000
VI. Impact and Environment Monitoring	25,000	25,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	25,000	25,000	250,000	250,000	500,000
VII. Audit and Evaluation*	0	0	23,600	0	157,200	0	23,600	0	23,600	0	157,200	0	385,200	0	385,200
VIII. APDF	74,365	0	148,730	0	148,730	0	148,730	0	148,730	0	74,365	0	743,650	0	743,650
IX. USAID Project Management															
a. PSC	294,023	0	123,147	0	0	0	0	0	0	0	0	0	417,170	0	417,170
b. FSN	0	10,016	0	21,534	0	25,464	0	30,111	0	35,360	0	20,786	0	143,289	143,289
SUBTOTAL	294,023	10,016	123,147	21,534	0	25,464	0	30,111	0	35,360	0	20,786	417,170	143,289	560,459
TOTAL	2,521,503	665,487	3,850,788	1,298,407	3,762,517	1,366,745	3,354,725	1,422,140	2,893,863	1,483,328	1,502,269	878,226	17,885,665	7,114,335	25,000,000
Year End Totals	3,186,989		5,149,195		5,129,262		4,776,865		4,377,191		2,380,498				
GOU Contribution, Ush	0	0	0	200,000,000	0	200,000,000	0	200,000,000	0	200,000,000	0	200,000,000			1,000,000,000

* Note: Of the Audit and Evaluation line item, $118,000 is for Audit, $267,200 is for Evaluation.

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IDEA Budget Notes

The IDEA project will cost $25 million and will have a GOU cash contribution of one billion Ugandan shillings. In this section notes are presented that underlie the methodology used in the budget.

For each project year the dollar sum of each line item is divided according to whether payment will be made in foreign currency, denoted by FX, or Ugandan shillings, denoted by LC.

The Contractor's Overhead is 80 percent of all TA.

All US technical assistance has been inflated at the rate of 4 percent per year. The upper bound of the FS-1 US long-term TA salary scale and an average of the upper and lower bound of the FS-2 salary scale were used in the calculations. Commodities or services procured from the US are inflated at 4.5 percent. Commodities or services procured from Uganda are inflated at 7.5 percent. The contingency rate used, calculated before inflation, is 10 percent. Year 1 and year 6 of the project will only be 6 months. The other years are 12 months.

Cost figures are constructed from estimating the unit cost of specified services, activities, and commodities and multiplying by the number of units required. Unit costs are estimated as follows:

		Unit Cost
I.	ADC	
A.	Technical Assistance	8,936,000 total
	a. Long-term TA (see detailed computation below)	6,871,000 total
	1. Chief of Party	86,589/yr, 5 yrs
	2. High Value Specialist	66,617/yr, 5 yrs
	3. Low Value Specialist	66,617/yr, 3 yrs
	4. Research/Training Specialist	66,617/yr, 3 yrs
	5. Financial Marketing	66,617/yr, 3 yrs
	6. Faculty Exchange 4 years, FS-2 level AID pays half	588,000 total
	7. Local Administration Support Staff (10% for contingency & inflation)	655,000 total
	a. Administration Officer	15,324 per year
	b. Chief Accountant	15,324 per year
	c. Accounting Clerk	15,324 per year
	d. Secretary/Typist, 3	20,220 per year
	e. Office Janitors, 2	3,602 per year
	f. Drivers, 6	20,238 per year
	g. Equipment Maintenance	6,740 per year
	h. Procurement Officers	6,740 per year

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8.	Local Professional Staff (10% for contingency & inflation)	954,000 total
a.	Horticulture/ High Value Specialist	15,324 per year
b.	Maize/Bean Production Marketing Specialist	15,324 per year
c.	Monitoring/Survey/MIS Specialist	15,324 per year
d.	Business Advisory Specialist	15,324 per year
e.	Training Specialist	15,324 per year
f.	Field Assistants	
i.	Direct Assistants for Marketing Information, 3	20,220 per year
ii.	Assistants to On-farm Trials, 3	20,220 per year
b.	Short-term TA	2,065,000 per year
1.	Peace Corps Volunteers, 10	70,706 total
	i. rent	128 per month
	ii. furnishing	250 per volunteer
	iii. travel allowance	1,200 per volunteer
2.	External TA, 16 person mo/yr @ 22,000/mo	1,864,000 total
3.	Local TA, 20 person mo/yr @ 1000/mo	130,000 total
B.	Operational Costs	1,414,000 total
1.	Apartment for Short-term consultants	25,000 per year
2.	TA/Assistance-Field Activities	50,000 total
3.	Miscellaneous (7.5% inflation and 10% contingency)	
	i. Office rental, service, utilities	70,000 per year
	ii. Communication/postage	50,000 per year
	iii. Fuel, oil, lube, maintenance of vehicles 5,000 per vehicle, 6 vehicles in operation	30,000 per year
	iv. Insurance, repairs	17,000 per year
	v. Local subsistence travel	16,000 per year
C.	Small Loan Program	250,000 total
D.	Market Information System (commercial database)	200,000 total
E.	Contractor's Overhead 80% ADC Technical Assistance	7,148,000 total
SUBTOTAL, ADC		17,923,000 total

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II. Training	
a. Makerere, long-term	423,404 total
6 MSc degrees, $30,000/person yr	
b. Short-term	5/year @ 7,000 per year
c. Local in-service training	20,000 per year
i. rent	
ii. food	
iii. transportation	
d. Internships	12 person yrs @ 500 ea
e. Workshops	5,000/workshop, 3 per year
f. Study Tours	3 per year @ 20,000/trip
SUBTOTAL, TRAINING	1,302,000 total
III. Commodities	451,000 total
A. ADC/UEPC Office	
1. UEPC COP Office	20,000 total
2. Vehicles	9 @ 22,000/vehicle
3. Office Equipment/Furniture	100,000 total
4. Supplies	20,000 per year
B. Private Sector Associations	60,500 total
C. Makerere University Equipment/Supplies	180,000 total
SUBTOTAL, COMMODITIES	691,000 total
IV. Research and Extension	
a. High Value	
i. High Value Contract (see sample below)	570,000 total
ii. NARO Institutional Support	100,000 total
b. Low Value (NARO)	
i. Maize	900,000 total
ii. Beans	500,000 total
c. Seed Multiplication/Distribution Program	300,000 total
d. NGO Outreach Program	200,000 total
SUBTOTAL, RESEARCH AND EXTENSION	2,570,000
V. Buy-ins to AID Projects	300,000 total
VI. Impact and Environmental Monitoring	500,000 total
A. Four Major Studies	
1. Sector study	
2. Special study	
3. Baseline study	
a. Targeted (first) baseline	
b. Midterm survey	
c. Final survey	
4. Environmental assessments	

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VII.	Audit and Evaluation	385,000 total
	a. Audit: Grants to NARO and APDF	23,600 per year
	b. Evaluation (1 midterm and 1 final evaluation)	267,200 total
VIII.	Africa Project Development Facility	743,650 total
IX.	USAID Project Management	560,459 total
	a. US PSC, 18 person months, FS-2 (second year 60% of total year's cost)	
	b. FSN PSC, 5 person years @ 15,324 per year	
TOTAL		**$25,000,000**

IV.a.	Sample High Value Research - Papain	$23,703 total
I.	Land preparation, 166/ha	1,000
II.	Chemicals	
	a. fertilizer, 5500 kg	500
	b. insecticides, 60 kg	400
	c. fungicides, 60 litres	500
	d. herbicides, 60 litres	500
III.	Tools	
	a. hoes, 20	50
	b. slashes, 20	80
	c. harvest boxes, 100	480
	d. spray pumps, 5	500
	e. knives, 20	30
	f. laddles, 20	30
	g. polythene roll, 50 kg	125
	h. polythene bags, 5,000	208
IV.	Labor, 10 laborers	5,000
V.	Salaries	
	a. Breeder	800
	b. Agronomist	1,000
	c. Pathologist	500
	d. Entomologist	1,000
	e. Technicians, 2	10,000
VI.	Travel, internal allowance	10,000
VII.	Cultivar introduction	500
VIII.	Equipment	1,000

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Long-term Technical Assistance: Base Year Calculations

FS-1	
Salary, increase of 3%	86,589
Contingency for compensation, 4%	3,464
Differential, 25% salary	21,647
Differential Contingency, 1%	866
7.65% of Salary, USG Contribution + Differential	8,278
Subtotal	120,844
FS-2	
Salary, increase of 3%	66,617
Contingency for compensation, 4%	2,605
Differential, 25% salary	16,654
Differential Contingency, 1%	666
7.65% of Salary, USG Contribution + Differential	6,369
Subtotal	92,971
Assignment to Post and Home leave	33,566
R & R	6,166
Education, new student fee	16,700
Medical exam, visa	6,345
DBA insurance	
FS-1	2,416
FS-2	1,859
Local support costs	50,000
Contractor Logistical Support	25,000
Residential Furnishings	61,417
TOTAL FS-1	322,453
TOTAL FS-2	294,023

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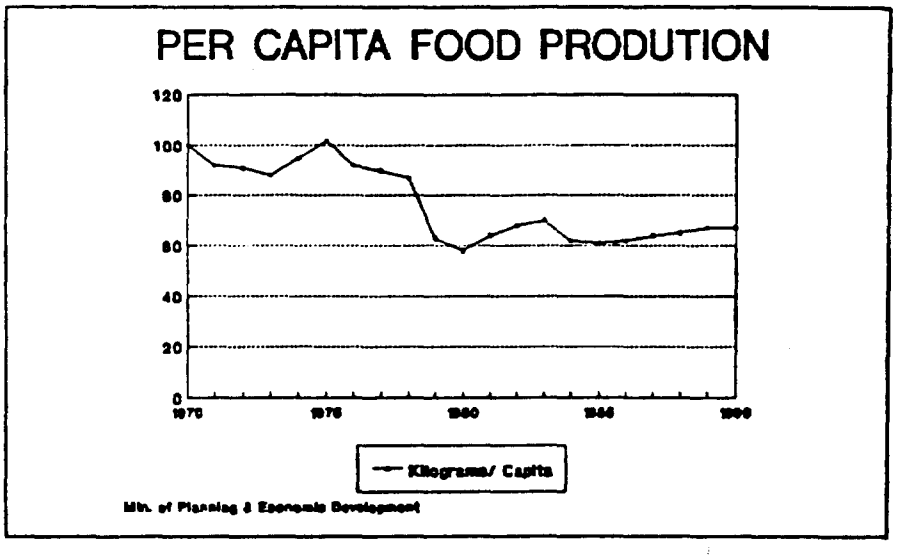
ANNEX C
TECHNICAL ANALYSIS

A. Overview

This technical analysis reviews constraints to NTAE production and marketing, provides specific analyses of the identified high-potential subsectors, and presents illustrative case studies of NTAE businesses in these sectors.

In 1986 Uganda began increasing food production following an over 30 percent decline in per capita food output between 1975 and 1985, as shown in Exhibit C.1. Since 1986 the country has experienced increasing political and economic stability. However, the value of exports in U.S. dollars fell from 407 million to 166 million between 1986 and 1991. This loss in exports earnings was mainly due to a fall in world coffee prices and the weakening of the Uganda shilling.

Exhibit C.1



The traditional export crops produced in Uganda are coffee, cotton, tea, tobacco, and cocoa. Of these only coffee has been as a major export crop. The production of other traditional export crops has declined to the point where Uganda is no longer a major supplier to foreign markets. Cotton and tea production has started to pick up, and Uganda is slowly regaining some of its lost markets.

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Regardless of the difficult economic environment in Uganda, the country's population is self-sufficient in basic food requirements and produces surplus cereal and pulse crops. Ugandan commodity traders are very effective in moving maize and other commodity products into regional markets. Kenya is the largest of these markets targeted by private sector traders. Typically the traders export maize by truck, receive payment in Kenya shillings, and then purchase consumer goods for re-export to Uganda.

Currently, six private firms are actively exporting fresh vegetables to European markets by air cargo from Entebbe International Airport. There is also an increasing amount of investment in export horticultural, as local business persons begin to invest in NTAE crops such as asparagus. Several other local business persons have invested in low-value commodity exports, the vanilla growing and processing industry, and the cut-flower industry.

The spice subsector is also attracting investment, with local business persons entering into farming agreements with vanilla growers and other business persons developing a vanilla production and export joint ventures with foreign parities, such as China, to supply plant materials and technical assistance.

B. Constraints to Non-traditional Agricultural Exports (NTAEs)

B1. Introduction

Constraints to the genesis, growth, and expansion of Uganda's NTAE industry are numerous and complex. They encompass production and postharvest obstacles, transportation and marketing difficulties, macroeconomic policy impediments, and legal and regulatory barriers.

The GOU has made substantial progress in recent years to alleviate many of the macroeconomic policy obstructions. The EPADU Policy Project under the MFEP has been working on macro-economic issues and is now beginning to shift some of its emphasis to improving the legal and regulatory environment.

This section of the technical analysis will provide details related to many of the constraints currently limiting NTAE industry growth. This section will also outline some of the activities currently underway which should, in the long run, substantially reduce many of the constraints currently facing the NTAE industry in Uganda.

There are many ways to categorize constraints and approach their analysis. This section will focus more on those constraints which directly or indirectly effect the growth and development of NTAE firms. Exhibit C.2 shows various levels of constraints and some of the GOU ministries and donors which are currently funding

programs or projects focused at that particular constraint level. Relevant activities will be noted in the following sections.

B2. Financial/Investment Linkages

Since capital drives economic growth and development, the lack of it is a major constraint to building Uganda's NTAE industry. Producers need working capital to cover production costs (such as seeds, fertilizers, pesticides, tools and labor) before they realize a return on production. Processors need capital to buy

Exhibit C.2 NTAE Constraints in Uganda

Constraint Level	Efforts Underway
I. Macro-economic Policy - Fiscal and policy reform - Exchange rate reform - Monetary policy reform - Public investment policy - International trade policy	PEC, MFEP(ANEPP), BOU/WB (Agriculture Secretariat), MFEP(UIA), MCIC(UEPC), & other GOU agencies.
II. Legal and Regulatory	MFEP(UIA), WB(SAC), MFEP(EPADU), WB(Privatization)
III. Infrastructure - Roads - Transport - Communications - Utilities	GOU Ministries of Works, Telecommunications and Utilities Authorities, US & other Feeder Road Projects, WB(Privatization), other donor efforts
IV. Know How/Information Technology Transfer - Research - Education - Training - Extension (Private & Public) - Business Management	NARO, MOES(Makerere), MAAIF(Extension, DFIs), Kawanda/UNDP, Regional and Ugandan Trade Institutes and Centers
V. Sector/Subsector - Production - Post Harvest Handling - Packing, grading, standards, - Cooling and storage - Financing - Market Information and Contacts	MAAIF/WB: Unified Extension, Makerere Univ, NARO, CIAT, CIMMYT, IITA, Bureau of Standards/EC, BU, UCB, DFCU/GTZ, EADB, APDF, USAID(CAAS), UIA, MCIC, UEPC, WB (Venture Capital)
VI. Firm/Enterprise Producer	EEC, ODA, NGOs, UNDP, WB, DANIDA, USAID, GTZ, Others

equipment to upgrade or expand their operations. Exporters need transactional financing to cover procurement, handling, and transport costs.

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A flexible and efficient financial system is essential to building Uganda's comparative advantage as an exporting country. Fortunately, Uganda has money that can be used, with over US$ 60 million in deposit at the Bank of Uganda. Yet the existing financial system is in crisis, as a result of both the macro-economic environment (over which it has no control) and inadequate supervision.

On the demand side, entrepreneurs are effectively shut out from the financial system, because loan interest rates are too high. In a recent study of the financial system, Dr. Dale Adams concluded that the Co-operative Bank Ltd. required a spread (between the cost of funds and interest paid by borrowers) of 25 percent to cover administrative costs. Further, he noted, because the Bank holds so many unrecoverable loans, expenses as a percentage of the flow of new loans made were substantially higher than 25 percent.

Beyond administrative costs, agro-entrepreneurs face cumbersome loan procedures that add to their costs. These include the time required to obtain a loan as well as costs of providing loan security. Even though large sums of capital are "available," Dr. Adams concluded that elevated borrowing costs and stringent loan security requirements will likely dissuade most new export entrepreneurs from using formal loans, especially for long-term investments.

The Uganda Development Bank (UDB) has funds available for small-scale projects, but in an August 1992 study, David Jones found that the UDB has not channelled any assistance towards fresh produce growers, and of the 49 applications received, only six operations have been financed. The UDB believes that there are too many risks attached to the vagaries of the horticulture market.

It often takes large amounts of capital to finance NTAE operations. For example, a recent AID-sponsored study concluded that more than US$ 200,000/ha is needed to establish a rose nursery. While the return on investment (ROI) might justify such a commitment of capital, the amount required is beyond the reach of most Ugandans.

One Bank official pointed out that the real problem in the banking sector in Uganda is that "...the banks do not make much effort to get to know their customers and in general are weak, and do not have adequately trained staff to process complex NTAE type projects." On the other hand, the same bank official pointed out that "...the problem with most Ugandan businessmen is that they are almost always involved in more than one business, which causes banks to worry that money which is loaned might not go for the intended purpose."

An economist with the World Bank in Uganda pointed out that "... even when a young entrepreneur contributes his house and other

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assets as collateral, there is often still a gap, even with a sound economic idea in place." He went on to say that venture capital was a new idea, even for the World Bank. He noted that the World Bank has a very successful venture capital fund in Brazil where "...the bank makes funds available through professional fund managers who take an equity position in the business then sell it off later." The Bank official felt venture capital was worth a try, perhaps using the Brazilian experience as a model. He said it was one of the few 'good' ways to "bridge the gap" with young entrepreneurs interested in entering the export business.

The World Bank also has an export finance scheme in place. Although it requires more money at the moment, it also needs to be more closely designed and tied to the private sector, according to a Bank official. He felt that more public awareness about the various provisions under the program need to be made public, so that the private sector would be in a better position to take advantage of a program, intended for use by exporters. However, not many have taken advantage of the program to date.

An interview with a Nile Bank official (Nile Bank is wholly African-owned and receives some support from USAID) indicated that they would like to move from a typical security/collateral type loan to a "cash-flow" based analysis. He stated that the individual entrepreneurs would need a great deal of "business plan development" assistance along the way before Nile Bank would be in a position to take over and do the credit analysis.

The Development Finance Corporations of Uganda is the only bank in Uganda which is currently operating a venture capital fund as part of its overall loan portfolio. Although small, it is currently being used to fund a number of projects. The DFCU takes only a minority ownership position under the program, but still attaches very strict management conditions and financial controls, in order to protect its stockholders interests. During interviews with DFCU officials, a strong interest was expressed in doing further work in the area of venture capital. They said the model they are currently using to privatize tea estates, under an EEC-funded program, could be used for NTAE projects just as easily. The essence of the EEC tea program is that the DFCU attaches technical assistance (in this case a long- term world-class tea expert) to the condition that the DFCU have a representative on the board of directors with veto power, if necessary. The EEC feels confident enough in DFCU's management to insist on this condition being part of the loan package.

B3. Market Information

Commodity markets are complex and dynamic. If agro-entrepreneurs are to accurately read market signals, clear communication of vital information is essential. To meet this need, the Market News Service, within the Ministry of Commerce, attempts to help keep farmers, traders, and consumers better informed about

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current domestic market conditions. Its main purpose is to disseminate timely and useful information on the current market situation for basic agricultural commodities. The information can assist users in their marketing decisions and help create a more efficient agricultural marketing system.

Despite these efforts, traders and exporters of maize, beans, and oil seeds are not receiving adequate timely information about market conditions. According to Sergeant and Macartney, a major constraint reported by primary traders was a lack of information on demand and prices.

Similar concerns were expressed by traders who were interviewed while undertaking this analysis. They all felt that a better method needs to be devised for sending accurate and timely market signals to smallholders producing basic cereals. The traders said they need to have a way to inform smallholders that there is strong demand for their products. They also said they need a more efficient system for determining when, where and what quantity of product will be made available from smallholders. Although in many ways, given current conditions, the existing system is efficient, there is a universal feeling that much more could be done. The traders cite the example of the tremendous response smallholders made in producing sesame a few years ago, to indicate how quickly smallholders can, and will respond, if given the proper market signals. In the same way, advance information about Sudan's re-entry into the sesame market in 1992, if it had been communicated early enough to smallholders, could have enabled them to shift to other crops. This would have avoided the sesame glut and resulted in more profit for both producers and exporters.

Smallholder producers lack basic market information that could enable them to adapt more appropriately to market demands. David Soroko concluded in his survey that useful and timely information on future demand must be communicated to farmers before the planting season to permit adjustments in the crop-production mix.

NTAE firms that export high-value products are also in constant need of timely market information. The ITC has recently put in place a market information data link to connect all PTA markets. A long-term expatriate advisor is currently being recruited to fill a post at the UEPC and to ensure better utilization of this important market information system.

Many useful market databases now exist, but there is no single entity in Uganda attempting to "...put it in the hands of the exporter," as one exporter put it.

To avoid redundancy and duplication, all existing data-gathering efforts by the government could be consolidated into a new National Agricultural Data Bank (NADB).

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By accessing, compiling and making available existing in-country sources as well as international databases, i.e. USDA, ITC, FAO and others, Ugandan exporters would be able to:

- Compile information previously collected
- Use the more reliable data sources
- Locate new information sources
- Meet their particular market information needs more effectively
- Obtain market information in a more timely fashion
- Access trade newsletters, extension information research results, and other presently unavailable or hard-to-access data

Interviews with traders and producers have shown that the types of information necessary for low-value crop exporters and producers are as follows:

- Locating exportable NTAE commodity surpluses, i.e. quantity, quality, and variety availability by district, consumption by district, seasonality of supply and demand, number of producers and consumers, and estimates of surplus available per farm.

- Determining what price to offer producers, i.e. farm enterprise budgets for different crops, locations, and seasons; average transport costs between producing and exit points.

- Determining the feasibility of forward contracting for supply, i.e. production costs and credit needs, and competition for supply in each location.

- Making crop production projections for the upcoming harvest and future years.

- Assessing marketing infrastructure, i.e. bulking, processing and storage capacity of rural collectors, urban traders, marketing board facilities, and general road conditions.

- Determining where to place production facilities, i.e. agro-climatic conditions, land and labor availability.

- Assessing and sourcing current and emerging production and processing technologies.

Specific information needs for exporters of high-value crops include:

- Import regulations, including customs, quantitative, and qualitative regulations, packaging and labelling requirements, customs laboratory responsibilities, and

documentation requirements (commercial invoice, certificate of origin, etc.).

- Information on the importing country's banking and finance sector, including currency valuation, how international payments are affected, and the role of the central bank.

- Commercial practices including business relations and language, offers, product descriptions, price quoting, minimum order quantities, specifying the quantity available for export, shipping and terms of payment, terms of delivery and insurance.

- Export market structure including transport, import and distribution channels, and freight forwarders.

- Trade promotion organizations, rules and regulations regarding advertising, trade fairs, etc.

B4. Electric Utilities

Uganda is blessed with abundant water and electricity. Rates are low (US$.015/kwh compared to US$.07-.09/kwh in the U.S.). However, power service is erratic, a clear detriment to reliable cold storage and efficient packing and processing plant operations. According to Maxwell Stump's study, UIA identified the acquisition of utilities as major concern of potential investors. Electric power, even though relatively cheap, is not widely available to smallholders. There are at least two hydro-power projects currently under consideration, which should further relieve this constraint in the longer term.

B5. Highways and Roads

A system of reliable transport for export products is essential. The road network in Uganda, while fairly extensive, is often in disrepair. As a result of numerous donor-funded road and highway projects, most major trunk highways have recently been widened and repaved, though some sections still need extensive work. Rural access roads and farm-to-market roads are far less developed, with many being impassable during rains. It is anticipated that the GOU's feeder road improvement project, supported by USAID and other donors, will lead to much needed improvement in many farm-to-market roads.

B6. Telecommunications

Modern efficient telecommunications are essential to commerce. Unfortunately, Uganda's domestic telephone service is expensive and unreliable. The World Bank is funding efforts to improve the system, but most business people were not very optimistic about near-term improvements. If the system is eventually privatized, it is felt that a more cost-competitive, efficient, customer service-oriented system might evolve.

Communications between Kampala and the districts are difficult. Traders complained that they must drive between Kampala and other trade centers, such as Jinja and Gulu, to obtain market information, since telecommunications are inadequate.

B7. Transportation Constraints

B7a. By Truck

High-value perishable export products require an adequate and reliable temperature and humidity controlled transport system. Presently, most produce trucks are open-bed, and those enclosed are not refrigerated. Transit temperature/humidity control technologies are a critical link in the cold chain, and must be developed to ensure the viability of Uganda's NTAE industry. The fish industry uses refrigerated vans, and these units could be a suitable model for high-value perishable produce exporters.

Transporting medium-value products like chillies does not require refrigeration. Transit to Mombasa normally takes a week. Transiting through Kenya, however, can be problematical for the exporter who has booked sea vessel space and must meet the "cut-off" deadline. To prevent highway larceny, police organize convoys and escort them to Mombasa. Often convoys are delayed, jeopardizing timely port arrivals.

B7b. By Rail

Historically, the rail connection to Mombasa was Uganda's key link to international markets. Today, exporters rarely ship by rail to Mombasa, since service is cumbersome and unreliable. If all goes well, transit time to Mombasa is 7 to 10 days. The switching point is Nairobi and often cars are diverted to side-tracks. Days and sometimes weeks go by before the shipment is "found," too late for the scheduled vessel.

B7c. By Air

Air freight is the vital link for high-value perishable cargos. Presently, Ugandan rates to Europe are competitive with Kenya's. How long this competitive edge can last is questionable. Air cargo is dominated by Sabena and British Airways. To ensure the development of the NTAE industry, more carriers must compete for future business.

Access to export markets for Uganda's NTAE crops requires strengthening of the transportation technology and infrastructure. In the area of transportation infrastructure, Ugandan exporters have limited overland trucking service through Kenya. Little or no refrigerated container service is available for overland shipments to the port of Mombasa, Kenya. This limited access to marine ports of embarkation restricts distribution of perishable product via sea transport.

Currently, the only viable mode of transportation for highly perishable Ugandan NTAE crops is air transport, although lift capacity and service is very limited. It is vital for Entebbe to attract as many internationally reputed airlines as possible, so Ugandan exporters can benefit from lower rates and increased availability of a number of direct scheduled flights each week from Entebbe to various cities in Europe. In the case of cut flower exporters, it is essential that the flowers arrive in Europe the day following harvest.

The principal weaknesses in transportation technology include:

- Inadequate truck refrigeration capacity
- Uneven size of boxes
- Weak structural integrity of boxes
- No airport refrigeration capacity

B8. Investment and Business Environment

The GOU recognizes that the country's ability to achieve rapid and sustained economic development depends largely upon attracting more private investment. This must be supported by the necessary public sector investments in economic and social infrastructure. The GOU has already taken substantial measures to improve the investment climate. Because attracting investment is so highly competitive, the GOU's investment incentives must continuously differentiate opportunities in Uganda from those in other developing countries.

The 1991 Investment Code made significant improvements in the overall investment climate, especially for export-oriented industries. Realizing that more improvements are still necessary, the GOU is currently undertaking a thorough review of the code. Incentives that are presently provided under the investment code include to qualified industries include:

- Providing duty and tax-free facilities, duty drawback for export industries and exemption from corporate tax.

- Withholding tax and tax on dividends are given preferred treatment under the provisions of the investment code.

The Uganda Investment Authority was created under the 1991 investment code act. The Authority was formed to administer the Code and promote investment. To date over 1,500 inquiries have been received and licenses granted for 375 projects worth US$ 850 million. UIA's aim is to:

- Attract foreign investment
- Facilitate the approval process for investors
- Grant investment incentives
- Protect foreign investment against expropriation
- Establish transparent procedures for the remittance of profit, dividends, and fees

In May the UIA mounted an outbound investment promotion mission to Europe. According to the Executive Director of the UIA, the mission was a tremendous success. He said they had to turn people away from their promotional meeting because there were not enough seats available in the hall. The UIA is anticipating an influx of potential investors as a result of this and other efforts.

The foreign exchange system was also liberalized, with the authorizing of foreign exchange bureaus that can trade foreign currency at freely determined rates. A foreign exchange auction now operates for determining the official exchange rate and allocation foreign exchange. At present the GOU maintains a two-fold exchange rate system, while exporters would prefer a unitary system.

Additional concerns expressed by NTAE firms included:

- Existing land tenure laws and technology transfer rights
- The slow pace of parastatal divestiture and transparency of asset ownership
- The slow pace of asset transfer under the Departed Asians Property Custodian Board (DAPCB)
- The current 2 percent withholding tax on all exports

In addition to continued improvements in its investment policies, the GOU must continue to pursue its economic liberalization policies aggressively. Inefficient parastatals still dominate key industries, such as milling and telecommunications. The importance for the GOU to stay its course for liberalization cannot be overstated.

B9. Agribusiness Management

Presently, limited agribusiness management skills limit the growth and development of NTAEs. Business leaders need management training is such areas as long-range planning, financial management, marketing strategies, and operations. Management information systems are also lacking.

In the case of vanilla production, one of the buyers now handles over 5,000 grower accounts. Adequate systems are not yet in place to handle all these accounts at the present time. The vanilla growers are provided with input credits for vine sections, wheel barrels, watering cans, and basic tools to establish and maintain their small half-hectare plots of vanilla. The systems need to ensure a good long-term working relationship between grower and processor, since once established the same vanilla plant will produce economic yields for up to 20 years if tended properly.

Similar agribusiness management systems will need to be in place for the NTAE firms that are now starting large smallholder schemes for the production of chillies and papain for export.

B10. Agronomic Constraints

Except for research and extension activities on maize and beans, Uganda's institutions lack a clear focus on the applied research and technology transfer needed to develop the NTAE industry. Overall Government expenditure on agriculture research is very low.

A recent World Bank study indicated only 0.2 percent of its agricultural GDP was spent on research, mostly from external donor sources. As a result, much of Uganda's smallholder agriculture industry remains rudimentary. If NTAE exports are to evolve, the industry must develop modern production, harvesting, postharvest handling, storage, transport, and marketing technologies.

Regarding floriculture, Sergeant and Manji noted that Uganda may have a better climate for top-quality flowers compared to Kenya and Zimbabwe, the two major African exporters of cut flowers. One of the main competitive disadvantages for Uganda is that it has no recent tradition of production and marketing of high-value export crops. The lack of experience in floral production will mean Uganda will be at a disadvantage during the early years of development.

In a similar study on vegetables, Sergeant and Wauters concluded that Uganda's temperature profiles are remarkably constant throughout the year. This means year-round production can be achieved. The ability to supply year-round produce creates improved marketing opportunities and makes targeting for specific market windows much easier.

The requirements for a competitive vegetable export industry include:

- Appropriate agronomic practices
- Proper seed varieties, planting, irrigation, and plant protection
- Harvesting, postharvest handling, transporting, and marketing expertise

For the past five years, the UNDP has funded and carried out through FAO a horticulture research program at Kawanda, designed to build the local capacities to carry out an ongoing fruit and vegetable research program. For five years they did research on vanilla, fruits, vegetables, and some floriculture at the station, and will be making some official releases shortly. Unfortunately the funding for this program has lapsed. Although it is anticipated that the research will be continued under a Phase II, there will be a rather lengthy time gap between phases, thus bringing much of the research that was in progress to a temporary halt.

Compared to vegetables and flowers, Uganda has longer history of growing and exporting spices and essential oils. In the 1950s to 1970s, a Japanese-owned company grew, processed, and exported mint, geranium, and eucalyptus essential oils. In the world market, Uganda's Bird's Eye chillies are regarded as one of the industry's standards. Foreign buyers are enthusiastic about receiving locally grown ginger.

One local processor is in the process of working with over 2,000 smallholder Bird's Eye pepper growers in a resettlement scheme three hours west of Kampala. He anticipates a great deal of opportunity, but at the same time realizes the many constraints he will face in the coming months as he begins to establish his operation.

Spice drying technology itself is simple. It only requires proper temperature, humidity, and protection from rainfall or dew, dirt, and organic contamination and bleaching caused by extended exposure to the sun. This can be employed with current in-country capabilities. Essential oil processing/distillation technology, however, is more complex. It entails exact time and temperature specifications, charge size, steam production rate, and the balance and capacity design of the condenser.

Two vanilla processors are currently buying vanilla beans for processing and export to North American markets from thousands of small growers. Numerous constraints have been identified, including a fungus which can affect as many as 50 percent of the plants in a given field. Applied field research is needed immediately to address this issue.

To be a major player in the world essential oil market, Sergeant and Caiger observed that Ugandan exporters and growers must:

- Import technologies to overcome constraints in local technical management
- Obtain source planting material with intrinsic chemical qualities, such as capsaicin in chillies and oil in eucalyptus
- Identify production locations and farming systems for optimum quality and cost controls
- Have access to accurate regional market information and project financing

B11. Plant Protection Constraints

Uganda's limited resource growers face a major problem with respect to pest and disease management. Yield-limiting pests common to all NTAE crops include weeds, nematodes, insects, and diseases. Purple nutsedge weed infects many of the production areas. Various sucking and chewing insects cause severe foliar stress, which limits crop productivity. As was observed in vegetable fields in Kabale, whiteflies and aphids are major vectors in the transmission of numerous viral diseases ubiquitous

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in Uganda. Other fungal diseases, leaf blights, and root rots present additional production constraints.

Plant breeders have developed cultivars resistant to certain pests and diseases in some crops. However, these are unavailable to most Ugandan growers who usually must rely on chemical pesticides to achieve economic control of pests and diseases.

Integrated pest management (IPM) combines a variety of control techniques to reduce or keep pest populations at acceptable levels. To be effective, growers must monitor their crops regularly for pest damage. Effective monitoring requires training in pest identification and appropriate eradication methods. IPM provides an environmentally sound, cost effective approach in the control of a wide variety of pests in NTAE crops. However, the lack of appropriate data and trained people in Uganda limits the application of this technology.

The NTAE crop industry in Uganda requires the introduction of environmentally responsible and humanly safe methods of pesticide usage. Pesticide poisoning and inherent environmental contamination adversely effect human health and the ability of the growers to compete in the marketplace. Applied technology includes:

- Sprayer calibration (which the Kabale snow pea growers failed to understand)
- Using protective clothing in pre- and postharvest environments
- Proper chemical storage
- River and groundwater protection
- Chemical disposal

Excessive pesticide application can lead to the development of pest resistance. Such resistance further complicates the control of insect transmitted viral diseases. Growers must employ such agronomic practices as field sanitation, the elimination of host weed species, crop rotation, and crop residue removal to minimize the incidence of plant pests.

Field operations can affect marketing opportunities. Growers require the latest international pesticide information on NTAE crops for export. Lack of knowledge of the current European pesticide laws places Ugandan growers at considerable risk. Importers or processors may reject products because they contain illegal chemical residues or legal residues exceeding established tolerance levels.

Limited availability and high costs of certain pesticides was mentioned by numerous growers as a major constraint to using pesticides, if they are being used at all.

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B12. Production Constraints

The principal production constraints facing limited resource smallholders growers of export crops in Uganda include:

- Site selection
- Land preparation/seedbed establishment
- Cultivar selection/availability of hybrid seeds
- Irrigation management
- Plant nutrition

Contrary to common practice, growers should select production sites according to the specific requirements of each NTAE crop. Soil texture, slope, pH, access to water, availability of windbreaks, native weed population (e.g. nutsedge), and proximity to postharvest infrastructure all enter into the selection of the most appropriate site. Crop rotation will aid in minimizing pest build-up, preserve soil structure, and will limit the carry- over of chemical residue.

A women's group recently planted snow peas in an improper site, which flooded out what otherwise would have been a good crop. The next planting, according to the group will be in a properly selected site that will not flood.

NTAE crops respond to optimal land preparation. Under current conditions, Ugandan NTAE crops suffer from inappropriate rates of application, timing, and placement of fertilizers. In many parts of Uganda, the natural fertility of the soil cannot be relied upon to produce high yields.

Many areas in Uganda where NTAE crops will be grown have periods of either inadequate or excessive precipitation. Growers will need irrigation and/or drainage control to avoid reduction in yields and crop quality. The sustained development of horticultural exports cannot easily be dependent on rainfed systems. The appropriate irrigation infrastructure must be established in those areas most suitable for horticultural production for export (e.g. southwestern Uganda). Appropriate technologies include the use of flood, overhead, and sprinkle irrigation. The interaction of inadequate soil fertility and deficiencies or excesses in soil moisture restrict crop productivity.

B13. Seed Selection

By combining proper site selection with improved varieties from the research stations, maize and bean yields of 1.5 tons/ha are reasonable. However, hybrid varieties demand higher levels of production inputs in the form of fertilizers, irrigation, and herbicides. In many cases, the less expensive open pollinated seeds perform better under low and medium input technologies.

Even though yellow maize is the predominate variety grown, white maize is gradually becoming a very important cereal in Uganda, occupying 10 percent of the total area under cultivation in annual crops. Despite its importance, producers lack training in modern agronomic techniques. Plantings are erratic with little attention paid to seed stock, seed distribution, inputs, irrigation, and postharvest procedures. The variety most commonly grown is Kawanda Composite A (KWCA) and most farmers rely on their own stock of seed taken from the previous crop for planting. Imported and improved white maize seeds from Kenya are much in demand but never sufficiently available, and these factors together lead to reduced yields of poorer quality maize.

Beans, a vital subsistence crop in Uganda, are generally grown by smallholders as an inter-crop between maize and other food crops. Very little research has been done to improve the production of beans in Uganda. The improved variety K20 was released in 1962, but there have been no substantial introductions since then. Similarly, there has been little development work to improve cultural practices and to improve inter-cropping and mixed-crop farming systems. A Namulonge improvement on Kawanda Composite, Longe 1, was distributed for the first time last year to about 3,000 farmers.

There are still inadequate incentives for the distributions of seeds. If incentives were incorporated into the distributions system, new varieties of maize would have far wider distribution then they presently enjoy.

Further investigative work is needed to look into the possibilities of privatizing the seed industry in Uganda. J/V prospects from the U.S. and Europe need to be considered in this process. Other African countries such as Swaziland and Lesotho have privatized their seed production systems in recent years through U.S. investment. The positive results of the privatization process are already being noticed by smallholders, as seeds are now more readily available then in the past.

B14. Postharvest Constraints

After harvest, under the best circumstances, the quality of perishable products can only be maintained, not improved. Grade standards that define quality, condition, size, and maturity are fundamental to a modern industry's structure and discipline. Carton standardization, with accurate labeling, consistent count and weight, builds industry integrity and consumer confidence.

Postharvest management covers the handling, packing, grading, cooling, storage, transportation, and distribution of the crop between the time of harvest and its final consumption. Farmers often do not understand what measures need to be taken to ensure that their produce arrives at the point of export in merchantable condition, and do not realize why proper handling is important to

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ensure quality. Serious problems with NTAE crops grown in Uganda reflect deficiencies in the following:

- Improper harvesting and field selection
- Lack of know-how and facilities for postharvest handling
- Lack of cold storage facilities (on farm, in centralized locations, and at Entebbe airport)
- Improper packaging for export markets
- Inadequate infrastructure at Entebbe airport for perishable (e.g., no pallet weighing machine, antiquated equipment, poor lighting)
- Lack of knowledge of international market standards
- Inadequate product quality control and uniformity
- Lack of facilities for postharvest antifungal and pest treatment

Compliance with improved standards of quality and more vigorous grading procedures require continuous education and supervision of the labor force. Improper picking, handling, and packing procedures increase the incidence of physical damage and product bruising.

The UNDP has been funding a program that established the Bureau of Standards, and the EEC will pick up the funding beginning this year. In discussions with the UNDP and EEC, it was clear that the exact nature of the work to be carried out under the Bureau has yet to be fully determined. It is clear that the future development of the NTAE industry will need to go hand in hand with the development of the Bureau of Standards.

Strategies for postharvest disease control should have an integrated, preventive approach. Such strategies include field and postharvest sanitation, postharvest chemical treatments, and future utilization of modified atmosphere packaging and shipping technologies. Until world standards are incorporated in industry operations, it will be difficult for high-value exports to reach anticipated volumes and sustainability.

Uganda has one manufacturer of boxes, yet exporters who were interviewed bought all their boxes from Kenya because they were of better quality and cheaper, as local boxes have a tax levied on them. The UEPC has appealed to the government on behalf of the box manufacturer, but the problem has not been resolved.

Perhaps the most serious constraint facing NTAEs is the need for a modern cold chain. Keeping products at proper temperature and humidity is essential to maintaining freshness. Unfortunately, on site pre-cooling and cold storage is virtually nonexistent. This is a major constraint to the development of the Ugandan NTAE industry. Product is harvested and set by the roadside for pickup. Many commodities would benefit from pre-cooling, cold storage, or on-farm drying before shipping.

The failure to remove field heat immediately after harvest reduces the quality and shelf life of most NTAE crops. To improvise, one exporter plans to use a hotel refrigerator to cool snow peas before transit to Kampala.

Conditions do not improve further down the distribution chain. The Kampala Ice Plant has refrigerated stores, but they are unsuitable for fresh produce. Airport cargo handling capacity is inadequate for handling volume shipments of perishable commodities. The three cold rooms at Entebbe Airport were not designed for storing produce and have not been maintained. The doors are too narrow for aircraft cargo pallets. Furthermore, lighting is deficient, scales are not accurate, cold storage is inaccessible, the staging area is too small, there is no pallet loader, and the refrigeration is not currently functioning. There is also a need to increase the capacity of the cargo shed, obtain a pallet weighing machine, and procure a high loader so that the upper deck of aircraft may be used.

Little if any in-country modern technology is used to support an expanding maize and bean export industry. Processing operations require crop dryers, hoppers, conveyors, screens, winnowers, baggers, stitchers, and scales. If appropriate storage units and processing facilities were located closer to production areas, producers could process and store their maize and wait for stronger marketing opportunities. They now sell their product at peak production periods when supplies are the greatest and prices the lowest. Then product is transported to Kampala for processing and shipping.

Also in the milling sector, large and small companies face technical problems. Small privately owned milling companies use locally manufactured equipment. As a result, efficiency is low (20 percent of capacity), quality control is erratic, and breakdowns are frequent. Even the large parastatals find that modern, efficient equipment cannot solve their problems. Although they can purchase modern equipment, technical training, skilled supervision, and efficient management are lacking.

B15. Extension Information Constraints

The government's agriculture extension system is weak and relatively ineffective. Low salaries, lack of adequate transport, inappropriate training are to blame. The World Bank has an Extension Institutional support project underway. The objective is to build up the capacities of the agriculture extension system in Uganda.

There are also a number of private extension systems operating in the country. The BAT system incorporates 28,000 smallholders who are producing tobacco, maize, and beans. BAT employees over 250 people in its smallholder support system, which includes input and other forms of credit as well as technical information. The system needs to be looked at closely to see if it is an

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appropriate model for a private sustainable extension system, which might be applied to NTAEs.

B16. Conclusions

The constraints facing NTAE exporters are formidable, whether they produce and export flowers, vegetables, spices, essential oils, or basic cereal crops. There are many constraints that are presently being dealt with through various GOU and donor programs and projects. Unfortunately for the newly emerging NTAE firms described earlier in this section, there are still a number of serious constraints that remain uncovered by the various programs described throughout this section, especially at the enterprise/producer level. NTAEs and smallholder have limited access to:

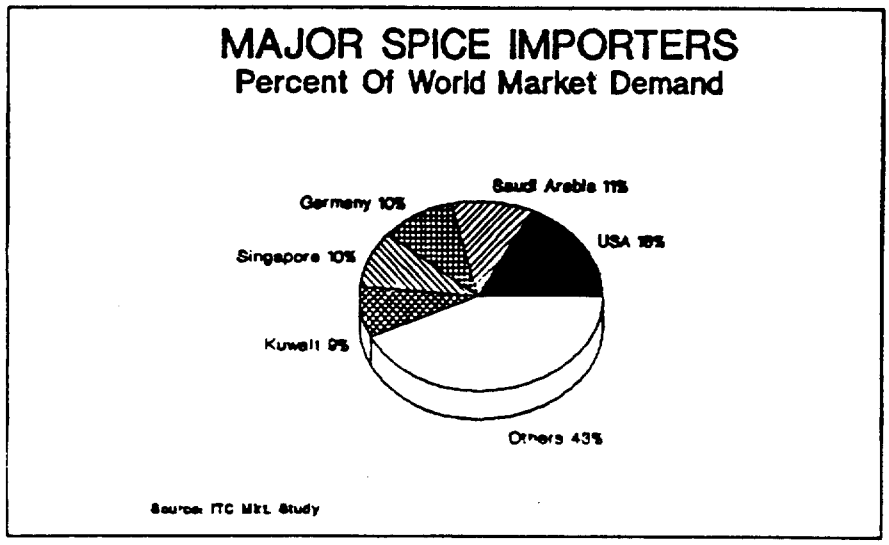
- Technical information
- Financing
- Market information
- Market contacts
- Private associations support
- Applied research, education, and training
- Access to policy makers and related institutions

C. Subsector Analyses

C1. Spices and Essential Oils

Exhibit C.3 shows the major spice purchasing countries of the world. The world market for fragrance and flavors is valued at over $6.5 billion and growing at six percent per year. The essential oil fraction of this market is estimated at over $1.0 billion.

Exhibit C.3



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Uganda has a small but growing spice industry. In 1991 the value of spices shipped from Uganda was $497,000. Major spice and essential oil export opportunities include: vanilla, chillies, ginger, geranium oil, pyrethrum, paprika, cumin, coriander, dill, and fennel. Many of the sub-markets in spices and essential oils are shallow and sensitive to changes in the world economy. Thus, Ugandan spice producers and processors generally form links with major world industry forces to ensure markets, receive technical assistance and maximize returns.

C1a. Vanilla

Vanilla has quickly become the vanguard of Ugandan spice exports. Ugandan vanilla is said to equal the high quality produced in Madagascar which controls the world market. In 1992, about five tons of vanilla extract was exported from Uganda, valued at $300,000. Although artificial vanilla has very close to the same taste, the market is strong, partly because labeling requirements for vanilla ice cream usually require distinguishing real from artificial flavoring. The danger in the world market is the control exercised by Madagascar, which is reputed to maintain a two-year supply on hand. On June 8, 1993, EPADU announced a slump in the world market price of vanilla from $72 to $54 per kilogram. In Madagascar, there is an excess supply of vanilla on the local market and last year over 1,000 tons were burned in reaction to a slump in international markets. In Uganda, however, there is no such glut and growers will continue to receive Ush 7,000 per kg for green vanilla beans. In fact, EPADU is launching a promotion drive aimed at boosting vanilla production.

The industry revolves around two major vanilla exporters. One sells to McCormick (USA) and has received technical assistance to install a modern vanilla processing plant which obtains more extract per bean, with a slight decrease in quality. His is an extensive system based on outgrowers. He contracts with about 5,000 smallholders, including at least one dynamic women's group. The exporter supplies cuttings, vine support materials, wheel barrows, watering cans, and technical assistance. Materials are supplied as interest-free loans to be deducted from initial sales when the vines begin producing after three years. The grower provides all labor required to grow and harvest the crop and agrees to sell the crop to the exporter. The exporter has 30 in-house extension agents located in 15 towns and also cooperates in the training of government extension workers. The average size of the typical contract grower is about one-half hectare.

The other exporter grows his minimum requirements and augments this with outgrower production. He obtained a multi-year contract to sell vanilla to Canada, and has undertaken a joint-venture with China (PRC) under which he supplies the land, labor and working capital while PRC provides plant materials, shade netting, and technical assistance on high-density vanilla production (3000 plants per acre). This exporter expects to

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harvest the first crop in two years and get two harvests per year thereafter. He is also projecting significantly higher returns per hectare using the high density system. He estimates the capital investment needed for a reasonable economy of scale to be $300,000. This would be a problem for many local investors.

Vanilla is currently grown in Masaka, Mpigi, Mbale, Bundibugyo, Bushenyi and Mukono districts. It has become very popular and is expanding rapidly. There are weekly radio broadcasts on vanilla production as well as training programs for government extension workers.

C1b. Chillies

Dried hot chillies are currently being exported by two local firms as well as Shell Oil. These firms sell dried Bird's Eye chillies to Japan, both directly and through EC brokers. Interestingly, most of the world market goes to industrial uses such as production of tear gas and soil fumigants, rather than food processing.

Most chillies are concentrated in the humid lakeshore zone near Kampala, but one exporter has introduced them as a cash crop for smallholders who have been relocated to the Kibale Resettlement Scheme between Mubende and Hoima. There are currently 15,000 families in the scheme, each with 15 acres of land, so ultimate potential is high. The exporter aims at 1,000 growers, but has begun by supplying 400 with seed to test the waters. He supplies seed and demonstration nurseries, as well as a watering can for each nursery. These plants are now at the nursery stage, but volunteer chillie plants in the area indicate good potential and some harvest can be expected this year.

This exporter complains that in other areas chillie growers have sometimes sold to another exporter for a slightly higher price after he supplied inputs. It appears that the concept of "contract farming" may need more formalization. When discussing growers' possible need for gloves for harvesting (some complain that the extremely piquant chillies burn their hands), he backed off saying "that's why I don't get into production—I only buy what they grow."

The concept of growers and exporters honoring a contract has not advanced in Uganda. The trust and commitment developed after many years of a good business relationship must develop in the NTAE sector over time. Chillies are usually sold FOB Mombassa, with 10 percent of the payment withheld until the produce is received and inspected in Japan. Ugandan exporters are expected to ship over 100 tons of dry chillies during 1993.

C1c. Other Spices and Essential Oils

Cardamom has also been planted in Uganda. One local investor has developed 80 ha of cardamom and has plans to expand to 200 ha.

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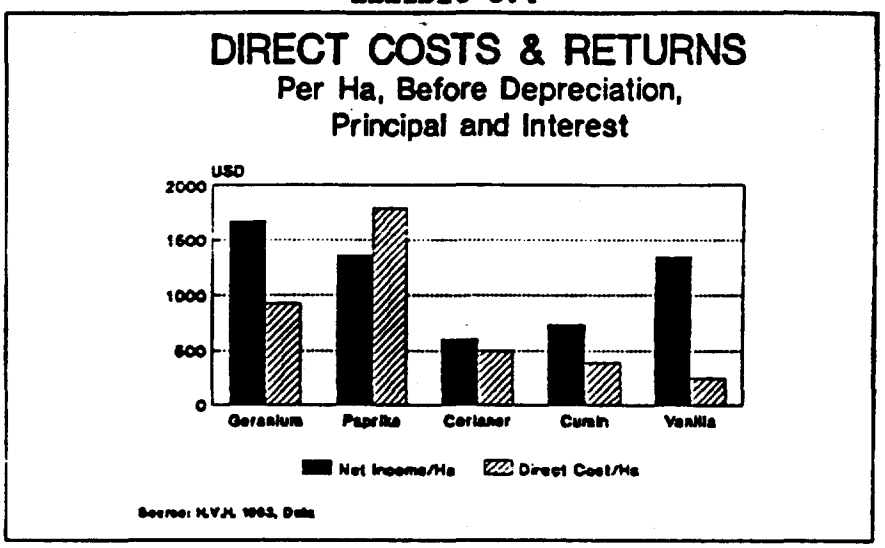
In 1992 about 4 tons of cardamom were exported. This will increase as the 80-ha plantation comes into production and smallholders begin to produce. In the development of Uganda's spice subsector, smallholders play an important role in supplying exporters and markets. This role is likely to expand as exports increase and demand grows.

Exhibit C.4 examines raw data from the Caiger-Sergeant Spice and Essential Oil Study. The data consider only direct costs and do not take into account fixed capital requirements, depreciation or time-value of money. It should be noted that vanilla usually requires three to four years before a positive cash flow is realized.

Exhibit C.4



Some of the other crops which exhibit attractive returns on the international market include geranium oil and paprika. Spices such as coriander and cumin also have a regional market niche, supplying Kenya in competition with imports from India. Pyrethrum is currently being tested in Western Uganda. Returns to growers have been relatively low, but there are plans to expand production and locate a processing plant in Kabale.

C2. Floriculture

Uganda has the potential to develop a profitable cut flower industry. The altitude, rainfall, and small diurnal temperature variations are ideal for quality year-round cut flower production. The soil and water resources in the Kampala/Entebbe area, near the international airport, pose no limitation to the development of this industry. There are two opportunities: high-investment, high-return greenhouse roses which can only be undertaken by highly capitalized entrepreneurs (often with expatriate assistance) and open field annuals, which would

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ideally be grown for export by smallholders. There are currently two major rose production operations underway and others under consideration. In addition, there is a Uganda Floricultural Association of small growers who are initiating contacts with potential buyers of field annuals in Holland.

In the near term Uganda has a very important competitive advantage in its lower air cargo costs over regional producers. The cargo rate for shipments over 500 kg from Entebbe to Brussels is $1.35/kg, which compares favorably with reported freight costs of up to $2.85/kg for cut flowers shipped from Kenya. Currently there is an excess cargo capacity of 10-20 tons per week for Brussels-bound passenger flights. This is enough capacity to allow the industry to develop to about 7-14 ha of flowers before additional cargo capacity will need to be added, assuming other products do not compete for the same space. Anticipated cut flower exports to EC markets will require additional air cargo capacity. It is assumed that the private sector will provide this service as total output grows and demand for air cargo space increases.

It is unlikely that Uganda will continue to enjoy lower freight rates than its regional competitors for long. As demand increases for limited air cargo space, rates will probably rise to come in line with those of Kenya (Manji-Sergeant). Even so, Uganda will still benefit from good year-round production conditions as well as lower labor costs. The nation's major challenge is to overcome the gap in know-how and technology with respect to experienced Kenyan growers.

Exhibit B.5

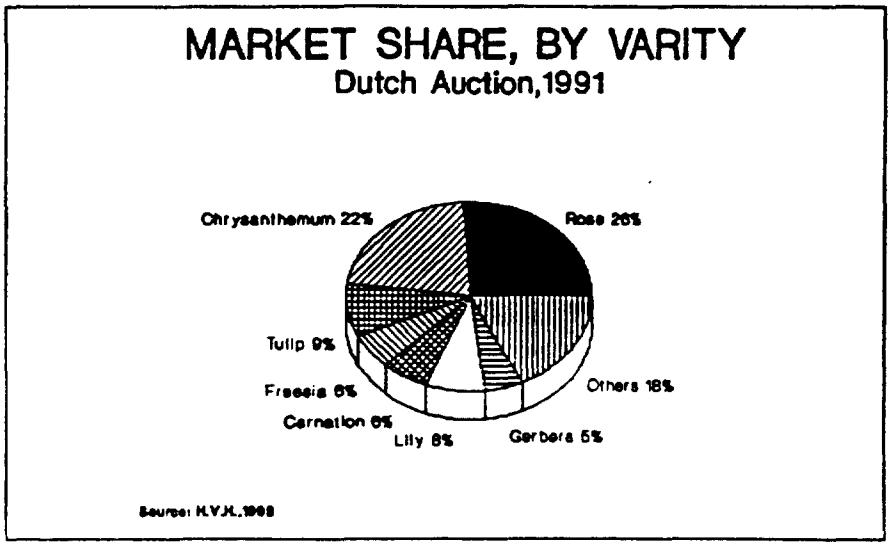

Exhibit C.5 shows world market share by flower types at Dutch auctions. Roses make up the largest market and will most likely

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be the target flower produced by investors. Risks and returns on investment in rose and other flower production is high. This is particularly apparent when compared with other production agriculture investments. Along with these high returns comes high entry costs. One hectare of covered roses requires about a $175,000 investment, plus overhead, supplies, and working capital. As far as agricultural production systems are concerned, rose growing is considered to be one of the most management and capital intensive subsectors in the industry. Capital, know-how, technology, operations management, quality control and marketing are some of the major constraints to the development of the cut flower subsector in Uganda.

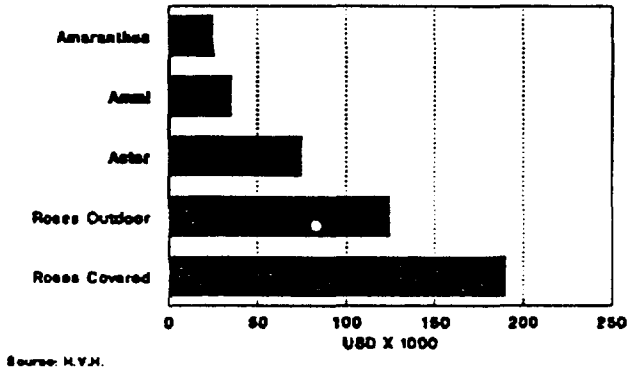
Many flowers besides roses can be considered for commercial production. Some of these include: Aster ericoides, Gypsoghhila, Delphinium belladonna, Ammi and Amaranthus. However, many of these flowers that can be grown in Uganda have very shallow markets. Therefore, further research should be carried out before significant areas are planted.

Technical assistance will be critical to bring local skill levels up to international standards. International markets demand quality and are unforgiving to a grower who cannot meet quality standards. Along with targeted, extended technical assistance programs, the GOU and donors must consider ways to encourage entry into the cut flower business through assisting growers in finding commercial debt capital, venture capital, soft loans, grants and other means of financing. Future technical assistance must address these constraints directly through targeted programs designed to diminish the magnitude of the constraints and allow easier access to and operation of these businesses. More than any other subsector considered in this report, the cut flower subsector will required a highly focused technical assistance effort to reduce risk on capital. Exhibit C.6 shows the capital requirements for a number of different types of flowers.

Exhibit C.6

FLOWERS, CAPITAL REQUIRED

Costs to Grow 1 Ha, up to Harvest



Source: H.V.H.
Does not include all fixed capital costs

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C3. Vegetables

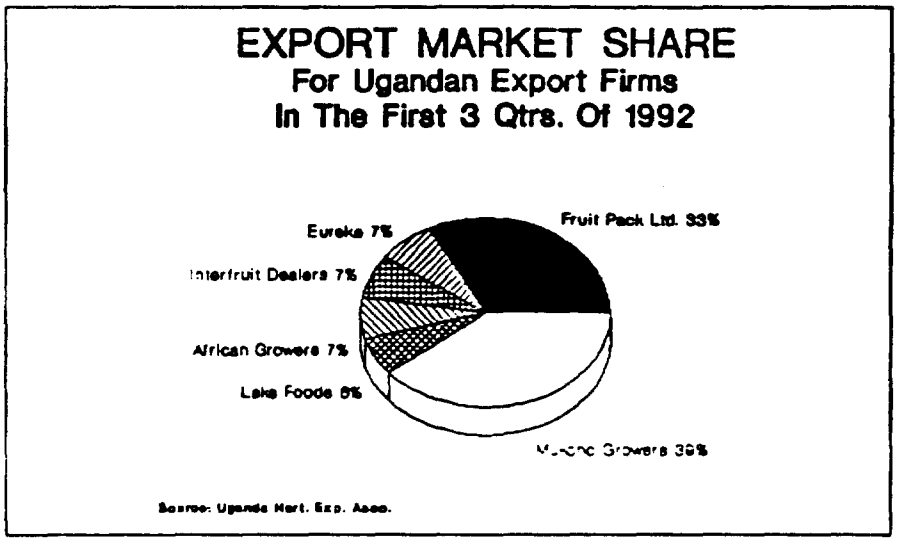
Uganda's vegetable export sector is small but growing. Exporters usually grow vegetables and purchase them from farmers or have smallholders produce them under out-grower systems. Uganda has excellent agronomic resources for producing high quality vegetables year round, but production for export to the world market is relatively new.

Exhibit C.7 on the following page depicts market share for major Ugandan exporters. Taken together, the largest two firms exported 39 percent of all officially-recorded horticultural exports in the first three quarters of 1992, making them equal to Mukono Growers as the largest horticultural exporters in Uganda. The fresh vegetable export subsector is relatively small. There are growth opportunities in the subsector for new firms as well as for existing companies to increase their size and efficiency of operations.

It is estimated that Uganda's horticultural exports consist of: 25 percent bananas (matooke), 35 percent other tropical fruits, and 40 percent vegetables. In 1991 an estimated 345 tons of mixed produce was shipped from Uganda, with a value of about $600,000. For 1992 these figures increased to 535 tons, with an estimated value of $930,000. Vegetable exports, therefore, were on the order of $375,000, but growing at a rate of 55 percent per year.

Currently, Uganda's vegetable export industry is centered around the Kampala region to take advantage to the short hauling distance to the international airport and the humid climate in this region, which is suitable for year-round production of tropical fruits and vegetables.

Exhibit C.7



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For temperate climate crops such as snow peas, the higher altitude zones around Mount Elgon in the east and Kabale in the southwest provide the best production environment. The disadvantage of both these regions is the hauling distance to the airport. Transport from Mount Elgon is about four hours and from Kabale six hours. These distances may pose problems not only because of high domestic trucking costs, but also because of the difficulty in maintaining the cold chain necessary for quality export products.

Traditionally, a wide variety of fruits and vegetables has been produced in Uganda. However, export fruits and vegetables require significant on-farm and market research. This does not necessarily mean extensive university research on varieties and production methods. Rather, research should focus on taking available varieties and technology and fast-tracking them into the commercial field for production and marketing trials. To offset some of the risks associated with this fast-track method and encourage private exporters, effective technical assistance combined with market information, assistance in securing capital, and small matching grants could be used in this subsector. These grants could be applied toward the costs of new seed or plant materials used either by commercial growers or under contracts with exporters.

The two most promising vegetables mentioned by Wauters and Sergeant in their study of "Opportunities In Non-traditional Vegetable Exports" were asparagus and snowpeas. Other non-traditional vegetables such as extra-fine beans appear to return too small a profit to the grower to generate much interest.

Exhibit C.8

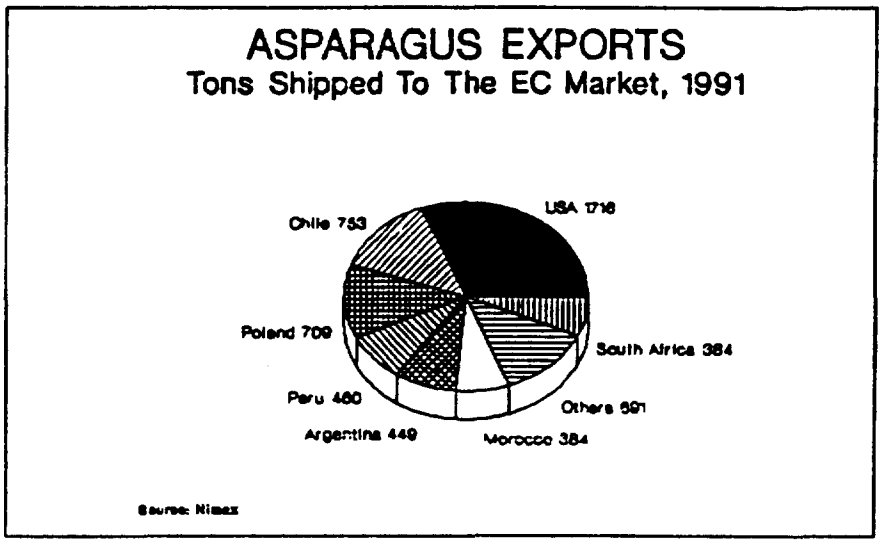

Exhibit C.8 shows the amounts of asparagus shipped into the EC market from major exporting countries. Countries with long shipping distances usually target very specific seasonal windows when prices are high. This is the only way countries such as Chile and Argentina can justify air freight costs.

Uganda will also have to target specific windows for snowpeas and asparagus as well as its other export crops. Uganda's air

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freight rate to the EC ($1.35-$1.50/kg) is marginally lower than that of Lima, Peru ($1.70/kg), but if freight rates go up to $1.85/kg, as projected in two years, the Ugandan grower may still have some cost advantage, since Ugandan labor costs are currently about one-third of Peru's.

A major postharvest problem Ugandan exporters face is the lack of adequate cold storage facilities at the international airport. It will be impossible for Ugandan exporters to expand into higher quality, high-value horticultural exports unless this problem is overcome. Currently exporters must leave produce in the Entebbe air cargo parking lot (which is cooler than the warehouse) for 10 to 12 hours before the flight departs to London. This long period at warm temperature causes rapid physiological break down of the produce, reducing shelf life and quality.

Chillies, okra, sweet potato, pink yam, eggplant, and raw sugar cane make up the major exports. The primary target market is North Spittalfields Market, just outside London. Wholesale agents handling the produce mainly service ethnic markets in and around London. One problem in expanding the market for Ugandan produce is that these wholesale agents tend to be relatively small-volume dealers. If Uganda is to expand into the mainstream EC vegetable market, Ugandan growers and exporters will have to develop relations with major EC supermarket chains.

England demands the highest quality produce of any EC country. The Dutch CBT auction (Centraal Bureau van de Tuinbouwveilingen in Nederland) and French supermarkets such as Carrfour and Mammoth (who share buying offices in Paris) follow the UK in general quality demands. German supermarket buyers are the least concerned about quality. They base their purchasing decision more on price. The EC supermarket industry is concentrated on a limited number of buyers who supply these very large markets. EC supermarkets are very important to the development of the Ugandan horticultural industry because they pay higher prices for produce. They move large volumes and demand high quality and consistency in return. High-end UK supermarket chains such as Sainbury's and Tesco also provide ongoing pre- and postharvest technical assistance to their overseas suppliers. Some of the larger importer/repackers also supply technical assistance to their regular offshore suppliers. As the supermarkets continue to increase their EC market share, it is clear that any long-term strategy for the development of Uganda's horticultural sector will need to focus on achieving product quality and entering the EC market through supermarket links. As wholesale markets like London's New Covent Garden and Spittalfields continue to lose market share to major EC supermarket corporations, it is clear which path Uganda must take to become a competitive force in the produce export industry.

An example of the concentration in the EC market is the German supermarket holding company GHD. The GHD group has eight supermarket chains under its control, including: Marktkauf, Helco, Kauf Mart and others. Many of the purchasing and distribution functions of these companies are centralized. Each of the different supermarket chains is targeted at a different market segment. GHD has already moved into the former East German market and Poland. As the EC begins to drop restrictive

trade policies, the major supermarket chains will move across borders in an effort to increase market share. If Uganda can supply quality products at competitive prices, it can find a place in the high-volume, high-value supermarkets of Europe. If it cannot produce consistently high quality at competitive prices, Uganda will be relegated to selling to the small ethnic markets, as it is currently doing.

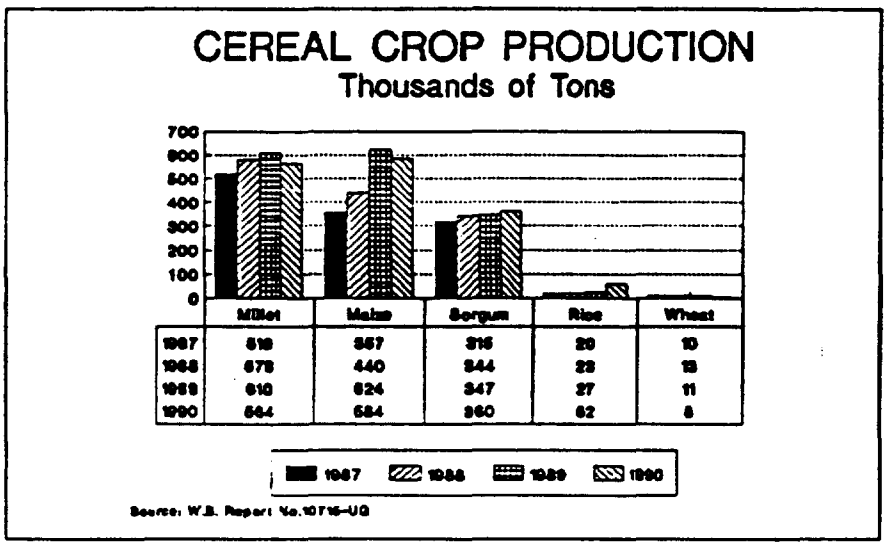
C4. Cereal Grains

Exhibit C.9 shows annual output of cereal grains from Ugandan farmers., Endowed with fertile soils and predictable rainfall, the country is in a position to increase cereal, pulse, and oilseed production to help meet regional demands.

Cereal production in Uganda is almost entirely under rainfed farming systems. Due to favorable climatic conditions, Uganda rarely experiences famine. However, food shortages developed in 1979 and 1980 due to the war and security problems. Occasional disruptions in food supply still occur, but only during extreme conditions in isolated locations. According to the GOU, in 1987, five percent (17 million ha) of Uganda's total land area was under cultivation. This figure compares with 13 percent in 1958. Since 1987, there has been a slow but steady increase in the land area farmed and total tons of agricultural commodities produced.

As a percentage of the total tonnage of low-value agricultural export commodity production (defined here in as cereals, beans and oilseeds), Ugandan farmers produce 67 percent cereals, 22 percent pulse (beans) and about 11 percent oilseeds.

Exhibit C.9



Cereal grains make up the largest sub-sector of the low-value, high volume commodity group. These products include maize, millet, sorghum, rice and wheat (see Exhibit C.9). Together, maize and millet make up approximately 75 percent of cereal grain output in Uganda and are projected to account for 45 percent of the value of total low-value exports (1993 projected).

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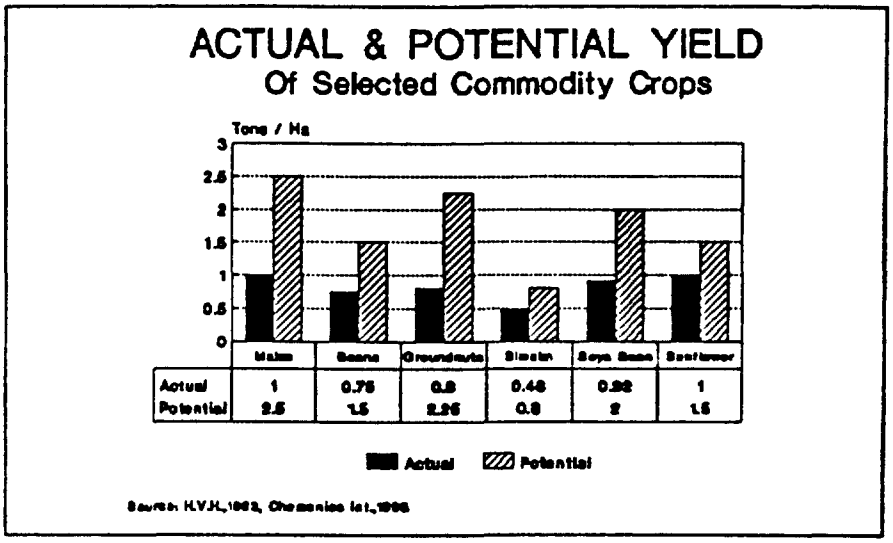
Millet was traditionally the dominant cereal crop in Uganda. However, since the early 1990s maize production has equaled or exceeded millet output levels. Uganda produced about 6.4 million tons of maize in 1992. Millet output for the same year was about 6.25 million tons.

Regional demand for Ugandan grain is high. Kenyan import demand is estimated at between 500,000 and one million tons of cereals per year. The United Nations World Food Program (WFP) plans to purchase 100,000 tons of cereals from Uganda in 1993 to supply regional production short-falls in Sudan, Somalia, Rwanda, and Zaire. The WFP program in Zaire alone is expected to demand 600,000 tons to be purchased within the region.

Exhibit C.10 shows estimated low-value crop yields, compared with potential yields achievable with improved cultural practices and improved production inputs.

Exhibit C.10



One of the most challenging aspects of the low-value export subsector will be to design a project that will reach large numbers of producers and traders distributed over a wide geographic area. One model to consider is the British American Tobacco Company's (BAT) field department operation. BAT works with 24,000 tobacco outgrowers distributed throughout Uganda, employing a staff of 260, all having two-year agricultural college degrees or higher. Their field department has on an annual budget of just under $500,000. This is one of the more effective agricultural extension systems in the country. All of BAT's tobacco farmers also grow cereals, beans, and oilseeds.

On a return per person-day basis, Exhibit C.11 displays the relative difference between traditional and improved farming methods. By using improved varieties of open pollinated or hybrid maize seed along with proper plant populations, cultivation (to reduce weed competition), and animal traction (ox plows), Ugandan maize production can be increased by an estimated

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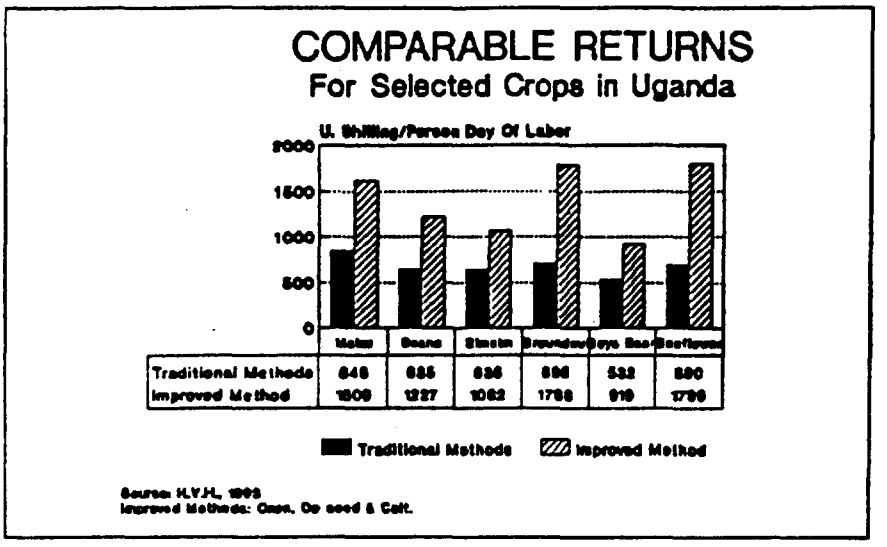
30 percent (Macartney-Sergeant). Animal traction alone can multiply a farmer's production fivefold. This one input could have an impressive effect on rural incomes.

Exhibit C.11



Assuming that West Kenyan import demand is 250,000 tons per year and the WFP will demand 100,000 tons per year, the farmgate value of this aggregate demand (in 1990 US$/ton farmgate) is $31.5 million/year. Given the recent history of rapid population growth, war and drought in the region, it is likely that WFP will continue to be a major player in the Ugandan cereal market through the medium term or longer. Unless the state of Uganda's cereals production sector improves, it is unlikely it will be able to supply all of the 350,000 ton demand forecasted.

Animal traction is most appropriate in the northeast and east. Ox plowing was historically common in the Mount Elgon region and northeast toward Soroti and Gulu. During the years of civil unrest, these animals were killed or rustled either by the military or Karmojong. In contrast, in mountainous regions of Uganda such as in the south, plots are small. Land is difficult to purchase and usually obtained through traditional means. Often land is borrowed in small plots for a season. An alternative is to lease tracts of unused public land. This procedure is expensive, time-consuming, and administratively difficult, and thus out of reach for most rural families. Even where land is available, many households cannot take advantage of it because of labor and capital constraints. Most families use hand tools and some routinely employ extra labor.

The value chain for maize is exhibited in Exhibit C.12. The data was collected in Eastern Uganda in early June, shortly before the maize harvest came in. The prices, thus, are close to the maximum for the year. This example is one of several methods by which cereals reach the export agents. Village and town agents often have working relationships with growers and each other. A village agent will sometimes advance cash to trusted farmers

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during the growing season. This debt will be deducted from gross sales revenue the grower receives upon crop delivery.

Farmers that live near trading centers may haul grain to town on their own, by passing village or town agents and receiving higher prices for their crop. This is often more arduous than it may first appear, as rural road systems can be difficult and transport costs can be too demanding for low income rural farmers.

From the value chain table it can be noted that the grower was receiving about 59 percent of the total border value of his or her labor at the time this data was collected. During this period it should be noted that maize supplies were short as the new crop was about nine weeks from harvest. A more typical FOB farmgate maize price for Eastern Uganda would be 110 shillings per kilogram. Thus, farmers usually see a lower return on their labor.

Exporters to Kenya routinely purchase maize and other bulk commodities from town agents. Exporters move the product though the border, registering the load at the Uganda Inland Revenue office. They report little if any delay when dealing with GOU border officials. If there are problems in the process, it is reported to be more on the Kenya side of the border where duties and other taxes may be demanded from exporters.

Exhibit B.12

Maize Market Value Chain For Eastern Uganda Pre-harvest Prices (June)

Item	U.Shillings
Production Cost, Farmgate	60
Farmgate Sales Price	130
Profit to Grower	70
Village Agent, Purchase Price	100
Village Agent Costs, Transport	9
Village Sales Price	150
Profit to Village Agent	11
Town Agent, Purchase Price	150
Town Agent Costs, Transport	15
Town Agent Sales Price	180
Profit to Town Agent	15
Exporter Purchase Price	180
Exporter Costs, Transport	15
Exporter Sales Price	220
Profit to Exporter	25

According to interviews with GOU officials and traders at the border, the border does not appear to be a significant bottleneck in the exporting pipeline. Although border customs operations run fairly smoothly, Ugandan grain exporters have voiced dissatisfaction with the 2 percent movement tax imposed on grains transported within Uganda as well as the 2 percent invoice tax imposed on grain exports.

Once the cereal has cleared Kenya customs, the exporter may sell to official Kenyan government purchasing centers or into the free market. Transactions are usually in Kenyan shillings as hard or official PTA currency is difficult to obtain. Traders convert their Kenyan shillings into consumer goods for profitable back-

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haul to Uganda. Typically, the importing of consumer goods into Uganda is more profitable to the trader than exporting cereals.

C5. Beans

Dry red beans and other colored beans make up the large majority of the pulse subsector. Three-quarters (76 percent) of pulses are beans, followed by 11 percent cowpeas, 11 percent fieldpeas, and 2 percent pigeon peas. Total pulse production was estimated at 550,000 million tons for the 1992 production year.

Official GOU statistics reported that 11,000 tons of beans were exported in 1992, compared to 30,000 tons in the first quarter of 1993. This increase in demand has mainly been driven by WFP purchases to supply regional needs in war and drought affected countries. In addition to the 30,000 tons of beans purchased by WFP, international commodity trading firms such as Conagra entered the local market and acquired 5,000 tons of single color beans. This demand pressure along with unofficial exports to Kenya (estimated at 20,000 tons/yr.) give a total export demand for beans of about 55,000 tons, or 10 percent of total production.

International markets for single color beans are broad and deep. This in itself does not completely protect growers and traders from world price variation. However Uganda, with its geographic location close to high-demand regions, should be somewhat insulated from variations in the world price due to its comparative advantage in freight cost to regional markets.

Exhibit C.13

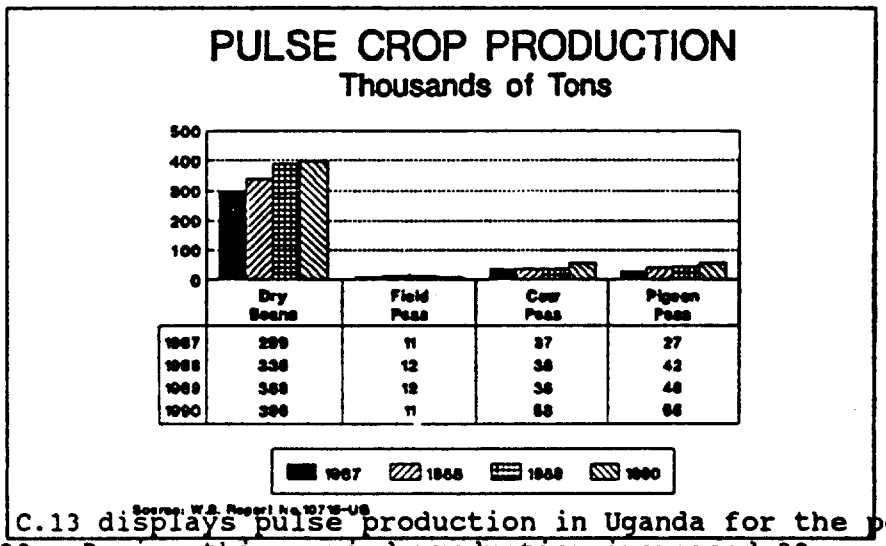

Exhibit C.13 displays pulse production in Uganda for the period 1987-1990. During this period production increased 39 percent. Since 1990 production has risen each year, but at a slower rate. It is estimated that at current prices, bean production will increase four percent annually.

Uganda is the largest producer of beans in Africa (FAO statistics). As seen in Exhibit C.13, beans and groundnuts

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(peanuts) together made up 20 percent of Uganda's low-value commodity crop exports in 1992. Groundnut alone was less than one percent of total commodity exports. Northern Uganda is the largest growing area in the country, producing 47 percent of the total bean crop in two rainy seasons.

With improved varieties and cultural practices, bean yields could be doubled. There are a number of pest and disease problems that affect beans in Uganda, including viral, bacterial, fungal and insect pests such as bean fly. Storage is also an area which needs to be addressed to reduce storage losses and improve the farmer's ability to market the crop profitably.

Regional markets are likely to remain strong over the near and medium term, driven by WFP purchases and demand from regional commercial markets. Quality standards are lower in regional markets, thus beans should be targeted into these markets.

Developing an effective conduit to get improved seed varieties, cultural practices, improved storage and market information to growers will be the critical issue in project design and implementation for this subsector.

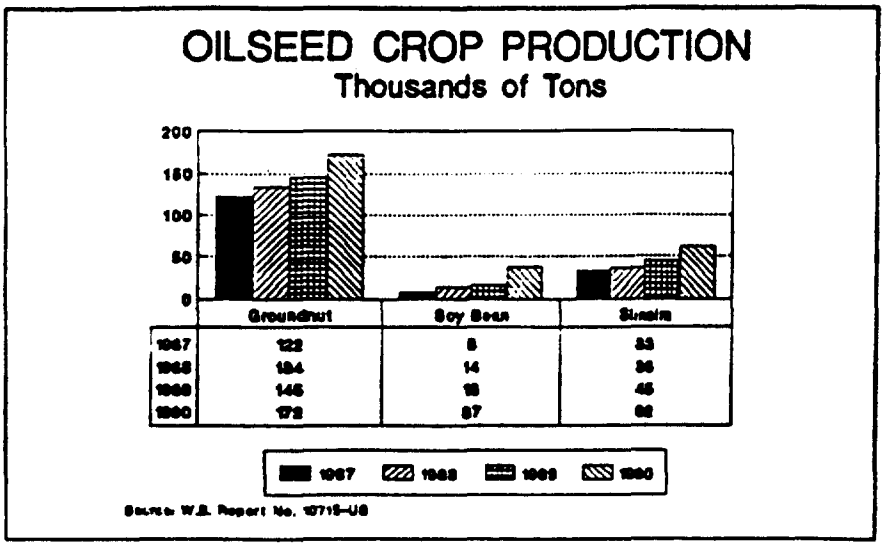
C6. Oilseeds

Uganda is a net importer of vegetable oil. Although the country has 18 oilseed mills, few if any are run near design capacity. Demand for edible oils is estimated to be 32,300 tons per year. In 1993 industry sources forecast domestic production at 2,900 tons, or about 9 percent of demand. The production potential for oilseeds is great. Uganda is capable of producing a variety of high-value oils which could supply domestic demand, with the oilseed cake being exported to regional markets, primarily Kenya.

Sunflower yields are about one ton per ha from a good producer, about the same as maize. Demand for quality sunflower (over 35 percent oil) is high. Current price (mid-June 1993) is estimated to be $158 per ton delivered to Kampala and $125 per ton in Gulu. This is about equal to maize returns on a per-hectare or per-ton basis. The GOU and donors should focus on increasing oilseed yield to increase grower income and production options (reduce risk) and stimulate exports of oilseed cake.

One cooperative mill near Tororo that could take advantage of an oilseed development program is in an especially good location due to the short trucking distance to the Kenyan border, and being located in an area that can produce high-yielding oilseed crops. Unfortunately, this oil mill is running at only a small fraction of its design capacity, due to both management and feed stock pricing problems. It has been unable or unwilling to pay market prices to oilseed growers in the region. The GOU is currently seeking ways to place such cooperative mills under more efficient management, and should be strongly encouraged in these efforts. Exhibit C.14 shows oilseed production in Uganda for the period 1987 though 1990.

Exhibit C.14



Although exporting edible oils would make little economic sense at this time, exporting oilseed cake is a different matter. Kenyan oilseed cake demand is currently pegged at 65,000 tons per year and is forecast to grow to 80,000 tons by the year 2000, (Macartney-Sergeant). Uganda's oilseed production region is geographically located in the center, north and east of the country, thereby reducing transport costs to Kenya's markets.

To complement and strengthen the oilseed and grain milling industries, improvements in both on-farm and off-farm commodity storage are necessary. The rural areas of Uganda already have some dry warehouse storage, and many cotton gins currently have thousands of tons of storage which are not being used. Efforts should focus on getting these under-utilized facilities into the hands of the private sector where they can be managed and used more efficiently.

Uganda can produce groundnut, soya bean, sunflower, sesame, and safflower oil. All these crops are considered high-quality oil and cake producers. They can be farmed efficiently by small holders and work well in a maize, bean, and oilseed crop rotation. Rotating oilseed crops is important, as crops such as safflower can be subject to Fusarium wilt and should not be farmed on the same ground within a three-year period.

In 1992, 53 percent of low value exports were sesame and 20 percent maize. The move to increase sesame exports came as a result of the failure of the southern Sudan crop, which resulted in increased grower prices. Ugandan growers and traders shifted into sesame production to fill the unmet demand which originated primarily from Turkey. In 1993, sesame exports will probably make up only 20 percent of the total exports, since southern Sudan is again producing and the price has fallen.

Low-value crop exports are expected to reach $31.5 million in 1993, up from $15.1 million in 1992. Uganda has a comparative

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advantage in supplying cereals and beans to regional markets, principally because of its geographic location and lower trucking costs for delivering commodities into western Kenya, western Tanzania, southern Sudan, southwestern Somalia, Rwanda, Burundi, and eastern Zaire.

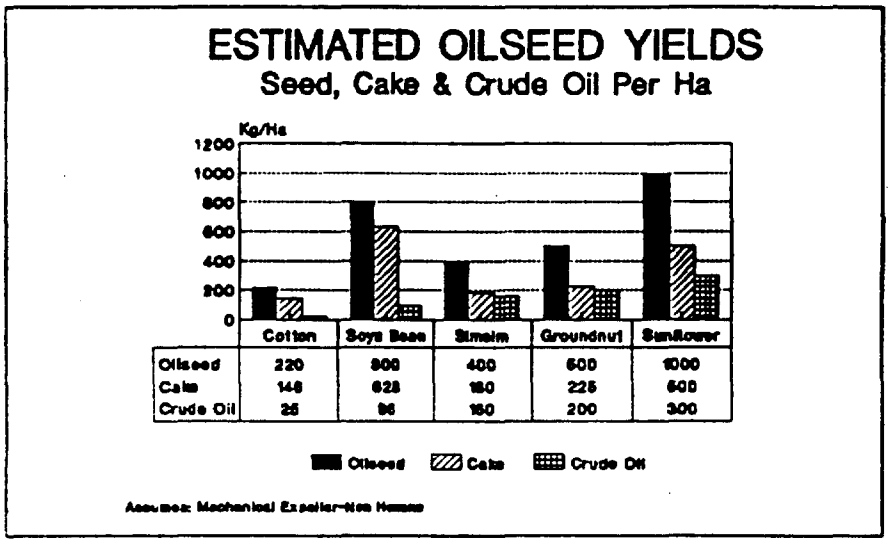
Exhibit C.15 shows potential output from different oilseed crops at farmgate and at the backdoor of the processing plant.

C7. Other Non-traditional Export Crops

There are a number of other crops that may have potential as NTAEs, including: mushrooms, berries, and—depending on the market windows in Europe—tropical fruit such as mango. Berries may have the greatest potential in the cool climates of the highlands around Mount Elgon and in the southwest of Uganda near Kabale. Berry crops fit well into a smallholder production system, but the product would most likely have to be exported though an agent, much as is currently being done in the export vegetable industry.

Oyster mushrooms are now being produced in Uganda on a very small scale. A group of 18 women located near Kawanda, outside the capital, have the potential to produce 10 kg per week per person. They stated that if they could develop a market for the mushrooms, they could expand output with only limited capital input. Mushrooms are interesting as an NTAE, because they have a high value-to-weight ratio, making them economical to ship by air. In addition, mushrooms can be dried and shipped in containers.

Exhibit C.15



Other processed products, including pyrethrum, papain, and to a smaller degree, processed fruit, hold potential for NTAEs. Papain is currently being exported and demand is said to be high. One exporter said he would like to help develop an outgrower system with a minimum of 2,000 smallholders in the Kawanda area.

In Uganda's fruit processing sector, cost per unit of output is high by world standards, because volumes are small. Thus the potential for export is limited. At best there may be some opportunity in regional exports.

D. NTAE Business Case Studies

D1. Introduction

This section is designed to provide a business operation analysis to the PP, by using case studies of businesses in the four different NTAE subsectors: cut flowers, spices, vegetables, and low-value commodity crops.

D2. The Flower Exporter

Ugandan investors are beginning to explore cut flowers as an export crop. The production of cut flowers is both capital- and labor-intensive. It requires an extremely high level of technical, logistical, and business management. The risks are high, but so are the rewards.

Currently only one export-oriented operation exists in Uganda, although a second flower farm is in the development phase. The firm has only recently started and has yet to export any flowers. The value chain in Exhibit C.16 was calculated by using data provided by the grower as well as the Manji-Sergeant Floriculture Study. The business exhibits a very fast payback when managed correctly. Likewise, these firms are subject to losses if management is weak or other problems develop.

Exhibit B.16

Value Chain For Exporting Sweetheart Roses From Uganda, 1993 Crop

Item	USD/Box
Land Preparation	0.25
Plant Material	5.16
Fixed Capital	5.04
Chemicals	3.15
Labor	3.64
Packing	1.65
Transport	24.18
Marketing	34.38
Total Cost/Box	77.44
Sales Revenue	150.00
Profit to Grower/Exp.	72.56

All fixed costs spread over five years. Model assumes grower is also exporter. Profit before taxes, debt service, G&A, R&M, and depreciation.

The management at the firm has done a very good job in planning and developing the business to date. Uganda is fortunate to have these business persons lead the development of the industry. Other investors will now have a model to work from.

In total capital invested, it is estimated that the firm has spent $800,000 on the 5 ha of greenhouses and production costs, and an additional $90,000 on fixed capital assets and utilities. Above these costs is working capital, which will most likely be sourced as a line of credit with an international banking group.

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The firm will require a line of credit around $425,000. This assumes annual recurrent costs to be about $1,850,000 and a seasonal export cash flow based on a nine-month shipping season and 60 days on receivables for international remittances. The business will be a challenge in both the technical and managerial senses. It will also provide Ugandans with training and skills.

Exhibit B.17

Value Chain For Exporting Vanilla
From Uganda, 1993

Item	USD/Ton
Land Rent & Shade	0
Plant Materials	180
Land Preparation	25
Labor, Grow	480
Labor, Harvest	125
Total Annual Cost	990
Sale Price to Exporter	4,000
Profit to Grower	3,010
Purchase from Grower	24,000
Process & Pack	600
Expedite 3% FOB	741
Letter of Credit	500
Ship (Rotterdam)	440
Total Annual Cost	26,281
Sale Price to Importer	50,000
Profit to Exporter	23,719

Drying ratio 6:1
Profit before taxes, debt service,
G&A, R&M, and depreciation.
Fixed capital costs spread over 10 years.

D3. The Vanilla Grower

Vanilla is currently considered one of the most profitable crops for both the grower and exporter in Uganda. There are only two companies exporting this crop, but given the profit levels it is expected that more companies will enter the business in the next few years.

Local firms have used two strategies in entering this business. The first is a an intensive, highly centralized production system with value-added processing being done off shore. The second strategy is one that relies on more of an extensive production system and provides some of the products added value in country.

The value chain shown in Exhibit C.17 indicates the direct costs and profits associated with the extensive production system. It is important to note that these costs are before taxes, general and administrative expenses, repair and maintenance, debt service, and depreciation. All of these line items will significantly cut into the bottom-line profits.

The example processing/export firm has developed a network of growers that supply raw product based on an annually negotiated price. To encourage planting and production of vanilla, the firm supplies interest-free development loans to farmers. Additionally, the firm provides training and in-house extension workers to the grower. This benefits both parties since it reduces risk to both the grower and the exporter (financier). In return the grower is expected to sell all of the harvested product to the firm. The firm is at risk if the grower sells

product to competitors, however to date this has not been raised as an issue in this industry.

The firm has invested capital in a vanilla processing facility. Technical assistance for plant design and equipment selection was provided by a U.S.-based spice importer. To make this investment return a profit, the firm will need to greatly increase raw product throughput. Generally speaking, after finished product sales price, days of plant operation is the single most important variable in determining plant operating profits. For this reason the firm must focus on increasing throughput to maximize profits. One of the largest factors in food processing plant failures around the world is lack of raw product supply. The exporting firm in Uganda is making great efforts to attract more growers and increase plant throughout. Over time this will make the greatest contribution to their bottom line.

D4. The Chilli Exporter

Exports of dried Bird's Eye chillies are increasing from Uganda. The size of firms that have entered this business varies from small, low-overhead exporters to some of the largest international companies doing business in Uganda. The example company which will be considered comes out of the small locally owned group, and began exporting chillies in 1991.

For this year's crop the exporter has arranged to have 400 growers in Western Uganda grow Bird's Eye chillies. In 1994, the exporter plans to expand and work with 1,000 growers and expand the use of rural agents who are advanced cash at harvest and purchase chillies for growers who have not already committed their crop to other exporters. The growers are given seeds and watering cans by the exporter. A few of the growers have received cash advances against the crop but according to the exporter this is only a small percent of the total number of growers.

The farmland first must be cleared and worked. This is included in the value chain shown in Exhibit C.18. This task is estimated to require 45 person-days per ton of chillies produced, at a rural labor rate of Ush 500 per day for labor. The growers are given seed and watering cans to use in the plant nursery by the exporter. Once the seedlings develop to several centimeters of height, they are transplanted into the open field. It is assumed that a grower will spend 140 person-days per ton of chillies produced to bring the crop from seed to pre-harvest. The rate used in calculating person-day labor rates for mid-cropping season is Ush 500 per day. This labor would in most cases come from within the family and no hired labor is assumed. Harvest is estimated to take 15 person-days per ton of chillies picked and is calculated at Ush 1,500 per day. The harvesting of Bird's Eye chillies is often very uncomfortable. After harvest, the chillies are dried by the grower on farm.

The current price in 1993 is Ush 1,700 per dry kilo, delivered to the exporter's rural warehouse. At an exchange rate of Ush 1,200

Exhibit B.18

Value Chain for Exporting Dried Chillies From Uganda, 1993 Crop

Item	USD/ton
Land Preparation	18.75
Labor, Growing	58.33
Labor,Harvest	18.75
Total Grower Cost	95.83
Sale Price to Exporter	141.66
Profit to Grower	45.83
Purchase from Grower	141.66
Seed Materials	7.14
Water Can	1.00
Clean and Sort	25.00
Packing	36.00
Ship (Mombassa)	185.71
Fumigation	12.50
Expedite @ 3%	75.00
Letter of Credit	41.66
Total Exporter Costs	525.67
Sale Price to Importe	2500.00
Profit to Exporter	1974.33

Profits before taxes, debt service, G&A, R&M, and depreciation.

per US$, this works out to $141.66 per ton. The farmer must grow about 8.5 tons of fresh Bird's Eye chillies to make one dry ton. Average dry tons per ha on Ugandan Bird's Eye chillies is reported to range between 0.5 to 0.9 tons. Thus, as can be noted in Exhibit C.19, the grower receives about $45.83 per ton or Ush 55,000 per ton farmgate, above his labor inputs, and payment is in cash. As chillies are a comparatively low yielding crop (.80 ton/ha) this would equal $36.66 per hectare after labor. This is not a good return per hectare to the grower by most standards, but many farmers in rural areas with no other employment options and few other cash crop options will undertake chilli production, since it does mean some money will be coming in at harvest.

The exporter and grower both share in the crop risk. If hail, insects, or pathogens damage the crop, both the grower and the exporter can lose part or all of their investment. Besides crop risk, one of the greatest risks to the exporter is that the grower will sell the crop to another buyer/ exporter once the crop is in. The exporter then stands to lose the seed money and the income from the planned sale.

The chillies are sun dried to 8 percent moisture by the farmer in the field. They are then packed up into a variety of containers and transported to the exporter's rural warehouse. The exporter then sorts and cleans the chillies and packs them into gunny bags. The bags are shipped in 7 ton loads, in 20 foot containers. The Kampala-based exporter uses a local freight forwarding company to ship the containers by road to the port of Mombasa. This costs the exporter about $1,300 per container or $185.71 per ton. Before the container is shipped out of Mombasa, it is fumigated. The container is then loaded on the ship, and sent to Japan for processing. This year chillies are being sold FOB port of Mombasa for $2,500 per ton.

When the exporter first began shipping product, he used a European-based broker. Brokers who work in volume industrial products such as Bird's Eye chillies usually charge commissions in the 4 percent to 6 percent range. The local exporter was soon able to develop market contacts outside the broker and now sells direct to the importer/processor in Japan and Europe.

Payment is made via letter of credit, and 90 percent of the value of the shipment is paid when the container is loaded on the ship at Mombasa. The final ten percent of the payment is sent after the load is inspected in Japan. Any deductions for foreign matter or low quality is discounted from the final 10 percent payment. The exporter makes about $1,974.33 per dry ton, or about $13,820.31 per container. This year the exporter used in this example will try to ship three containers.

D5. The Low-value Commodity Exporter

One of Uganda's leading grain millers and bulk commodity exporters is located in the Southeast of the country in a good location to service the large domestic market around Kampala, as well as export raw grain and finished products to Kenya. The storage and milling facilities are also in a suitable location to source raw product. The firm has significant domestic market share and is interested in expanding its export sales.

The company has four operational groups: durum wheat flour, animal feeds production, maize milling, and bread baking. The GOU is a minority shareholder in the firm along with other financial institutions and organizations. The firm's management is trying to convince the GOU to divest itself of its stock in the company.

The company has paid dividends to its shareholders since 1987. However, since 1987 profits in both absolute and relative terms have declined. The after-tax operating profit as percent of sales has fallen from 28 percent in 1988 to 5.6 percent in 1991. Since that time company officials report relatively flat returns.

In procurement operational terms, the company purchases all of its domestically sourced raw product at the plant gate. It relies on local traders to deliver maize and other commodities to the plant, where payment is made by check. The company said they did not feel it was cost-effective to go into rural areas to purchase grain directly from growers or village agents. One problem they cited was that these purchases would have to be made in cash, and hauling the amount of cash necessary to make the purchases would be dangerous. A second reason that was noted by the management was they would personally be in danger if they took over the function of purchasing and transporting the commodities from the field, taking income opportunities away from the village and town agents.

The company's operational problems can be grouped into six

categories:

- Purchasing: lack of forward purchasing, lengthy purchasing procedures, lack of intra-departmental coordination.
- Quality control: no set standards, limited lab equipment, lack of trained staff, slow response to customer's complaints.
- Storage facilities: 60 percent below necessary capacity for efficient engineering and equipment; obsolete and poorly selected equipment; lack of training, lack of tools.
- Marketing and information: inadequate market information, lack of field research and contacts, low export volumes.
- Personnel: lack of accountability, over staffing, lack of job description.
- Finance: late submission of accounts, high debt, poor financial planning, ineffective budgeting.

There are a number of strategies which the company is considering to mitigate these problems. The first is GOU divestment; by putting the group of companies 100 percent in the private sector, it will free management to make the politically difficult decisions of addressing personnel and debt problems. It will also make management accountable to the stockholders. Many other problems can be directly addressed through training and technical assistance. This includes helping management prepare and operate under realistic annual budgets, and assisting the firm in restructuring debt and management systems. Marketing information and timely planning and action can increase export volumes and generate additional revenue for the firm. Quality control and customer relations should also be improved before expanding exports.

E. Conclusions

Uganda's political and economic environment has begun to stabilize following the twenty years of civil unrest between 1975 and 1985. Unfortunately, as the country moved towards stability the value of its largest export crop, coffee, fell by over 60 percent. The over-reliance on coffee export earnings and the fall in coffee export values has driven the GOU to seek alternative ways of increasing foreign exchange earnings and the incomes of Ugandans living in rural areas. To accomplish these goals, the GOU has focused on a policy of developing non-traditional agricultural exports.

There are two broad groups of agricultural crops which are currently being developed for NTAEs. The first group is referred to as the high-value/low-volume crops and includes vanilla, cut flowers, fresh vegetables, and dried chillies. The vast majority of these crops target international, particularly European markets.

The second group considered for NTAE development is the low-value/high-volume crops including maize, beans, and oilseed cake.

These products are mostly marketed regionally. There are growing markets in Kenya for this group of crops, and they serve as basic food commodities in deficient regional areas such as southern Sudan, Somalia, Rwanda and others.

Commodities entering the humanitarian relief markets are usually purchased in Uganda by the World Food Program or other donor organizations and transported by land or air to affected areas. The projected export earnings of Uganda's low-value/high-volume crops in 1993 is expected to be over $31 million.

Exhibit C.19 shows the estimated percentage of profits from FOB sales value to growers and exporters. As the products move through the marketing system, other persons or firms may provide services such as collection, handling and transport. In the case of chillies, exporters occasionally pay agents to source product from farmers on commission. This fee is taken out of the exporter's profits. Similar sourcing arrangements have also been reported in the maize market. Ugandan traders are creative and they bring their products to market via a wide variety of avenues.

Exhibit B.19

Percent of Profits From FOB Sales
Value to Grower and Exporter

Crop	Grower	Exporter
Chillies	2 %	79 %
Vanilla	6 %	47 %
Flowers	48 %	NA
Maize	60 %	11 %

Profits; calculated on direct costs only, before; taxes, debt service, G&A, R&M, and depreciation.

It is important to note that the profits calculated in Exhibit C.19 consider only direct costs against FOB value. This value is not consistent across all products. For example, chillies are sold as FOB Port of Mombasa, vanilla as FOB European port, cut flowers as FOB Dutch auction warehouse, and maize as FOB Eastern Kenya. Furthermore, the value added by the exporter differs for each product. For example, vanilla requires a significant amount of postharvest processing, while cut flowers are highly capital-intensive and require larger, up-front expenditures. Thus, some of the exporter's profits are used by his/her business to cover the costs of debt servicing, general and administrative expenses, repair and maintenance, depreciation, operations expansion, taxes, etc. Nevertheless, there appears to be potential for expansion within these industries based on projected profit levels and market demand.

Export earning goals can be reached by targeting both the high-value/low-volume and the high-volume/low-value product groups. Given the fluid nature of agricultural markets, it will be important for the GOU and the donor community to be flexible when developing the product groups so that returns to rural Ugandans are maximized.

Uganda has the ability to grow a number of non-traditional export crops. Climate, soils, and water resources are all favorable for the production of the crops considered in this study. One of the largest constraints to the successful development of the non-traditional export sector is know-how.

The project will need to focus on assisting growers of high-value crops, providing long-term technical assistance on a day-to-day basis. This will be especially important with high-risk crops such as cut flowers and fresh vegetables. The project will need to provide the necessary technical and managerial skills to the local business community and transfer these skills within the life of the project. Given the large amount of money at risk during the production season and the susceptible nature of agricultural production in general, it is strongly recommended that the project provide technical and managerial assistance on a long-term basis. These persons should be able to focus their attention on a limited number of high-value agricultural export businesses. This focus will reduce risk to the investors and increase the successfullness of the businesses and the project. These successful businesses will in turn act as models for other entrepreneurs interested in entering the NTAE sectors.

Low-value crops pose a very different set of problems in project design and implementation. Maize, beans, and oilseeds are produced over vast areas of farmland in Uganda. In order to have a significant impact on this sector, the project will have to assist large numbers of farmers. Assistance should focus on increasing yields at farm level, reducing storage loss at farm and in centralized warehouses, transferring storage and processing know-how to Ugandan business persons, and developing regional market information systems for low-value crops.

On-farm programs to increase yields should focus on improving seed distribution, improving training in cultural practices, and investigating ways to re-introduce animal traction. At the applied policy level, the project should help the GOU find ways to use currently existing resources more effectively. Resources could be used more effectively in Uganda by privatizing or adding incentives to the seed production and distribution system. Transferring warehouses and processing plants to the private sector through leases from co-ops or the GOU are other areas that should be considered.

ANNEX D
RESEARCH/EDUCATION/TRAINING ANALYSIS

A. Constraints in the Ugandan NTAE Industry

The constraints to the development of the NTAE industry in Uganda impact at many different levels. An integrated multi-faceted applied research, education and training program should be used to overcome the network of constraints. The challenge will be to overcome all the constraints, since the success of the Ugandan NTAE industry will be limited by the weakest link in the chain.

Four major constraints must be overcome if the NTAE sector is to mature and play a significant role in the economic development of Uganda.

A1. Plant Protection Constraints

Uganda limited resource smallholder growers face a major problem with respect to pest and disease management. Yield-limiting pests common to all NTAE crops include weeds, nematodes, insects, and diseases. Purple nutsedge weed infects many of the production areas. Various sucking and chewing insects cause severe foliar stress which limits crop productivity. Whiteflies and aphids are major vectors in the transmission of numerous viral diseases ubiquitous in Uganda. Other fungal diseases, leaf blights, and root rots present additional production constraints. Vanilla production may be seriously impeded by fungal diseases.

Plant breeders in Uganda and elsewhere have developed cultivars resistant to certain pests and diseases in some crops. However, Ugandan growers usually must rely on chemical pesticides to achieve economic control of pests and diseases. Growers lack awareness of alternative control strategies for particular pest situations. Smallholders, especially, rarely implement biological control systems. Limited resource growers require education in the cost effective use of pesticides. Economic principles stipulate the use of pesticides only when the pest population reaches threshold levels. Above these levels the economic loss sustained by not applying chemical measures exceeds the cost of applying control. None of the Ugandan NTAE crop growers were familiar with this concept.

Integrated pest management (IPM) combines a variety of control techniques to reduce or keep pest populations at acceptable levels. Growers must monitor their crops regularly for pest damage. Effective monitoring requires training in pest identification and appropriate eradication methods. IPM provides an environmentally sound, cost effective approach in the control of a wide variety of pests in NTAE crops. However, the lack of appropriate data and trained people in Uganda limits the application of this technology. None of the smallholders visited were practicing or even aware of IPM.

The NTAE crop industry in Uganda requires the introduction of environmentally responsible and humanly safe methods of pesticide usage. Pesticide poisoning and inherent environmental contamination adversely effect human health and the ability of the growers to compete in the marketplace. Pesticide contamination of riverwater was observed on several field visits in the Mukono district.

Excessive pesticide application leads to development of pest resistance. Such resistance further complicates the control of insect transmitted viral diseases. Growers must employ such agronomic practices as field sanitation, the elimination of host weed species, crop rotation, and crop residue removal to minimize the incidence of plant pests. Growers require the latest international pesticide information on NTAE crops for export. Lack of knowledge of the current European pesticide laws places Ugandan growers at considerable risk. Importers or processors may reject product containing illegal chemical residues or legal residues exceeding tolerance. The IDEA project should regularly hold IPM demonstrations to educate producers and exporters in this area.

A2. Production Constraints

The principal production constraints facing limited resource growers in Uganda include the following:

- Site selection
- Land preparation/seedbed establishment
- Cultivar selection/availability of hybrid seeds
- Irrigation management
- Plant nutrition

Growers must select production sites according to the specific requirements of each NTAE crop. Soil texture, slope, pH, access to water, availability of windbreaks, native weed population (e.g. nutsedge), and proximity to postharvest infrastructure all enter into the selection of the most appropriate site. Several smallholder vegetable growers visited in the Mukono district were using poorly drained acidic soils. A major rose grower in the area had also failed to incorporate limestone in the soil to raise the pH before planting. Crop rotation will aid in minimizing pest build up, preserve soil structure, and will limit the carry-over of chemical residue. Many smallholder grain farmers in Uganda do not rotate their crops.

NTAE crops respond to optimal land preparation. Soil sampling is a vital component of land preparation. The information provided from soil sampling allows the grower to determine native soil fertility, liming requirement, and indigenous nematode populations. The grower can then make cost effective decisions pertaining to soil amendments, fertilization rates, and nematicide application timing. Under current conditions, Ugandan NTAE crops suffer from inappropriate rates of application, timing, and placement of fertilizers. In many parts of Uganda, the natural fertility of the soil cannot be relied upon to produce high yields.

Ugandan crops often show deficiencies in major and minor elements that restrict yield. During various field visits, nitrogen deficiency was observed in maize, and potassium deficiency was observed in several vegetable crops. Ugandan crop yields are very low, suggesting that substantial increases are possible through overcoming various production constraints.

Inadequate seedbed establishment further limits germination and yield of many NTAE crops. Growers need to optimize planting dates, planting depth, and spacing/plant population. The use of fungicide treated seed will reduce damage from soil fungal attack. None of the smallholders visited used treated seed. Increasing the use of improved open pollinated and hybrid seed may offer advantages in terms of resistance to stress, pests and uniformity of product. Genetic purity of the seedstock and germplasm quality has deteriorated over the years. Significant yield improvements can be immediately realized through the use of more improved open-pollinated and hybrid varieties. Currently 65 percent of the maize production in Uganda is from unimproved seed (e.g. farmers saving their own seed); 35 percent from improved open pollinated varieties (e.g. Longe 1); and only 5 percent from hybrid seed. The principal cultivated variety, a Kawanda composite, was released in 1971. It is a tall late-maturing variety which is susceptible to maize streak virus. The production potential for maize is very good as indicated by the fact that new selections from the ongoing maize research program at Kawanda have given yields of 3-4 tons/ha (average unimproved variety yields are 1.2-1.5 tons/ha). Moreover, maize varieties with a higher yield potential (5-7 tons/ha) can be obtained from some of the germplasm from the international agriculture research institutes (e.g. IITA).

Beans have good regional export potential due to geopolitical reasons in east-central Africa. The present variety grown (K20) was released in 1968 and gives very low yields of 0.6-0.8 tons/ha. With improved varieties from the research stations, yields of 1.5 tons/ha are reasonable. Introduction of new high yielding varieties of vegetable crops will allow for significant increases in productivity. Introduction of limited amounts of high quality seeds and plant material should be an IDEA project strategy.

The areas in Uganda where NTAE crops will be grown have periods of either inadequate or excessive precipitation. Growers will in some cases require irrigation and/or drainage control to avoid reduction in yields and crop quality. Limited resource growers must improve their irrigation management practices. A visit to one of the better vegetable growers revealed that even he did not understand how to make raised beds and use furrow irrigation. The sustained development of horticultural exports cannot easily be dependent on rainfed systems. The appropriate irrigation infrastructure must be established in those areas most suitable for horticultural production for export (e.g. southern and southwestern Uganda). Appropriate technologies

include the use of furrow, overhead, and sprinkler irrigation. The interaction of inadequate soil fertility and deficiencies or excesses in soil moisture restrict crop productivity.

Specialized expertise will have to be identified to initiate the production of many NTAE crops. For example, little expertise exists at MU for snowpeas or asparagus. MU has sufficient expertise in the staple food crops (e.g. beans, cassava, maize, etc).

A3. Postharvest Constraints

A3a. Fresh Product

Postharvest handling significantly influences success in any NTAE crop. Postharvest management covers the handling, packing, grading, cooling, storage, transportation, and distribution of the crop between the time of harvest and its final consumption. Serious problems with NTAE crops grown in Uganda reflect deficiencies in the following:

- Improper harvesting and field selection
- Lack of know-how and facilities for postharvest handling
- Lack of cooling and a network of cold storage facilities (on farm, in centralized locations, and at Entebbe airport)
- Improper packaging for export markets
- Inadequate infrastructure at Entebbe airport for perishables (e.g. no pallet weighing machine, antiquated equipment, poor lighting)
- Lack of knowledge of international market standards
- Inadequate product quality control and uniformity
- Lack of facilities for postharvest anti-fungal and pest treatment

Postharvest grain losses are very high in Uganda (from 20-40 percent). Weevils and larger grain boer may infest grain fairly soon after harvest. These losses justify the development of storage facilities with insect control capabilities. Also, inadequate drying of grain and pulse crops results in substantial losses due to mold and decay.

There is almost a total lack of postharvest cooling infrastructure in Uganda for horticultural crops. The introduction and use of forced air and hydrocooling systems are needed. For example, in Kabale a potential major cool season vegetable crop region, there are no cooling facilities. In addition, there is absolutely no infrastructure to maintain the cold chain during transit from Kabale to Kampala. Snowpeas could fuel the start of a horticulture industry in Kabale, but it will require construction of forced air coolers, cold storage warehouses, and refrigerated trucks.

Quality control problems in many NTAE crops are due to deficiencies in the packing system. Packinghouses in Uganda are non-existent or rudimentary at best. Inadequate product flow increases the unit cost of grading and packing. The

failure to remove field heat immediately after harvest reduces the quality and shelf-life of most NTAE crops. The rose industry in Uganda will in particular need infrastructure for forced air cooling.

Strategies for postharvest disease control should employ an integrated, preventive approach. Such strategies should include field and postharvest sanitation, postharvest chemical treatments, and future utilization of modified atmosphere packaging and shipping technologies. Modified atmosphere shipping containers may allow some of the lesser perishable NTAE crops to be transported over land to Mombasa, and then by sea to Europe. This would lower transportation costs compared to air freight.

A3b. Value-added/Processing

An urgent need exists to establish value-added and processing facilities for domestically produced NTAE crops. Processing facilities are practically absent for horticultural crops. The food processing industry should be relatively labor intensive, since the skills need to handle advanced technology simply do not exist in Uganda. The domestic human resource base exists to support the food processing industry. Emphasis should be put on such processed products as tropical fruit juices, purees, and concentrates, dried fruit and spices, canned pineapples and beans, and frozen products.

Development of the processed industry will provide for an increase in product value, ability to use off-grade non-exportable fresh product, and the creation of non-perishable system to distant markets. However, international markets are well supplied and the trade is very competitive. These markets require high quality product.

B. Overcoming the Constraints to the Ugandan NTAE Industry

The IDEA project will address the above listed constraints by providing focused research, education, and training in these areas.

Public and private sector sources of technical information on NTAE crops, particularly horticultural crops, are very limited in Uganda. Capacity, productivity, and credibility are all lacking at the present time. There is a critical lack of research manpower in Uganda. Due to difficult economic problems and resulting low salaries, the amount of time given by researchers to their employers is very limited. Documented reports indicate that on the average only 10 percent of a researchers time is given to research activities. The remainder of the time is given to activities which will ensure that their families survive. Given this situation, management and utilization of the existing research staff is the critical issue. Additional staff trained in NTAE crops are needed, but must be supported in order to avoid adding to the burden of research management without increasing productivity.

Except for research on maize and beans,and the horticulture research at Kawanda, Uganda's institutions lack a clear focus on applied research and technology transfer needed to develop the NTAE industry. Overall government expenditure on agriculture research is very low. A recent World Bank study indicated only 0.2 percent of its agricultural GDP is spent on research and this is mostly from external donor sources.

Currently, the research and extension services for NTAE crops are completely inadequate. The MAAIF extension service suffers from under-funding and institutional weakness. The travel budget is so meager that it does not allow extension workers to spend more than one night in the field per year.

A vital component of the long-term sustainability of the NTAE industry will be a human resource base capable of supporting the industry.

The objective of the research, education, and training component of IDEA will be to provide intensive technical training to both public and private sector individuals, institutions, and firms involved in NTAE crops. Emphasis will be placed on demand/market-driven practical, hands-on training and applied research.

The export market demands a consistent supply of quality product. Research and training efforts must address the production and postharvest constraints in order to strengthen Uganda's capability to become a player in the international NTAE crop trade.

Intensive in-the-field technical assistance, training, and applied research will be provided to tackle the constraints.

B1. Research Analysis

National Agricultural Research Organization (NARO)

The objective of NARO is to undertake, promote and streamline research in agriculture, livestock, fisheries and forestry. The functions of NARO include the following:

- Provision of research and training grants
- Determination of resource requirements and approval of research strategies
- Dissemination of research results

NARO will conduct research activities structured by commodity and subject matter at eight national research institutes and five stations, as follows:

Institutes:

- Kawanda Agricultural Research Institute (KARI), Kawanda
- Serere Agricultural and Animal Production Research Institute (SAARI), Serere

- Namulonge Agricultural and Animal Production Research Institute (NAARI), Namulonge
- Food Science and Technology Research Institute (FOSRI)*
- Agricultural Engineering and Appropriate Technology Research Institute (AEATRI)*
- Livestock Health Research Institute (LIRI), Tororo
- Fisheries Research Institute, (FIRI), Jinja
- Forestry Research Institute (FORI), Kifu

* Funds have not yet been appropriated to establish these institutes.

Stations:

- Rwebitaba Tea Research Station
- Kalengyere Agricultural Research Station (cool season crops, Irish potatoes)
- Kotido Agricultural Research Station
- Ngetta Agricultural Research Station
- Najjansi Agricultural Research Station

The research institutes of NARO will identify production, policy, market, processing, and utilization constraints in agriculture and prepare short and long-term research programs. The research institutes will carry out on-station and on-farm research. They will ensure participation of extension workers, producers, and agro-industries in identifying constraints and establishing priority research areas. They will also organize conferences, seminars, workshops, and training to improve skills and knowledge of research, extension and support staff. The institutes will identify and disseminate, in collaboration with public and private extension agencies, appropriate technology options to improve agricultural production and income of clients.

The research institutes directly involved in NTAE crop research will be numbers 1-5 above. The fields of research that each research institution is mandated to do include:

KARI	Perennial cash and food crops, farming systems, soils, crop protection, horticultural crops.
SAARI	Cereals, root crops, legumes and oil seeds for semi-arid areas.
NAARI	Annual industrial and food crops.
FOSRI	Food preparation, processing, storage, and marketing.
AEATRI	Farm mechanization, crop processing and storage, soil and water engineering.

Very limited research has been done in Uganda on NTAE horticultural crops. Public sector research and education institutions largely have focused on traditional export crops (e.g. coffee) and agronomic food crops (e.g. maize, beans,

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cassava, grains). In addition to the national research programs on maize and beans, international agriculture research institutes like IITA and CIAT conduct research programs in Uganda on maize and beans, respectively. These programs receive substantial support. Their expensive and long-term breeding and biotechnology research programs should not be duplicated in the IDEA project. However, additional research is needed on cultural practices and storage technology for agronomic food crops. KARI is charged with the responsibility of improving the national capacity to carry out horticultural applied research and improving the productivity of fruits and vegetable for local and export markets. Research on spices and floriculture is also included. The FAO horticulture project at KARI used a rapid approach to varietal evaluations, with the goal of turning over to farmers improved germplasm. In order to avoid duplication of efforts, horticultural research at KARI should be coordinated with the FAO horticultural research project. Little public sector research has been directed to horticultural crops, especially in support of the development of exports.

A systematic research program should be conducted to overcome the existing constraints in the NTAE industry. This research may be conducted at both public sector institutions and by contract to private sector firms. The type of research will be determined by demands of the private sector. The research program should utilize the capabilities of the various NARO affiliates along with the private sector, using a competitive grant system. The merit of each research proposal should be determined by a research advisory board, which should be comprised of growers, private sector agribusiness representatives, and NARO or MU scientists. Funded research should be of the applied nature, with the likelihood for immediate impact on overcoming constraints to the NTAE crop industry. Multidisciplinary research focused on a specific crop and/or problem area should be encouraged. Allocations of monies for administrative purposes should be kept to a bare minimum.

NTAE crop research should be encouraged through more active linkages with the private sector. This might involve, setting aside funds for private sector contract research to be conducted at government research institutes or stations. Private sector funded research contracts would ensure that the research being done at public sector units is meeting a specific demand in Uganda and that the research results will be applied and disseminated.

An incentive system which would reward researchers who are able to bring in privately funded research projects should also be established. Research should also be contracted out to growers associations and agribusiness firms. It is likely that the maize and bean research program will be conducted mostly at NARO based institutions.

In some cases, research results from other countries may be applied to the development of Uganda NTAE crops. Special attention will be given to identifying NTAE innovations which

have been successfully used in similar agro-ecological zones in other countries which may require little or no adaptation. Linkages with external sources of knowledge will be strengthened and expanded.

The IDEA project should establish a demand-driven applied research program closely linked to and coordinated with grower needs. The applied research results will be disseminated to the private sector via the information delivery mechanism of the IDEA project. A significant portion of the research effort should be participatory, using the growers field and involving the district, parish, or village extension person.

Although many production and marketing factors limit NTAE crop development in Uganda, the findings of the IDEA PP team strongly suggests that research and education efforts should focus on plant protection, postharvest handling technology, and production constraints. Emphasis should be placed on improving crop quality, not just yield.

A realistic applied research program would include:

- Identification of the best varieties (varietal evaluation)
- Pest and disease control measures to meet export requirements
- Postharvest handling technologies of NTAE crops for export, including quality and market requirements
- Appropriate packaging materials in order to meet export requirements
- Processing and value added technologies

B2. Education Analysis

Agricultural education is conducted at various levels and by different institutions in Uganda.

The MAAIF produces the technical and semi-technical staff needed for agricultural services at three different Agricultural Colleges. These colleges provide post-secondary training and award diplomas (senior technical graduates) or certificates (junior technical graduates) to their graduates. Two of the colleges teach general agriculture and the third teaches agricultural mechanization. The three Agricultural Colleges are:

Bukalasa Agricultural College. Specializations in the College are agricultural engineering and home economics. Certificates are awarded after successfully passing a two year curriculum and diplomas are awarded after an additional period of not less than two years of successful experience as a field officer of the MAAIF. Serious constraints exist in operational funds,equipment, laboratory supplies, textbooks, library references, and transport. On-the-job training is needed for the graduates in order to improve their performance as field extension agents.

Arapai Agricultural College. The situation at Arapai is similar to that of Bukalasa. Farm management is the main area of specialization.

Busitema Mechanization Agricultural College. Students receive specialized training in agricultural mechanization, tractor maintenance, welding, and blacksmithing.

MU is responsible for the training of advanced level manpower at the undergraduate and graduate levels. It is the only institution in the country offering B.S and M.S degrees in agriculture. MU also operates the Kabanyolo University Farm (KUF), where in-field practical training is given to second year MU agricultural students.

The KUF is located 10 miles from the main university. Total area of the farm is 490 acres, but existing facilities have deteriorated and there is no irrigation available. Transport to and from the farm is a major problem. As a result of the constraints, staff at MU are not doing much research at the farm.

The four-year B.S degree program at MU combines hands on field training with theoretical information. The Faculty of Agriculture and Forestry offers B.S. degrees in Agriculture, Forestry, Food Science and Technology, and Agricultural Engineering. MU provides training in crop sciences, including a general course in fruit and vegetable production. However, graduates are not able to carry out research programs in horticulture unless they get further specialized training at the M.S level.

Agriculture marketing training constitutes an important part of the B.S and M.S degree curriculum. However, little or no emphasis is put on export marketing of perishable horticultural commodities. The food science and engineering program at MU need considerable strengthening, especially in the areas of postharvest technology, processing, and agriculture mechanization.

Laboratory facilities in the Food Science and Technology Department are lacking for postharvest NTAE crop research. Specifically needed are a freezer, several walk-in temperature and humidity controlled coolers, prototype forced-air and hydrocooling equipment, and a pilot processing laboratory (with peeler, washer, cutter, evaporator, finisher, retort, freeze-drier and aseptic filler). Also, laboratory equipment is needed to monitor quality and compositional changes in fresh and processed horticultural products during storage. Specific analytical instrumentation needed for establishing an effective food quality laboratory include a gas chromatograph, liquid chromatograph, refractometer, pH meter, and spectrophotometer. With these instrumentation and equipment additions to the Department of Food Science and Technology,excellent student training and value-added processing facilities will be available. Private sector agribusiness firms will have a facility available to contract with to do research and development work on value-added NTAE

products from Uganda (e.g frozen products, purees, juices, concentrates,etc).

The academic staff profile of the Faculty of Agriculture and Forestry at MU is shown in the following table.

DEPARTMENT	PROFESSOR	ASSOCIATE PROFESSOR	SENIOR LECTURER	LECTURER
AG. ECONOMICS	1	0	2	5
AG. ENGINEERING	0	1	1	2
AG. EXTENSION EDUCATION	1	1	4	2
ANIMAL SCIENCE	3	1	2	4
CROP SCIENCE	1	2	5	5
FOOD SCIENCE	0	0	1	6
FORESTRY	1	1	3	4
SOIL SCIENCE	1	0	4	4
TOTAL	8	6	22	32

Of the total MU Faculty of Agriculture and Forestry, 36 hold a Ph.D., 32 have an M.S. degree, and the remaining 16 hold a B.S degree. The academic base of MU faculty is sound. Through the USAID-funded Manpower for Agriculture Development (MFAD) project, 26 staff have received or are receiving graduate training in the U.S.

At present, MU has an annual enrollment of 150-160 undergraduates in agriculture and 135 students get their B.S. in agriculture annually. Graduates of MU are usually posted as extension workers in the regions and districts, or at the various research stations. Some are also posted at the DFIs and Agricultural Colleges. Postgraduate (M.S) studies in agriculture are very limited at MU due to lack of facilities, staff shortages, and a decline in research funds. The number of postgraduate students declined from 70 in 1974 to 15 in 1990. Currently, postgraduate enrollment is around 25.

Overseas postgraduate training is very expensive, ranging from approximately $50,000 for two-year M.S. to $100,000 for Ph.D. degrees, respectively. This sharply contrasts with the corresponding figures for in-country training of $9,000 for M.S. and $16,000 for Ph.D. A long-term strategy should be to shift emphasis of postgraduate training from overseas institutes to in-country MU training.

The agriculture program at MU has suffered greatly during the last 15 years from shortage of staff, lack of laboratory supplies, deterioration of research facilities and equipment, shortage of transport, and inadequate library reference materials.

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Sixteen District Farm Institutes (DFIs) provide in-service training for MAAIF staff and for farmers to teach them new production skills and practices. They are also used by other agencies for short courses.

Uganda has a good infrastructure for meeting the training and educational needs of the NTAE industry. However, due to years of decay, the three Agricultural Colleges, sixteen DFIs and MU are in a state of decay and need major strengthening.

Facilities at the Agricultural Colleges can be used to provide training and education to supervisory level workers in the private sector and for parish and village level extension workers. The students that attend the Agricultural Colleges are mostly from farms while those that attend MU are mostly from the cities. Therefore, Agriculture College graduates are more likely to serve as the better farm workers.

The DFIs are ideal places for hosting/holding workshops and training sessions for both extension personnel, Agriculture College teachers, farmers, and NTAE farm personnel. They are also suitable locations for adaptive research, variety trial evaluations, demonstrations, and hands-on training in improved cultural practices. The DFIs collaborate with NARO and MU by doing demonstration plots from their research information.

The long-term human resource needs of MU in the area of postharvest handling, plant protection, horticulture crop production, floriculture, food processing,engineering, and horticulture marketing should be addressed. MU currently does not have faculty trained in these areas. Scholarships will be awarded to train faculty at the M.S. level in each of these seven areas. A total of 11 scholarships should be allocated to include one person trained in each of the following specialty areas.

- Postharvest handling of grains, spices, oilseeds
- Postharvest handling of horticultural products (e.g fruits, vegetables, flowers)
- Plant pathology
- Entomology
- General horticulture production/cultural practices
- Floriculture
- Grain/oilseed food technologist
- Horticultural product food technologist
- Agriculture engineering/irrigation specialist
- Food engineering
- Horticulture product marketing

In the short term, the U.S. university that participates in the IDEA project should send faculty to teach and provide technical training in these areas. A new crop science curriculum should be developed which will include courses in postharvest handling, plant protection, horticulture crop production, floriculture, food processing, engineering, and horticulture marketing. Long-term university expatriates and relevant short-term specialists should be available to assist

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with lectures, short courses, and training materials for university students.

The long-term educational and training needs of the NTAE industry will be supported by strengthening the human resource capacity of MU. This institutional building will come about through graduate degree training of MU faculty in U.S. universities and establishment of a U.S. university linkage with MU specifically focused on NTAE crops. Long term U.S.university and/or private sector expatriates will work closely with MU students and faculty in research, teaching, and extension programs designed to enhance the knowledge base on NTAE crops. A likely contractual agreement will be for the prime contractor to provide the majority of the long and short-term staff, but sub-contract to a U.S. university or consortium of universities to provide for additional staff and undertake the Ugandan graduate training program of the IDEA project.

It is necessary to establish a critical mass of human resources educated in various aspects of the NTAE crops to sustain the industry over the long term. Building the complement of researchers and extension personnel needed for the future will also require many existing staff to update their education and skills. Strengthening of NTAE research capacity will also be provided by regular in-service training to Ugandan faculty and staff using expatriate and local resources. The trained and experienced MU faculty and NARO research staff may then be used to offer courses on a timely basis to coincide with NTAE industry needs. Short-courses and workshops by senior staff will help to educate young research and extension personnel.

B3. Training Analysis

The objective of this component is to provide intensive technical training to both public and private sector individuals, institutions, and firms involved in NTAE crops from Uganda. Many of the proposed diversified export crops and commodities require highly specific skills and technologies which are not generally available in Uganda. Postharvest and processing skills are fundamental to export development and Uganda will have to import these skills initially until local technicians and managers have been trained. Emphasis will be placed on practical and applied training of trainers and preparation of technical information guides for producers.

All areas of the chain from planting to marketing will receive attention; including crop specific production practices, pest management, harvesting, postharvest handling, transportation, value-added processing, and marketing. The training methods will involve both short and long-term efforts within Uganda, in neighboring countries (i.e Kenya), in Europe, and in the U.S. Emphasis should be placed on short-term training (seminars, crop specific short courses, quality control requirements for the export market, and industry internships). The short-term training component will provide both public and

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private sector individuals with subject matter knowledge in all aspects of the NTAE industry. Also, these individuals will be capable of training additional in-country personnel. Long-term graduate training (M.S. level) of MU staff is a necessary component to the long-term sustainability of the NTAE industry. This will develop a long-term human resource base for offering a horticulture or NTAE crop option as part of the B.S curriculum in the College of Agriculture at MU.

The IDEA project should utilize a full array of training vehicles and delivery systems to assure the transfer of the appropriate technology and management systems to the target group. The research, education, and training (RET) delivery mechanism of the ADC will have one long-term RET specialist (expatriate) and one long-term RET advisor (local) to carry out the RET program of the ADC under the IDEA project (see Annex A, Institutional Analysis, for further details).

There will be extensive use of short-term technical assistance (expatriates/locals). Listed below are examples of short-term consultancies to be provided by the Contractor. During IDEA project implementation, it may be determined that some are not required. Similarly, additional consultancies may be necessary due to unforeseen circumstances arising during implementation. Whenever possible, local consultants will be used. This will ensure consideration of locally acceptable approaches and solutions which promote sustainability after withdrawal of project resources.

The IDEA project will provide short-term consultants as needed. The following is a list of short-term consultants that may be required:

- Floriculture specialist
- Tropical disease control specialist
- Tropical entomologist
- Postharvest specialist
- Grain crops specialist
- Plant nutritionist
- Specialty crop advisors (highland crops, i.e. berries, snowpeas, asparagus)
- Irrigation specialist
- International marketing advisor
- Food processing specialist
- General horticulture crop production advisor
- Equipment specialist
- Spice and essential oil production and processing advisor
- Association management specialist (e.g to work with NTAE growers associations, cooperatives)

Throughout the life of the IDEA project, long-term and short-term personnel should provide commodity focused seminars and short courses to the NTAE industry personnel. Approximately two one-day workshop/seminars should be provided per crop per year. These seminars should be conducted at MU, NARO institutes, DFIs, or in the field.

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In the early phase of the IDEA project, MAAIF extension workers should be given a comprehensive NTAE course at Kawanda and/or Namulonge research stations. This several week course should be conducted by IDEA project staff, assisted by short-term training specialists, MU faculty, and FAO horticulture project staff. Training should focus on extension-communication, production, postharvest handling, grades and standards, quality assurance, cold storage, transport etc. Training should focus on both technical knowledge and skills and on technology transfer methods.

Approximately 15 workshops/field days should be held annually on the production/postharvest handling/marketing of specific commodities. These training events will be held at various sites in the production zones for small-scale farmers and marketing firm personnel to improve their understanding of production/ postharvest technologies and market requirements.

The IDEA staff will select appropriate faculty at MU, Agricultural Colleges, District Farm Institutes, and MAAIF personnel to receive intensive crop specific or component specific (e.g. production, postharvest, processing, marketing, etc) training via seminars or short courses. These seminars or short courses will include expatriate or short-term consultant delivered programs in Uganda or in the U.S. Various U.S. universities, the USDA, and private sector firms offer a wide range of training courses. The trained participants will serve as a resource base to train additional NTAE personnel.

Long-term training for advanced degrees (M.S) in the U.S. for future MU faculty will be provided in various areas of the NTAE industry as previously discussed.

Short-term industry awareness training will be given in the U.S., Europe, and Kenya for NTAE personnel to examine production, packing and processing facilities. Product quality standards and packing requirements demanded in the international market will be demonstrated by visits to selected wholesale and retail markets in Europe and the U.S.

Approximately six industry tours should be arranged for Ugandan public and private sector NTAE personnel. Emphasis should be placed on private sector participation, with groups limited to no more that 20 for logistical reasons. The tour host(s) will be a long term expatriate and /or short-term specialist from the IDEA staff.

During the first several years of the IDEA project, progressive potential Ugandan exporters (about 12) should be sent to the annual PMA and ANUGA meetings to observe international market requirements and standards for horticultural crops. These are the premier trade shows for fresh perishables in North America and Europe and are attended by 10,000 or more people from around the world. During these 3 day trade shows, representatives from all aspects of the produce industry have booths displaying their wares.

In addition, hundreds of buyers attend in hopes of making deals for the upcoming season.

Approximately 12 public and private sector personnel should be sent to the U.S for training in postharvest technology. Options include the two-week short course at the University of California, Davis, the one-week short-course offered by the University of Florida, or various short courses offered through the Postharvest Institute for Perishables at the University of Idaho. In addition, visits to ports of entry will be made to observe international customs and inspection procedures.

The IDEA project staff should establish production oriented field demonstrations at the Kabanyolo research farm of MU, NARO and MAAIF sites, and/or private farms of NTAE crop producers. Examples include using the existing facilities and resources of the Kawanda station to carry out well organized, commercially oriented horticulture crop trials. Resources of the Namulonge station should be used for low value grain crop trials, incorporating oxen demonstrations. With the injection of a relatively small amount of additional funding for equipment, supplies, and technical expertise, an effective program could be quickly structured. These demonstrations will focus on the importance of timeliness and sound farming practices rather than the introduction of exotic technologies. These demonstrations will serve as the basis for "field days". The project staff can demonstrate the increase in productivity and returns that comes from improved management practices. The IDEA project should also utilize the resources of the international agriculture research institutes (e.g CIAT, IITA) and have combined field days for low valued grain crops.

On-farm site visits by short and long-term specialists using hands on learning and demonstrations. Demonstration farms will be established in a number of rural locations throughout the country to which farmers and Peace Corps volunteers will be invited to field days. Extension officers who work directly with the growers will use these farms for farmer training.

Internships should also be an integral part of the training, process. Growers and farm managers should be placed in NTAE crop farming operations in Uganda, Kenya, or the U.S to learn improved technologies and get on-hands experience. Examples of internships include placement at a rose exporting operation in Kenya, a snowpea farm in California, a vegetable packinghouse in Florida, a food processing plant, and local internships in Uganda. Internships should generally be for durations of 2-3 months.

Production manuals, fact sheets, bulletins and other types of written technical information should be an essential component of the overall training process for NTAE crops. Commodity specific grower bulletins on production, harvesting, and postharvest handling procedures should be written for each prioritized NTAE crop. This producer oriented technical information should be distributed to growers to improve the

efficiencies of their operations. Since not all farmer/ producers are literate in English, training materials for these farmers should be illustrated and published in two languages. The FAO horticulture project at Kawanda has produced information packets on certain crops. The IDEA staff should build on these and not duplicate existing information. In addition, the IDEA project should not duplicate existing information available on low value grain crops from public sector institutions or international agriculture research institutes (e.g, CIMMYT,CIAT, IITA).

Another effective training mechanism is to use videos that follow a specific crop from farm to export and to show the producers and exports what the market requirements are for packing, grading, and quality.

Training programs addressing the special needs of women farmers and women's groups or organizations will be targeted.

The IDEA project should also take advantage of the technical assistance and training programs of VOCA, Peace Corps, IESC, and other voluntary organizations, as appropriate. Private firms offer training to supply manpower to their organizations, but may cooperate in offering certain types of generic NTAE crop training to non-employees for a fee.

B4. Extension Analysis

The agriculture extension service in Uganda is housed under the MAAIF. Extension operates at various levels. Uganda is divided into ten agricultural regions, each under a Regional Agricultural Officer (RAO). Within each region are various districts, each headed by a District Agricultural Officer (DAO). Districts are divided further into counties, sub-counties, parishes, and villages.

The DAO has a B.S. degree and is assisted by a deputy. In each district are senior staff that deal with specific crops, depending on the crops cultivated in the area. The DAO is responsible for agricultural development activities in the district. Under the DAO are county officers. The policy is to have a college graduate (B.S. degree) in charge, although many counties still have diploma or certificate graduates in charge. At the sub-county level, a diploma holder is in charge of the office. However, because of personnel shortages, a person with a certificate might be in charge, depending on the crops grown. At the parish level, the MAAIF goal is to have certificate holders in charge. A certificate holder might be responsible for 2-3 parishes. A parish may have from 10 to 1,500 families. Villages are the lowest administrative level. Field assistants (FA) are responsible for the villages. They have no degree, but usually lots of experience. The FAs do the extension work at the primary level, and usually have an average of 500 families to service.

The national extension staff totals about 2,300 agents, of which about 250 are university graduates. This does not

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include the FAs, who are estimated to number about 2,000. Cooperatives also have extension people under the MCIC.

Within the MAAIF, the Home Economics section deals specifically with the role of women in production. There are about 126 employees in this section, allocated to different districts and assigned to different levels. FAO has worked with this section in educating women in vegetable cultivation. Another project, financed by UNICEF, supported women's farming groups by providing inputs and training.

There are various constraints facing the extension service, which results in very ineffective programs. The constraints include:

- Low salaries, which force the staff to find additional jobs, leaving only a small proportion of their time for the extension program.
- Lack of transport and allowances. In the past, a car was allocated to the district and also credit was provided to staff to encourage them to buy cars or motorcycles, but this was stopped.
- Lack of essential and timely available agricultural inputs (seeds, fertilizers, chemicals).
- No training courses for extension workers exist; technicians have only basic training.
- Lack of up-to-date research bulletins and information from the research institutes.
- Inadequate funding for travel and for preparation of instructional and demonstration materials.
- Little interaction among farmers, extension agents, and research institutes.

Of the total extension staff, none hold a Ph,D. Degree, 4 hold a M.S. Degree, and about 250 hold a B.S. in agriculture (about 6 percent of the total staff). The system has about 2,000 trained extension staff. The rest, about 47 percent, are unclassified FAs. These are people who have left secondary schools but were given informal and on-the-job training by officers at the district level and below.

The World Bank is funding an integrated institutional strengthening program of the agriculture extension service. They are emphasizing management,leadership, program development, and evaluation. A graduate program at MU in Extension will begin this year. A part of the World Bank extension project is to set up training programs upon demand. This World Bank project should be used to train IDEA project extension personnel in communication methods, management skills, and farming systems. They have very well educated personnel, however, they lack resources. For example, the faculty are allocated only one pad of paper per month! The

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Ag. Extension Department will also be working with NARO research institutes.

Extension is a vital link between research and farmers. There is a need to strengthen the training and education of the extension work-force and the farmers in NTAE crops. The present system does not deploy field workers strategically to improve the quality and intensity of contact between the farmer and national system of research. Large numbers of staff have administrative duties at ministry and district headquarters instead of being at village levels where they are most needed. Further, the least trained and least paid staff are the ones assigned the responsibility of being in direct contact with the farmer. The low level of awareness and utilization of research results by farmers are a reflection of the lack of functional linkages between extension workers and researchers. A salary incentive system which rewards staff for good performance is lacking.

To sustain the NTAE industry,a pool of knowledgeable, well-trained extension personnel must be in place to provide technical advice to growers. The technical information will come from local, regional, and international sources. It will also be supported by a focused, private sector, demand driven applied research program. Continuous updating of the knowledge extension workers at all levels is required to assist them to acquire newer technologies. The training extension workers receive should be practical in nature and attuned to the opportunities, problems, and constraints in Ugandan NTAE crops.

At its inception, the IDEA project should identify MAAIF extension personnel who have the most expertise and motivation in NTAE crops and use them as a basis for implementing the technology transfer arm of IDEA. As a means of jump starting this system, IDEA should consider "topping off" the MAAIF salaries of the best extension workers. Possibly a reward system could be established based on a percent of increase in grower output that has resulted from extension workers efforts. Each of the major horticulture growing districts should have a horticulture specialist, like currently exists for the grain crops in certain districts.

To facilitate broader coverage of training and transfer of NTAE skills, the IDEA project will identify progressive farmers who have a strong interest in and potential for training. This group will be given a several week short course in training methods using participatory, discussion-based, adult learning techniques. Particular attention will be paid to the training needs of women producers with the appropriate participation of progressive women farmers in these training activities. These farmers/trainers will in turn assist in the development and delivery of commodity specific extension and training programs. This technical information will be delivered to farmers at technical field demonstration days on the farm. In this way extension can be accomplished farmer-to farmer in a commodity specific manner by people with direct interest in the quality of the product.

These farmers/trainers would be paid a small amount for carrying out these activities.

A common criticism heard from numerous growers was that the existing extension service was totally inadequate to meet their needs. For example, several flower growers said they never did get a response from the extension service or MU about a cut flower foliar disease problem. Only firms or enterprises with sufficient resources to establish connections with U.S or European based information sources (e.g. Universities, importers, private consultants) can obtain the necessary technical support.

Many farmers believe that the MAAIF extension service is not meeting their needs. They believe they would be better off dealing directly with the private sector for information services. Privatization of the extension service is an option for the NTAE crops. To some extent, this is being done by some of the producers and exporter groups. For example, vanilla growers in the Mukono District are being assisted by a local producer who has contracted with McCormick spice company. Also, with the assistance of USAID and the APDF, a horticultural expert trained several progressive men and women farmers who are now working as extension agents with their neighbors.

One of the most challenging aspects of the IDEA project will be to develop an effective extension program to meet the needs of the large numbers of producers of low value export sub-sector crops over a wide geographic area. One possible model to follow would be the BAT system. BAT works with 24,000 tobacco out-growers distributed throughout Uganda. They employ a staff of 260, all with two-year Agriculture College degrees or higher. Their field department has an annual budget of about $500,000. This is one of the more effective agricultural extension systems in Uganda.

IDEA project research results must be disseminated to the user cliental via various effective delivery mechanisms. A close coordination should be established between researchers and technology transfer agents in the MAAIF and private sector. Strengthening the extension component will be vital to the success of the NTAE industry.

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ANNEX E
SOCIAL SOUNDNESS ANALYSIS

This Social Soundness Analysis examines social characteristics and forces in the Ugandan agricultural and agribusiness sectors which influence the potential for developing NTEA exports. After describing the socio-economic background, agricultural production, smallholder opportunities, and market structures, the analysis examines social factors influencing the production and marketing of NTAE exports and draws conclusions regarding the feasibility and potential impact of NTAE interventions.

A. Socio-economic Context

Uganda's socio-economic context is characterized by agronomic potential, physical remoteness, social diversity, and colonial legacies affecting exports and religion.

A1. Agronomic Potential

Uganda is a very fertile country with outstanding agronomic potential for year-round production of high-quality horticultural products demanded by international markets. Uganda gives the impression of a bountiful green garden, which Churchill once called the "Pearl of Africa." It is a landlocked country located on the equator in the Western Rift Valley, surrounded by Kenya, Tanzania, Rwanda, Zaire and Sudan. Uganda is roughly the size of Oregon or Great Britain (241,139 sq. km/94,354 sq. mi.) and has an estimated 1993 population of 17.3 million (projected from 1991 census cited in World Bank 1993, p. 25). It is one of the least urbanized countries in Africa, with almost nine out of ten residents (89 percent) living in rural areas.

Most (84 percent) of Uganda is an elevated plateau (900 to 1500 m) with a pleasant and agronomically productive climate. There are generally two rainy seasons (March-May and August-November), with an average annual rainfall of 1250-1500 mm. One-sixth (18 percent) of Uganda's land area is covered by fresh water, including Lake Victoria, the second largest lake in the world, and the headwaters of the Nile River, which drains most of the Ugandan basin. In addition to fertile land and abundant regular rainfall, Uganda is blessed with considerable mineral deposits, including copper, cobalt, and limestone.

At the equator, altitude is the most important determinant of agro-ecological zones. There are three broad zones in Uganda: the rich, humid Lake Victoria crescent; the mountainous west and southwest; and the lower, dry short-grass zones of the north. The mountains that ring Uganda—from the famous Rwenzori (literally "rain-makers" but often called the "Mountains of the Moon") in the west to Mt. Elgon in the east—offer fertile year-round growing seasons suitable for a diversity of fruits and vegetables, along with staple food crops. In addition, the elevated plateau that constitutes most of Uganda, especially in the humid lake region, provides excellent conditions for many high-value crops. Ecologically, Uganda has a distinct comparative advantage for year-round production of quality horticultural export crops, grains, spices and oilseeds. It has

never experienced the droughts which have plagued much of the rest of Africa.

A2. Remoteness

The major ecological limitation on Uganda's export potential is its remote, land-locked position. Historically, transportation costs restricted foreign trade. It wasn't until 1844 that Arab traders from Zanzibar entered Uganda. Thus, the country was spared much of the slave trade common in coastal areas. Since conveyance was by human porterage, few items could be traded at a profit. Delivery to Mombasa cost 70-130 Britsh pounds per ton, making coffee unprofitable at the world price of 70-90 British pounds/ton (Kaberuka 1990, 37). Major exports were limited to ivory and slaves, much of which went from northern Uganda through Sudan to Egypt. In turn, firearms, beads, bracelets and cloth were imported.

Today, fresh exports to European markets must be carried by air, and thus must be limited to high-value products. Low-value products can only be exported to regional markets in Africa. After Uganda develops processing industries and refurbishes railway service to Mombasa, sea freight to world markets will become another alternative. Even then, however, exports must focus on products not available from coastal areas to avoid a competitive disadvantage in transport costs.

A3. Diversity

Traditional Ugandan cultures incorporate much of the best of African values: respect for elders and ancestors, assistance to family in time of need, and considerable self-sufficiency of smallholders. There is also considerable cultural diversity within Uganda, including over 37 tribes, each with its own language, classified as follows:

- Bantu: Luganda, Lusoga, Runyankole, Rutooro, Rukiga, Rukonjo, Rwanba, Runyarwanda, Lumasaba, Lunyole, Lugwe, Lugwere, Ruruli, Rugungu, Lukenyi
- Sudanic: Lugbara, Madi, Lendu
- Western Nilotic: Acholi, Lango, Alur, Dhopaluo, Labwor, Nyakwai, Kumam, Dhopadhola
- Eastern Nilotic: Alteso, Karimojong, Jie, Ngandotho, Ngopare, Mening, Tepeth, Kakwa, Kupsabiny, Suk, Ik

Bantu speakers are found throughout southern and western Uganda and non-Bantu speakers in the north and east, with the Nile River forming the boundary. English is the *lingua franca* being the medium of instruction in primary schools. Swahili is used by the police and armed forces, as well as near the Kenyan border.

Pre-colonial societies were of three main types:

- The feudally organized agricultural kingdoms of southern Uganda
- The more loosely-knit clan-based societies of the North which practiced a combination of pastoralism and agriculture

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- **The nomadic Karamojong pastoralists of the east**

Major ethnic groups include the following:[1]

- **The Baganda** (20 percent of the population in the former Kingdom of Buganda, 7 of Uganda's 38 districts).

- **The Bantu of Western Uganda** (25 percent of the population, include:

  - **The Banyankore** (1.5 million in the former Kingdom of Ankole, 2 districts near Mbarara.)
  - **The Bakiga** (in the densely populated mountain highlands of Southwest)
  - **The Batooro** (in the former Kingdom of Toro, 3 districts near Kabarole)
  - **The Banyoro**, whose ancient Kingdom of Bunyoro was developed as a regional trading center before the rise of Buganda.
  - **The Banyarwanda** in the densely populated Kisoro District on the Rwandan border.

- **Eastern Bantu**
  - **The Basoga** (1.5-2 million living around Jinja, an industrial center).
  - **The Bagisu** on the slopes of Mount Elgon.

- **Eastern Non-Bantu Groups**
  - **The Itesot** (a Nilo-Hamitic community in Soroti, Kumi and Tororo. Primarily pastoralists, but also practice agriculture).
  - **The Karimojong** (A Nilo-Hamitic tribe of nomadic herders in Moroto and Kotido with a culture similar to the Masai).

- **Northern Nilotic Peoples**
  - **The Langi** (one million cattle herders like the Itesot and Karimojong, but also engaged in agriculture).
  - **The Acholi** (on the Sudan border, engaged in agriculture).

- **North-Western Sudanic Peoples**
  - **The Lugbara** (The largest group in the Northwest, farming the well-watered plains west of the Nile River).
  - **The Madi** (Also Northwestern agriculturalists).

Ethnic, linguistic, and religious diversity underlie most of the political disruptions and armed conflicts that have plagued Uganda. But the government has taken pains to ensure an open, representative administration. Among the public, there is widespread relief at the resurgence of peace, and eagerness to get on with the long-overdue task of economic development.

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[1]Based on Bow and Arrow Publishers, 1992.

A4. Colonial Legacy

European explorers left their mark on Uganda. John Speke, who first arrived in 1856, was followed by a series of traders, missionaries, and colonialists. Great Britain sought to control the source of the Nile to command Egypt, which was the passageway to India. This political imperative drove the colonial forces who, through the Imperial British East Africa Company (IBEA), left a legacy of concentration on a few cash crops. This resulted in the current dependency on coffee.

Equally important is the legacy of missionaries. Both British Protestants and French and Italian Catholics sent missionaries. Rivalry between these religious groups created an opening for colonialism. The British agent, Captain Lugard, supplied arms to the Protestants, establishing a Protestant hegemony which lasted until it was briefly challenged by Idi Amin in the 1970s. Religious competition remains today the foundation underlying Ugandan national political parties.

Most Ugandans are Protestant, followed by Catholics and Muslims. Often traditional African and imported religions are practiced simultaneously. National political parties, as well as more immediate reference groups, are organized along religious and ethnic lines. The importance of religion is institutionalized into the socialization process through the maintenance of separate primary schools for Protestants, Catholics, and Muslims.

B. Characteristics of Agricultural Production

Agricultural production in Uganda is overwhelmingly smallholder, quasi-commercial, market-responsive, and labor constrained.

B1. Smallholder Agriculture

Nine out of ten Ugandans (89 percent) live in rural areas. In 1991, the agriculture sector accounted for 51 percent of GDP, 90 percent of exports, and 80 percent of employment. Almost all agricultural output is produced by Uganda's 2.5 million smallholders, 80 percent of whom have 2 ha or less (World Bank 1993).

Food crops account for 71 percent of agricultural GDP, livestock products 17 percent, fisheries 4 percent, forestry 3 percent, and export crops 5 percent. Only one-third of food crop production is marketed, compared with two-thirds of livestock production and all of export crops.

Agricultural output has been growing rapidly (4.9 percent since 1986), but due to years of armed conflict and disintegration, is just now re-achieving the levels of the late 1970s. The World Bank analysis (1993) concludes:

- Agricultural expansion has resulted from the rapid increase in the production of food for a resurgent domestic market.

- The increase in food production has resulted from

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expansion in area cultivated.

- International markets for Uganda's traditional export crops have become much more competitive than in the early 1970s.

B2. Quasi-commercial

As shown in Exhibit D.1, smallholders are much poorer than urban dwellers, living largely outside the monied economy, with an average annual expenditure of only $10 per person. Over 97 percent have no running water or electricity. Because of Uganda's favorable climate, however, these smallholders have been spared the drought and starvation evident elsewhere in Africa. Most manage to produce enough to eat as well as something to sell. Smallholders are not, therefore, purely subsistence farmers; they are quasi-commercial, and are the primary potential producers of NTAE exports.

B3. Market Responsive

Ugandan smallholders not only have experience with marketing crops, they have in fact shown a remarkable ability to respond to market signals. In 1990 and 1991, when disruptions in southern Sudan led to an opening in the sesame (simsim) export market, Ugandan smallholders quickly jumped in to fill the gap, and production and exports boomed for a few years. Such data affirm that Ugandan smallholders respond readily to market signals and validate the assumptions underlying a market-driven approach to agricultural development.

Exhibit E.1. Characteristics of Smallholder Households

Indicator	Rural	Urban
Household size	5.59	4.50
Male/Female ratio	1.02	0.89
Expenditure per capita	$ 10	$218
% Expenditures for food	71%	51%
% starch in diet	33%	25%
Plot size (ave.)	1.35 ha.	
Over 2 ha.	15%	
1 - 2 ha.	23%	
Under 1 ha.	62%	
Other land held	1.03 ha.	

Source: National Household Budget Survey, 1989-90,
Reported in World Bank Uganda Agricultural Sector Memorandum, 1993, p. 25.

In 1992, however, when southern Sudan rejoined the sesame market, Ugandan smallholder production continued high and created a glut on the market. Last year, however, more maize and beans could have been exported if farmers had produced more. But market signals did not get through fast enough. There is need for better and faster market intelligence. In the absence of real market intelligence, the farmer can only learn by experience.

This implies a one-year delay in adjusting to market demands.

Agricultural growth since 1986 has been largely linked to the resurgence of domestic urban demand in response to the re-establishment of peace and order. But Uganda's urban market is small—only 11 percent of the population. Fortunately for the Ugandan smallholder, demand for food crops remains strong in surrounding countries. Even more fortunately, the purchasing power needed to convert this demand into an economic reality is currently being supplied by major donor programs such as the World Food Program. There is thus an export market for all the maize and beans that Ugandan smallholders can produce.

Land tenure does not seem to influence responsiveness to market signals. In various studies conducted by the University of Wisconsin Land Tenure Center, no differences were found in yields among farmers who owned, rented, or borrowed their land.

B4. Labor Constraints

In addition, smallholders' ability to increase production upon market signals is limited. Increases to date have been accomplished by bringing more land under cultivation. The area cultivated by smallholder families averaged 1.35 ha. Available labor, rather than land or land tenure, is the main constraint to increasing production. Labor demands exceed supply at the peak periods of weeding and harvesting.

Strategies for dealing with this problem have varied by region (World Bank 1993, p. 30). Historically, Buganda farmers took in immigrants from Rwanda or Zaire as permanent laborers to work year-round on coffee or cotton. In the North and East, labor-sharing arrangements were more common and labor was only hired to meet peak demands. In some Northern areas there was a tradition of communal participation in opening new lands.

More than half of the landholders, especially in central Uganda, pay for labor in cash. In 1989, approximately 30 percent of total labor inputs on major cash and food crops were provided by hired labor. Escalating labor costs are now placing considerable constraints on smallholder employers. In 1991 wages for casual labor fluctuated between Ush 350-700 per day, equivalent to $0.33-0.65. Agricultural wage rates ranged from USh 24,000 to 30,000/ha in June 1992 (BOU 1992, pp. 99-100). Wages were highest in the densely populated East—Mbale, Tororo and Iganga—and also Massaka.

C. Smallholder Opportunities

Opportunities for smallholders to increase production and earnings include animal traction, improved cultural practices, improved seed, on-farm storage, and high-value export crops.

C1. Animal Traction

In the wide level plateau areas of the North and East, from Gulu and Soroti to Tororo, smallholders had another technology for overcoming labor constraints—the ox plow. During recent

disruptions, however, their oxen have been decimated, either by the army or Karimojong cattle raiders. This has reduced them to farming a small portion of the fields they formerly cultivated. Minister of State for the North, Betty Bigombe, urges restocking oxen as a key element in any agricultural development program for this area. A survey she conducted found more than enough mechanical tractors available in the North, but all are out of commission, and there is no way that smallholders could afford either the repairs or the maintenance once they were repaired. Thus, the minister recommends animal traction, which the farmers already know and can afford.

C2. Improved Cultural Practices

Academic analysts are fond of comparing current yields with "improved" yields obtainable if proper cultural practices were followed. The implied intervention is to improve the extension service, and the first recommendation an extension agent will give is to add another weeding. In general, farmers already know this, but are unable to comply because of labor constraints. We must be careful not to underestimate farmers' knowledge of their fields and ability to maximize yields within existing constraints. There is a need for improved extension services, but, for significant improvements, these should be combined with physical inputs to alleviate real constraints.

C3. Improved Seeds

Improved seeds can raise yields 20-30 percent with little additional labor. Currently, many farmers near the Kenyan border are obtaining hybrid maize seed. Most others are planting Kawanda Composite. Last year, Namulonge Research station distributed their improved seed, Longe 1, to 3,000 smallholders for the first time. If an effective multiplication and distribution system could be established to put this seed in the hands of smallholders, it could have an immediate and striking impact on yields without the major expenditures necessarily involved in revamping the extension service.

One model for multiplication is the current potato program where the primary seed potato producer distributes his yield to a group of multiplier farmers who replant it and return their yields to him. The multiplied seed potatoes are then sold to other customers.

The current Ministry of Agriculture system of seed distribution involves passing seeds through the District Agricultural Officers. The system is not commercial and involves no sales promotion. Seeds could be sold commerically through traders receiving commissions on their sales. This would encourage active sales promotion and wider distribution of improved seeds.

C4. On-farm Storage

Although statistics reveal that farmers tend to receive a fair proportion of the market price (see Annex B, Technical Analysis), smallholders complain that their farmgate prices are significantly below town prices. The newly formed Uganda

National Farmers Association dreams of forming their own marketing system to "eliminate middlemen." Some mistakenly believe that this is another instance of inadequate market information. In fact, farmers are well aware of town prices. Low farmgate prices are a function of real market structure: lack of competition among buyers at the farmgate, poor feeder roads leading to high transportation costs, and lack of on-farm storage which requires farmers to sell immediately upon harvest when prices are low due to the glut on the market. Of these constraints, the most amenable to farmers control is the building of on-farm storage. If farmers could hold most of their maize harvest to sell six months later, they could potentially obtain about a 20 percent higher price. This, however, must be balanced against storage losses and the fact that the maize would have to be thoroughly dried, thus losing some of its water-weight.

As far as we could determine, there is no current on-farm storage project in Uganda. DANIDA is engaged in a large-scale grain storage initiative. Small scale trials with on-farm storage could determine the feasibility of pursuing this course on a wider basis to increase profitability to smallholders by raising the farmgate price. This is the kind of project that Peace Corps has undertaken in other countries.

C5. High-value Exports

Vanilla, chillies, and snow peas, among other high value export crops appear to offer the promise of substantial rewards for Ugandan smallholders. Flowers are indicative of other export crops which have attracted interest, but will probably not pay off for smallholders, at least in the near future.

C5a. Vanilla

High-value crops being introduced for export generally require smallholders to learn new technologies and cropping systems. Nonetheless, because of the rare opportunity they provide for breaking out of a semi-subsistence mode, these crops have been greeted with enthusiasm. Vanilla, which used to be grown years ago and seems to have a proven market, is catching on like wild fire. Weekly radio broadcasts about vanilla production, training of government extension workers, and provision of inputs by exporters have led to widespread adoption, limited primarily by the exporters' capacity to provide planting material. This is despite the fact that vanilla requires three years before bearing and is very labor intensive, requiring daily hand pollination. Vanilla production is quite a different cropping system from the standard maize and beans that smallholders are used to, but does not require any expensive inputs. Planted in favorable soils and treated with adequate cultural practices, the plants are rather robust with respect to common pests and diseases. An unknown fungal disease currently attacking some plants, however, is indicative of the dangers which may lie ahead for these eager smallholders.

C5b. Chillies

Birds eye chillies are another smallholder export crop which is expanding rapidly. They do not require a new cropping system, since exporters recommend intercropping them with traditional maize and beans. The plants are relatively hearty and, once out of the nursery, do not require special inputs. A serious smallholder grower, however, rapidly expands beyond the capacity of family labor to do the harvesting. Some smallholders are already complaining that they can't hire laborers to harvest chillies because the highly concentrated capsaicin burns the hands. There are ways around such difficulties, such as wearing gloves, but such occurrences are indicative of the fact that the industry is still "shaking down" and an efficient production-marketing system is still emerging.

C5c. Snow Peas

Two high-value vegetables have been identified as high opportunity export crops: asparagus and snow peas. Both can be grown as smallholder crops. Asparagus can be planted throughout the Lake Victoria crescent region around Kampala, but snow peas require the higher altitudes of the mountains. Currently, asparagus is being planted on a large commercial farm. It has not yet been exported and no particular interest has yet been expressed by smallholders. Snow peas, on the other hand, have developed considerable excitement in Kabale where they were test grown last season by several groups including a women's cooperative. The first week's harvest was impressive, then the snow peas were drowned out by rain. To keep up enthusiasm, the American agronomist initiating the trials paid cooperators for four weeks of harvests. These smallholder groups are now eagerly looking forward to the next planting.

C5d. Flowers

Probably the largest foreign exchange earner among the newly proposed export crops is flowers. This, however, is not a smallholder crop. The highly competitive European market demands extremely high-quality, and most of the investment is in high-tech greenhouse rose production. These are being pursued by well capitalized investors with imported technical assistance. There may eventually be a cost-effective add-on market for field annuals, once the major investors have established cold storage and transport facilities. There is already a small, dedicated group of flower growers who have formed the Uganda Floricultural Association. They sell flowers locally and hold annual flower shows. Most will need irrigation to compete in world markets. The leader of this group is currently installing irrigation and has initiated correspondence with a potential flower buyer in Holland. Chances of any significant exports from these small growers in the near future are very slim, but this again demonstrates the enthusiasm of local entrepreneurs to enter the export business.

In summary, most high-value export crops open rare earnings potential for Ugandan smallholders. Farmers show extreme eagerness to participate. They are probably unaware of the substantial risks involved, but would probably make their investment anyway because of the high potential rewards envisioned and the

lack of other opportunities. To avoid raising false hopes, such projects must be carefully test marketed with a few growers before extensively involving smallholders.

D. Market Structures

Three unique characteristics of the Ugandan market structure deserve attention: smallholder exports, hierarchy and fairness, and contracts and competition.

D1. Smallholder Exports

The most unique aspect of the Ugandan non-traditional export market is that it is almost entirely based on smallholder producers. The United States and most other big players in the world market, in contrast, derive their exports from a relatively small number of high-tech farmers managing large holdings.

Sociologically, Uganda's reliance on smallholder producers has a distinct equity advantage. It ensures that benefits derived from NTAE exports will be widely distributed throughout the population. Economically, however, it requires additional expenditures for collection of produce over a widespread area. These costs need to be added when calculating Uganda's comparative advantage.

D2. Hierarchy and Fairness

Export markets are hierarchically organized. In such systems, there is always a tendency towards "perceived inequity." At every level, each actor tends to feel that he or she is being taken advantage of by the richer, more powerful persons above. At the top, resistant Ugandans argue that encouraging foreign investment and producing for the European market is "neocolonialism" or "selling Uganda." At the bottom, the Ugandan National Farmers' Association dreams of creating its own marketing structure to "eliminate the middleman."

Using the maize market as an example, individual producers sell a few bags to traders or agents in the village market. These, in turn, sell to agents in the nearest town, who then sell to major exporters in Kampala. The exporters accumulate the volume necessary to sell to major donors such as the World Food Program. At the bottom of the pyramid, farmers argue that they must sometimes sell below cost, and larger farmers can rattle off these costs precisely. There is, undoubtedly, at times some truth behind these allegations, but the arguments were weakened when made by a doctor who claimed to make more from farming than practicing medicine. Value chain analysis indicates a very fair distribution of profits on maize (See Appendix B, Technical Analysis). In fact, at the time of our field visit (just before harvest) the farmgate price was 60 percent of border value.

D3. Contracts and Competition

Market theory relies on supply and demand and competition to keep prices adjusted fairly. There are, inevitably, imperfections in such small markets with only a handful of buyers at each level

and very few exporters at the top. It is important that some competition be developed to keep market mechanisms working, but the number of players in such a small market will always be limited. In the vanilla sub-sector, for example, there are only two exporters. They behave as true competitors, but share a common interest in developing the sector. Under such conditions, it is important that strong vertical linkages and teamwork be developed between exporters (or intermediate traders) and producers. For new crops, it is the exporters who can supply advances of seed, inputs, and technical assistance to smallholders. They can afford this because they can deduct payment from the price of ultimate sales. What must develop is somewhat akin to traditional patron-client relationships based on mutual help and self-interest. Such vertical arrangements are not only valuable, but necessary for efficient market operation, as long as some competition remains, permitting smallholders to shift alliances.

The concept of "contract growing" is not yet formalized in Uganda. Loose agreements are entered into, but remain ill-defined. Some buyers complain that growers sometimes sell to competitors after accepting their seed, and growers sometimes seem to expect more assistance with production problems than buyers are willing to offer. As the market matures, we can expect further codification of these vertical arrangements.

E. Social Factors Influencing NTEA Exports

E1. Political Stability

Political stability is the key factor underlying Uganda's recent economic resurgence. Since President Yoweri Museveni came to power in 1986, he has engaged upon a program of political inclusiveness and economic liberalization that has paved the way for peace and progress.

The first quarter century of the post-independence period was characterized by violence and instability due to the political vacuum left by the withdrawal of colonial institutions and imperial coercion. There was a general lack of consensus as to how the country should be governed and particular resentment towards the constitution of 1962 which made the King of Buganda also President of the whole country. In 1966, Prime Minister Milton Obote replaced this constitution with one of his own, abolishing Kingdoms. In 1971 Idi Amin, one of Obote's generals and his principal hatchet man, installed himself as President through a military coup. He suspended the constitution and ruled by military decree for eight years. Amin was a school dropout who gave vent to his resentment of the system, which he felt had treated him and his peers as pariahs. He waged an "economic war," expelling the Asian businessmen who controlled the economy, and killed the Archbishop of Uganda, the Chief Justice, and the Vice Chancellor of Makerere University. Many professionals and skilled workers were forced to leave the country. Externally, he attempted to realign Uganda with the Islamic bloc. By the time Amin was finally defeated by Tanzanian soldiers in 1979, the country was left in shambles.

Instability continued from 1979 to 1986. Three short-lived governments were followed by a questionable re-election of Milton Obote. Obote's return led to formation of the guerrilla National Resistance Army (NRA) which waged war against Obote and his military successors from the countryside.

The NRA took over Kampala on January 25th, 1986. The first year of National Resistance Movement (NRM) administration was dominated by its military wing, but gradually decisions were left to the National Resistance Movement (parliament). When Yoweri Museveni was sworn in as President, he pledged fundamental change to break the recurrent cycle of violence and restructure state institutions to reflect the values of the people of Uganda. His Ten Point Programme or NRM manifesto emphasizes four areas of reform:

- **Ideological independence:** Institutions based on Uganda's unique character rather than foreign models.
- **Popular Democracy:** Home-grown democracy based on hierarchical Resistance Councils (RCs).
- **Human Rights:** The Human Rights Commission has investigated abuses since 1964, and the Inspector General of Government keeps a permanent check on corruption.
- **Economic Independence:** Movement away from dependence on export of primary raw materials toward diversification of exports and industrialization of the country to bring about balanced development based on modern technology and skilled labor.

The return of political stability has enabled current investment from abroad as well as revitalization of agricultural production. NTAE initiatives are designed to support the NRM's fourth point of reform.

E2. Vertical Integration

As mentioned above, vertical integration among producer, trader and exporter is necessary for efficient market operation. Relationships of mutual trust and assistance based on mutual "fair returns" must be developed in place of more common hostility and perceived exploitation. Such relationships are all the more difficult to establish because they generally cut across traditional clan, tribe, political and religious membership groups.

President Museveni has, by example, encouraged such vertical integration. His National Resistance Movement administration includes members from all different tribes, religious groups, and regions of the country. More specifically, he deliberately replaced the "foreign" parliamentary model of government with home grown democracy that avoids divisive elections involving national political parties, while still giving voters a choice. The NRM instituted a broad-based political movement based on consensus rather than competing political organizations.

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President Museveni argues that attempts to transplant the British parliamentary system proved largely unsuccessful, and historically Ugandan leaders were either hereditary or chosen by councils of elders. Thus, the NRM government established a six-tiered hierarchy of Resistance Councils.

The first level, RCI incorporates all adults in a village. They elect a council of nine to regulate village affairs by openly standing behind the candidate of choice. Council members elect representatives to subsequent councils as follows:

RCI	All adults in a village elect a council of nine.
RCII	All RCI council members in a Parish elect a council of nine.
RCIII	All RCII council members in a sub-county wlect a council of nine.
RCIV	All RCIII council members in a county (County Council) elect a representative to the National Resistance Council (Parliament) and representatives to RCV.
RCV	The District Resistance Council.
NRC	The National Resistance Council (NRC) consists of 278 members: 150 elected county representatives, 38 women (one per district), 10 military, 5 youth, 3 workers, 20 presidential nominees, and 38 historical members.

E3. Associations

A third important factor influencing NTAE exports is the formation of voluntary associations for mutual cooperation and assistance by producers, traders and exporters. When formed voluntarily, rather than imposed by government, such associations are proving very effective in developing the economies of scale necessary for production and export. They are contrasted with formerly imposed cooperatives and authorities which often adopted a regulatory rather than facilitative approach. An especially encouraging development is the current proliferation of women's groups which are making a major contribution towards productively cultivating the entrepreneurial energies of this long neglected half of the population.

F. Conclusion

In conclusion, NTAE interventions are not only socially feasible, but highly desirable. Smallholders have proven their responsiveness to market signals and are currently enthusiastic about NTAE exports. The smallholder nature of Ugandan agriculture ensures that benefits will be widespread, and the earning opportunities for smallholders are unparalleled elsewhere.

Principal Source of Data: BOU (Bank of Uganda, Agricultural Secretariat), *Quarterly Bulletin on Agricultural Prices*, April-June 1992, Vol. I, no. 1, June 1992.

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ANNEX F
GENDER CONSIDERATIONS

The purpose of this annex is to analyze gender considerations constraining NTAE production and marketing. It will focus on identifying constraints particular to Ugandan women's advancement in agricultural production, marketing and exporting, and examine opportunities for overcoming them. The annex begins with an overview of women's roles in Ugandan society and then focuses specifically on participation in the identified high- opportunity crop sectors: spices, flowers, and vegetables; and low-value exports: cereals, beans and oilseeds. It concludes with an examination of current opportunities for women's advancement that could be promoted and strengthened, and potential ways for increasing women's access to NTAE information and resources. A final note examines gender considerations from a male perspective.

A. Women in Ugandan Society

The role of women in Ugandan society is in transition. Traditionally, men ruled decision making and wives were more often treated as laborers or property than as equal partners. With both official government and popular social support, this situation is undergoing transition in the modernized public and private sectors. Despite progress, however, women still face constraints and require special consideration to overcome years of oppression and achieve their full potential. This is especially true in the rural smallholder sector where traditional values remain strong.

A1. Traditional Values

Five major constraints are placed on women by traditional Ugandan values:

- Gender-role stereotyping
- Marriage customs
- Gender-based taboos
- Gender-based prejudice
- Unequal sexual rights

Traditionally, Ugandan women are expected to cultivate fields, harvest crops, cook, clean, fetch water, collect firewood, tend the sick, look after the elderly, and bear and raise children. It is widely held that a girl does not need education to perform these tasks, so among the poor, daughters are often kept home from school. Perhaps one-half of the women of Uganda have never attended school (UNICEF 1989, p. 81). The male is supposed to be the undisputed head of the family, ruling supreme in the home. Many men shy away from marrying highly educated women who might challenge this supremacy, or wives who might stay away at work or travelling on business.

Most marriages are regulated by the Marriage Act and Customary Marriage Decree of 1973. Moslem marriages are regulated by Mohammedan Law. Legally, "property acquired during marriage

belongs to the husband. In the event of the husband's death, the woman is not the automatic heir ...a wife or wives get 15 percent while the children get 75 percent in equal shares. Dependent relatives get nine percent and the customary heir one percent." (Jarawan 1991, p. 9).

Traditionally, marriage is not a contract between husband and wife, but between two families, involving payment of "brideprice." Today, many marriages are not properly formalized due to the expense of the ceremony, inability to pay brideprice, lack of parental control, and family dispersal. The line between girlfriend and wife has become blurred. A woman is considered a wife if she has borne a child and the man has accepted responsibility (UNICEF 1989, p. 75).

At marriage, a bride is adopted into her husband's clan. Thus, parents no longer benefit from her earnings. Sons, on the other hand, are expected to care for their elderly parents. Thus, poor families will discontinue their daughters' education in time of need, but sacrifice for their sons. Brideprice, an ancient custom, reinforces the wife's separation from her parents and encourages the husband to claim control of his wife's earnings. The desire of poor parents for brideprice can also contribute to pressure for early marriage.

Polygamy formalizes gender inequality. Over one-fourth (28 percent) of women surveyed in 1988 were in polygamous households (UNICEF 1989, p. 75). Polygamy can be supportive when co-wives work together, but can also cause conflict when wives compete for resources. In the north, the word for co-wife, *nyeke*, means jealousy (Laker-Ojok 1987). The polygamous husband may end up with more wives and children than he can support. Too many children may also result when a couple with all girls keeps on trying for a son to be their heir.

Traditionally, divorce requires repayment of brideprice, so it is not common (estimated at 3.5 percent of men and 6 percent of women—UNICEF 1989). Increasingly, however, there is no formality over separation. Four out of five women heads of household (82 percent) considered themselves married. Divorce laws are biased against women. A man may divorce his wife for adultery alone, but the wife must have two grounds (UNICEF 1989, p. 75).

According to a traditional taboo, girls were not supposed to eat protein-rich foods such as eggs, chicken, and goat. Beef was permitted, but rare. In some cultures men were served first and women remained with the leftovers. Such customs are no longer common, but may still persist among some rural groups. Similarly, female students and women entering non-traditional occupations used to encounter prejudice based on traditional stereotypes like "girls can't do math and science." Such biases are rapidly disappearing under concerted social and government pressure.

Anecdotal evidence suggests that girls may also suffer from

unequal sexual rights. They can be powerless to resist sexual advances from older men and it is said that with the spread of AIDS older men are seeking younger sexual partners. The rate of school-girl pregnancies is alarming, and a pregnant girl may be removed from school while the boy responsible continues unpunished.

A2. Transition

While such cultural attitudes remain prevalent among the rural poor, the Government of Uganda is promoting women's rights and has vowed to formalize them in the forthcoming constitution. President Museveni stated:

> ...our policy aims at strengthening the position of women in the economy by raising the value and productivity of their labor and by giving them access to and control over the productive resources. By productive resources I mean land, capital, credit, seeds, fertilizers, tools, water, energy, education and information.

The Ministry of Justice is revising statutes affecting women, and the Uganda Women Lawyers' Association is reviewing the draft legislation. Many discriminatory laws are expected to change. There are special women representatives in the National Resistance Council (NRC, or parliament) and among many other women's organizations are the Ministry of Women in Development (MWID), the National Association of Women's Organizations, and the Women's Studies Program at Makerere University.

Women are found in high positions in both the government and private sectors. On the government side, the Minister of State for the North and the Minister of Agriculture are women, and throughout the country there is a growing number of women District Agricultural Officers. In the private sector, women are found throughout the production and marketing chain as major exporters, village traders, farm laborers, and as the primary smallholder producers of food crops.

Women continue to experience special difficulties, but are beginning to learning ways around them. The most entrepreneurial are actively seeking business contacts and already showing signs of success.

B. Women in Agribusiness

Women smallholders traditionally have primary responsibility for production of most of the high-potential crops identified: grains, beans, and vegetables. At this level where traditional values remain strong, however, the woman may not benefit in proportion to her efforts. Decisions may be made by the husband and proceeds disappear into family coffers where she has no say over their disposition (See World Bank 1993, Vol. II, pp. 34 ff.).

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A recent World Bank report on the status of women in Uganda places women appropriately at the center of agriculture (Jarawan 1991). Women provide 68 percent of the labor for food crops and 53 percent of the labor for cash crop cultivation. Almost all employed women (94 percent) versus four out of five (82 percent) men were employed in agriculture. Of course, most women are not formally employed. Three out of four economically active women (72 percent), compared with one fifth (20 percent) of males reported their primary activity as "household duties" (MPED 1991, Table 2.20). Men's primary activity was "own account worker" (60 percent).

A Ugandan woman's workday is long and hard, reportedly 12-18 hours (1988 Action for Development Survey reported in UNICEF 1989, p. 73). Fetching firewood and water, however, are easier than in neighboring countries—mort women walk only one kilometer. Seeking treatment for illness requires considerable time, and both women and their children are frequently ill. In Mbarara, three-fourths (76 percent) of women and 42 percent of children under five had been sick in the two weeks prior to being surveyed (MOH 1989).

Women are strongly represented in the trading sector. At least half of traders are women. They own many small businesses in urban areas (UNICEF 1989, p. 78). Women entrepreneurs are found throughout the marketing chain. They play a major role in weekly village markets, which often constitute the first stage of collection for low-value crops. Even at the highest levels, the largest exporters of both high-value and low-value commodities are family businesses in which the wife takes as strong a role as the husband. At an intermediate level, over half (57 percent) of the students in the Uganda College of Commerce are women (Balyamujura et al., 1985 and Bitamazire, 1988). It should be recognized, however, that many of these may be taking courses such as typing and accounting.

Seven out of ten (71 percent) women surveyed in 1988 engaged in some other income-generating activities such as crafts. This income was fully controlled by the women, but the amounts were small. Seven out of eight (87 percent) earned less than Ush 500 (UNICEF 1989, p. 78). Approximately 500,000 women are involved in small-scale industry, either individually or through women's groups, NGOs, or cooperatives. They produce domestic articles (baskets, mats, cotton cloths, shoes, tailored items) or are involved in agro-based industries such as food processing, poultry and pig farming, etc. (Nalwanga-Sebina 1988).

B1. Constraints

Women's agricultural labor contributions are not matched by control over the resources generated. Decisions about disposition of proceeds included only four out of ten women (39 percent, one-third of these jointly with men) for food crops and only one out of six (17 percent, half with men) for cash crops (Jarawan 1991). Women are increasingly responsible for meeting

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household expenses that were once paid by men's cash crop income, including maintenance of the home and support for the children. In 1988, three out of ten (30 percent) women paid all or part of the children's expenses (UNICEF 1989, p. 78).

Women also face lower returns and greater difficulties competing in the rural labor market. Female wage labor supply is limited by the demands of domestic food production and processing, household maintenance, child care, and health care. Inadequate transport limits mobility and restricts labor time. Loss of assistance from school age children also impacts female labor time. Women are also at a disadvantage in education. Almost half (43 percent) of women versus 28 percent of men are functionally illiterate. Restricted bargaining power and contractual inferiority in the labor market largely stems from these constraints. This inelasticity of female labor supply may limit the response of both family and hired labor to new incentives. Nevertheless, distress selling of female labor during periods of food deficit and when school fees are due, however, is very common (Evans 1992, para. 18). In 1988, three out of four (75 percent) women farmers earned cash by selling their labor to other farmers in addition to working their own farms (Nalwanga-Sebina 1988).

There are no statues that prevent a woman from acquiring property, but according to custom, property acquired during marriage belongs to the husband. For example, women in nine contrasting ethnic communities cited difficulties in owning livestock because their husbands could claim them (Laker-Ojok 1987). Only 9 percent of women surveyed in 1988 had title to the land they farmed (UNICEF 1989, p. 78).

Many business women depend on donor aid for seed money. Often they don't have the necessary business skills, so rely heavily on extension field officers and donor-sponsored training seminars. Prevalent skills are mat and basket weaving (74 percent), beer brewing (49 percent), embroidery and needlework (40 percent) and simple bookkeeping (21 percent) (Nalwanga-Sebina 1988, p. 53).

B2. Opportunities

USAID's CPSP (Vol II, p. 435) notes a wide range of women's initiatives in Uganda by the NRM Government, donors, NGOs, PVOs and religious groups. One type of initiative aims at welfare issues related to high morbidity and mortality. Examples involve nutrition, immunization, sanitation, family planning, safe drinking water, and health care facilities. A second type relates to socio-economic status. These focus on gender issues and access to political, legal and government structures which affect change. Women's institutions in Uganda have altered the focus of women's initiatives from welfare issues towards economic improvement and achievement of political rights.

Addressing gender inequalities involves providing information or

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access to resources that help women gain control of their situation. Because of their inferior status, women are less likely to receive information, have access to the resources to act on it, and have control of the decision of whether to act on it. Thus, gender issues are best addressed when programs include empowerment.

There are two key ways in which NTAE initiatives can foster increased access to information and resources for Ugandan women: through special credit and financial facilities, and by channelling information and resources directly to women through women's groups.

B2a. Credit

Lack of land ownership places severe constraints on women's ability to provide collateral and secure loans though the formal banking system. The government has initiated two schemes to extend credit to women: The Uganda Women's Finance Credit Trust and the Rural Farmers' Credit Scheme of the Uganda Commercial Bank.

One-third (31 percent) of women surveyed knew of the Rural Farmers Credit Scheme, but only one percent had applied. Reasons for not applying were lack of assistance with the loan procedure, illiteracy, fear of not being able to repay, and poor access to banks. All of those who did apply were successful. These progressive women farmers are far above average. For example:

> Florence (age 36) used to live in Kampala where her husband works. They decided to buy six acres and she moved there. Now she sees her husband on weekends. She started with poultry, sweet potatoes, beans, and maize. She joined the Rural Farmers' Association, which provided advice. In 1988 she applied for and obtained a loan from the Rural Farmer's Credit Scheme to start a dairy farm. After a wait of eight months she received five exotic cows from the Government farm and hired a man to look after them. After three months, however, three were poisoned by malicious neighbors. She was discouraged but her husband urged her on. The bank granted a one-year grace period. Now she grazes the two remaining cows only in her compound and provides supplementary feed. The cows give 30 liters of milk per day which she sells to neighbors. With her earnings she pays domestic expenses and keeps her children in boarding schools where they get a better education (UNICEF 1989, p. 79).

Florence is not a typical woman farmer. Most women surveyed wanted to borrow such small amounts and had such weak financial skills that bank plans would be unable to assist them. About one-third (31 percent) had tried to borrow money. Most (60 percent) sought loans under US$3.00 (UNICEF 1989, p. 78). It

seems that a much more informal banking model involving small sums similar to the Gramin Bank of Bangladesh would be necessary to meet these women's needs. Such an initiative could help both men and women smallholders. In addition, special financial resources, such as small grants, could be targeted specifically for assisting women's groups.

B2b. Women's Producer Groups

In 1984, 30 percent and 1988, 50 percent of women in the districts surveyed were members of some sort of group. Most common were women's groups (18 percent) and religious groups (13 percent). Memberships in informal groups was higher. For example, 40 percent belonged to "Friend-in-need" mutual assistance groups. Regular participation in public meetings was low; only 37 percent had attended any meeting in the previous six months (UNICEF 1989, p. 74). Only 6 percent of women were members of agricultural cooperatives, although one-third (32 percent) occasionally sold them produce (UNICEF 1989, p. 77).

Women's groups provide a simple answer to the question of how to ensure that women producers keep control over the proceeds of their labors. Group earnings never enter the family coffers, and so never run the risk of being expropriated by husbands. There are already myriad women's groups springing up throughout the country. Channelling women's initiatives through these groups will guarantee that they reach the intended beneficiaries.

There are many kinds of women's groups. Their important common characteristic is that they are all voluntary. These are small groups of women who know and trust each other and band together out of common interests. They are not at all like cooperatives that were organized by the government.

Reasons for forming groups can vary widely, but earning money is always near the top of the list. Non-traditional agricultural exports are a popular women's group activity. A women's group may have multiple projects. It may start with embroidery or sewing and progress to include activities such as collective wholesale purchasing, agricultural projects to raise funds, and even literacy classes. A key social aspect of these groups is just plain having fun. Whether they are sewing, working or studying, the women also enjoy themselves chatting and gossiping.

Women's groups are not hard to identify. The National Association of Women's Organizations has an extensive, country-wide list of registered organizations. In addition, groups interested in non-traditional exports are very entrepreneurial and will readily approach the ADC once it advertises its services. During their brief stay in Uganda, IDEA design consultants were contacted by women's groups seeking to export such crops as mushrooms, flowers, and snow peas.

Women's producer groups need a lot of help. Four types of

assistance are fundamental:

- Extension
- Training
- Management
- Marketing

Agricultural extension will be necessary to teach new cultural practices related to non-traditional agricultural exports. This will be especially necessary for newly introduced high- value crops such as vanilla, chillies, and ginger. These women will be already very experienced with low-value food crops like maize and beans. For these crops they will only need to be taught improvements in cultural practices needed to raise yields. Since most of these women will be functionally illiterate, this extension education must be done in the field, learning by doing, and it must be taught in the local dialect. Women learn faster than men when taught in this way since they are already familiar with the basic field work.

In addition to agricultural extension, various types of training will be needed. Common topics would include specific aspects of postharvest handling such as cleaning, drying, sorting, packing, and transporting. Training could also address more indirect entrepreneurial skills such as empowerment and literacy training.

Women's groups will also require management training and supervision. They will need to learn such basic skills as how to calculate their production costs—including valuing their labor and seeds, how to keep simple accounts, and how to plan. Such groups often apply for seed money from donors, and can learn important skills in the course of preparing proposals for such grants.

Finally, these groups also require help with marketing. An effective way of providing all of the above is through establishing a "contract buying" type of relationship with a trader/exporter who will provide the extension, training, management assistance and will purchase the crop.

Such relationships are already developing. In the vanilla industry there is at least one women's group that has obtained inputs, extension assistance and a purchase agreement with the exporter. There is also a women's group involved in the initial testing of snow peas. This group, however, is composed of women from the town who have set up the enterprise and hire laborers to do the actual farming. Another women's group is starting to grow mushrooms for export. The Uganda Floriculture Association which is interested in exporting flowers, is not limited to women, but is comprised mostly of women. Similar women's groups can be formed for chilies and other high value crops.

At the moment, contractual relationships between grower and exporter are often vague and few exporters want to spend as much

time assisting producers as they may need. Project interventions to assist exporting or trading firms to formalize such relationships while helping their contract growers produce more would be extremely valuable.

B2c. Women Traders and Exporters

Roughly half of Ugandan traders are women. In selecting firms with which to work, NTAE projects should aim at assisting half women-owned businesses. It may require a little extra effort to meet this quota since many women traders are small merchants rather than major exporters. Nonetheless, the target will serve the country well by strengthening women's positions in commerce and ensuring equitable distribution of project benefits.

Major exporters are few, but there are women among them. For both high- and low- value crops, some of the largest exporting firms are family enterprises in which the woman takes at least as active a part as the man. One major grain exporter maintains 12 warehouses in which she hires about 2,500 women. Such individuals provide an opportunity for emphasizing women's roles even at the highest levels of the NTAE sector. NTAE promotion efforts should attempt to identify dynamic women entrepreneurs and traders at relatively high levels who could become major exporters with a little bit of assistance. These activities would support women at all levels of the production and marketing chain.

B3. Conclusion

In conclusion, women are primary actors in the production and marketing chain. They constitute about half of all traders, and half of NTAE support activities should be targeted to them. At the producer level, initiatives to assist women should be targeted through women's groups. This will ensure that the women benefit from the proceeds of their labors. These groups will need assistance in extension, training, management, and marketing. Such assistance can be efficiently provided through contract agreements between exporters and grower groups. Donor NTAE assistance could profitably target supporting the development of such agreements.

Finally, let us contemplate gender roles more generally, including the male perspective. Many NTAEs are food crops or vegetables which were traditionally allocated to women. As cash crops, however, they fall under the purview of men. The blurring of such traditional distinctions will necessitate redefinition of gender roles, and it offers an opportunity for project initiatives to foster more equitable sharing relations within smallholder households. Women's groups provide immediate channels for special assistance to women, but the redefinition of household roles ultimately presents more potential for fundamental long-term transformation.

ANNEX G
INSTITUTIONAL ANALYSIS

A. Institutional Review

A1. Overview

Uganda's efforts to promote exports and investments and to undertake policy analysis have been checkered. The numerous institutions involved have had mixed effectiveness and have led to varied outcomes. As a result, the institutional structure for export and investment promotion has not been fully rationalized, nor has a clearly defined strategy and framework been developed. However, a number of developments now underway should set the stage for establishing a fully functioning, integrated framework for export and investment promotion and policy analysis.

First, a national Export Development Committee (EDC) was established this year to assist in developing a coordinated national export program. Second, the GOU has approved a major World Bank export promotion effort focused on institutional capacity building. Third, the GOU and USAID are formally clarifying the roles that various institutions play in investment promotion, export development, and export policy. Finally, the GOU has agreed to restructure the Uganda Export Promotion Council (UEPC), drawing a majority of its board members from the private sector and giving the Council greater autonomy.

Once the above developments have been fully executed, a coordinated, complimentary approach to investment promotion, export development and policy analysis can be initiated. More dynamic growth of NTAE industries should result.

The Services Group recently completed a study for USAID entitled "Review of the Institutional Structure for Investment and Export Promotion." The institutions described below (UIA, UEPC and EPADU) were included in their review.

A2. Uganda Investment Authority (UIA)

The UIA is the primary organization responsible for promoting investments in Uganda. Its objective is to "...contribute to the economic development of Uganda by supporting the private sector through promotion of both local and foreign investment." The UIA carries out this objective by promoting a relatively liberal investment code, providing investor services and alleviating constraints to investment.

The UIA's main responsibilities include:

- Promoting and facilitating foreign and local investment in Uganda

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- Appraising application forms and issuing investment licenses
- Securing secondary licenses and other approvals for implementation of projects
- Granting investment incentives to applicable projects
- Recommending national policies and programs to promote investment in Uganda
- Supervising or monitoring projects made under the investment code

Future efforts will focus more on investor promotion, facilitation, and registration.

The UIA, a statutory body established under the 1991 Investment Code, is led by a Board of Directors which in turn is responsible to the Ministry of Finance and Economic Planning (MFEP). Since its inception the UIA has enjoyed good access to the Minister as well a high level of autonomy in carrying out its mandate.

The UIA's fifteen-member board is considered to be very active. The Chairman of the Board is appointed by the Minister, while the executive director is appointed by the board. The board includes representatives from the Bank of Uganda, Commissioner of Economic Affairs (MFEP), the Chief Government Development Economist (MFEP), the Commissioner for Technology (MCIC), the Commissioner of External Trade (MCIC), and the Commissioner for Immigration, Ministry of Internal Affairs, as well as representatives elected by the Uganda National Chamber of Commerce and Industry (UNCCI) and the Uganda Manufacturer's Association (UMA). The Minister of the MFEP selects the remaining five representatives, all of whom are currently from the private sector.

The UIA is in the process of being reorganized, along with other changes being made in the investment code. Both the appointment process and make-up of the board will change. Staffing will also to be reorganized. There are presently 30 staff members including 18 professionals. UIA is currently expanding the number of investment officers to six in spite of the fact that they are running a substantial budget deficit.

The UIA has an institutional development plan which lists the functions and responsibilities of each division and unit. Job descriptions have been developed for all professional staff members. A high-caliber staff has been hired at competitive salaries and they are given extensive training in their areas of responsibility.

The UIA has issued over 1500 application forms from which it has received 500 applications for investment since its establishment in 1991. The value of the proposed investments is US$900 million. Through April 1993 almost 400 applications had been approved. The Authority estimates that actual investment is in the range of US$ 200-300 million. The

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planned investments should create over 25,000 jobs. Much of the investment interest has been from Kenyan investors. The UIA does not track exports so it is not known what percentage of the investments are for import-substitution versus export industries. Nevertheless, these are very impressive numbers for an organizations that has been operating for only 18 months.

The UIA is currently being funded primarily by USAID. Future funding sources are still quite uncertain at this time although discussions have been taking place with the World Bank.

A3. Uganda Export Promotions Council (UEPC)

The UEPC is a statutory body established by the Export Promotion Council Act of 1983. Their offices did not open until 1985. While the UEPC is semi-independent of government, it is supervised by the MCIC. It has a Council (or board) consisting of a chairman and seven to fourteen other members. The following Ministries are represented on the council:

- Ministry of Commerce, Industry, and Cooperatives
- Ministry of Agriculture, Animal Industry, and Forestry
- Ministry of Land
- Ministry of Transport

Not more than two persons are appointed by the Ministry responsible for Commerce from each of the following three sectors: traders (after consultations with the Uganda National Chamber of Commerce); farmers (after consultation with the Uganda Cooperative Alliance); and industrialists (after consultations with relevant institutions). The Chairman of the Council is currently appointed by the Minister.

At the present time the Minister of MCIC has relatively broad discretionary power over the organization. The full-time Executive Secretary is appointed by the Minister. The Minister also has the final say on all senior appointments as well as on budgetary expenditures.

The primary responsibilities of the UEPC are to:

- Provide advice to exporters in order to promote exports
- Educate and assist exporters with costing products penetrating markets
- Disseminate market information

More specifically, the UEPC has undertaken the following activities:

- A documentation center, which consists of a small library and databases on PTA firms, products, regulatory measures, has been established for

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exporters. (The UEPC indicates, however, that it is unable to get the information "out to the exporters" effectively.)

- With UNDP funding, the UEPC has linked with the ITC network. The UNDP is also expected to fund a representative in London beginning in July.

- The Council recently published an attractive newsletter which serves to inform exporters about general areas opportunity. It does not appear to target any specific sector.

- The UEPC has completed basic studies (on hides and leather and on sesame) and plans to carry out similar studies on mining, hardwood furniture, and fish. Target sectors have not yet been identified but this is something the UEPC is working to develop.

Recent funding increases for the UEPC have increased its level of activity. The organization has purchased some equipment and vehicles, started a media program, begun an update of their trade directory, and undertaken the planning of seminars for exporters as well as a series of trade fairs and public information events through out the country.

The UEPC has a staff of 17 of which nine are professionals. They are outside the civil service but have little private-sector experience.

The UEPC does not charge for its services. The Acting Executive director felt the UEPC is a public enterprise and therefore has to respond to every exporter's request "no matter what their size or where they are located within the country." He went on to point out that without district offices it is very difficult to serve exporters throughout the country.

The UEPC's current strategic plan was drawn up before the present Acting Director assumed his role and was, admittedly, written without sufficient consultation with the private sector. Since its inception, the UEPC has not conducted a survey of the private sector to determine what services potential exporters actually need or how the organization could improve its services.

The UEPC's inactive board (it has not met since 1987), the lack of a clear mandate, and its history of being inadequately funded explain the widespread view that the UEPC have been ineffective and unresponsive. As a result, until recently, donor programs related to exports and investment have generally been set up outside of the UEPC and the Ministry.

Last year's Cabinet decision last year to transfer EPADU's (see next section) export development functions to the UEPC

will bring about substantial changes to the Council. Along with the recognition that the UEPC has a significant role to play, Cabinet decided to split the one-percent tariff on all imports between the UEPC, the National Bureau of Standards, and the Ministry responsible for the promotion of tourism.

Further legislative action is currently being considered by MCIC that would structure the UEPC along the lines of the UIA, giving it more autonomy. Institutional analyses by EPADU, the World Bank and USAID's ANEPP program have all recommended that the new export promotion institution created by overhauling the UEPC be given a new name in order to avoid its being encumbered with negative connotations from the past. In accordance with these recommendations, we shall hereafter refer to this new export promotion office as the Ugandan Export Development Agency (UEDA), a name suggested by design workshop participants.

A4. Export Policy Analysis and Development Unit

The Export Policy Analysis and Development Unit (EPADU) was created in 1988 as part of the Agricultural Non-traditional Export Program (ANEPP). EPADU was created under the program to act as the executing agency for the project. The creation of EPADU in 1988 and its attachment to the MFEP was in part a reaction to perceptions that the UEPC was not performing. The ANEPP project has recently been amended and extended until March of 1994.

EPADU is not a statutory organization, merely an implementing agency of USAID's ANEPP project. EPADU is run by an intra-ministerial/industry committee, and reports to the MFEP. When external funding is discontinued, it is anticipated that EPADU will be absorbed into this Ministry under Economic Planning.

ANEPP assistance was designed to increase the value of Uganda's non-traditional exports and to diversify the country's export base. Through identification of policy constraints and provision of services to potential exporters. In addition to EPADU, ANEPP also provides funding to the African Project Development Facility (APDF) to respond to specific needs of individual enterprises.

EPADU has two primary functions. The first is to recommend policy, regulatory and infrastructure changes to improve the environment for non-traditional exporters. The studies EPADU has undertaken appear to have been important elements in the debate regarding liberalization of the Ugandan economy. EPADU's influence is thought to have played a role in the following policy reforms:

- Liberalization of the foreign exchange regime
- The shift from import licensing to the simpler import certification
- Deregulation of fixed prices and the abolition of monopolies

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- Creation of the Investment Code

The second function of EPADU is to promote export development by working with potential exporters. This function has been on-going for the past one and a half years. A number of baseline studies have been conducted to examine potential opportunities for the development of five agribusiness sub-sectors. The studies, recently completed, examined the market potential and evaluated the opportunity for producing particular crops for export. As a result of these studies specific flowers, spices, vegetables, and basic cereals have been identified as having potential for future development.

EPADU has 20 staff members, including the Director, five professionals, and 14 support staff. Of the five professionals, two are policy oriented and three concentrate on export development. EPADU staff are not part of the Civil Service System and receive salaries comparable to the private sector, even though provision has been made for EPADU staff to return to the Civil Service when EPADU is absorbed into the Ministry. Currently, 90 percent of EPADU's funding comes from USAID with the balance from the GOU.

There is some uncertainty regarding the recent Cabinet decision to transfer export promotion development functions to the UEDA (reorganized UEPC). The debate centers around whether only the functions of export development or the EPADU staff as well would be transferred to the UEDA as a result of the Cabinet action.

In addition to the above-mentioned studies, EPADU staff have given a number of seminars on product-specific topics. These full-day events featured all aspects of production, handling, and marketing for the exportation of fish, beans, and bananas.

Further direct assistance has been provided to exporters through the OCA program. To date over seventy projects have been presented for consideration. Six have already received assistance. The assistance package has included:

- Feasibility study preparation
- Trial shipment assistance
- Identification of markets
- Management assistance
- Training
- Technical assistance
- Assistance in obtaining finance
- In selected cases, grants of up to $100,000

EPADU continues to sponsor individuals to attend trade fairs on a cost-shared basis. EPADU also is in the process of establishing a fresh produce inspection program in London to serve as an "honest" broker between Ugandan exporters and London buyers. Price and quality disputes should be better facilitated to create and develop a level of trust necessary sustain the exporter/buyer relationship.

EPADU efforts have had a direct impact on the development of the exports of vanilla, flowers, tropical produce and crocodile hides.

A5. Other Private and Public Institutions/Associations

In addition to the three primary institutions discussed in detail above, consideration also needs to be given the following private/public-sector groups and the role(s) they will play in the future development of the NTAE industry:

- Industry associations, including:
  - Uganda Chamber of Commerce and Industry
  - Uganda Manufacturers Association
  - Northern Uganda Manufacturers Association
- Exporter associations, including:
  - Uganda Horticulture Exporters Association
  - Uganda Grain Exporters Association
  - Uganda Flower Association
- Producer associations, including:
  - Uganda National Farmers Association
  - Uganda Commercial Farmers Association
  - Uganda Progressive Farmers Association
- Financial institutions
- Local consulting firms
- Service providers
- NARO and other research organizations
- Makerere University
- Agriculture extension
- Economic Policy and Research Center

The roles of the various associations and institutions mentioned above is expected to evolve over time. As the institutional capacities of the various organizations are enhanced throughout the life of the project, it is anticipated that they will take on greater responsibilities for providing services which had previously been provided through the ADC. The ADC will, therefore, gradually relinquish its role in providing export services as the institutions listed above are able to take on greater responsibility for there constituents interests.

Some of the organizations mentioned above are already providing many services to its membership. In the case of the UMA a special consulting division has been established which is capable of carrying out various types of analysis for a fee from its membership. It is envisaged that where this organizational capacity already exists, the ADC will enhance this capacity by working in close cooperation the organizations and its export clients. For example, it was mentioned that local consulting firms are capable of initiating feasibility studies in terms of the financial analysis were not very adept at locating and integrating

specific technical details into the study. Through the ADC local firms and organizations would gain access to these technical resources which could then be accessed directly at the end of the project.

The ADC will also work closely with membership organizations to build their capacities to better serve their members in the long run. The UNCCI could be provided with ST expertise in how to build a strong membership base. A retired Chamber President from the United States might work with the UNCCI for a few months under ADC/VOCA sponsorship.

A detailed discussion of NARO and Makerere University can be found in Annex D.

B. Lessons Learned

USAID-assisted agricultural export promotion activities are currently underway in a number of countries around the world.

Projects in Swaziland, Guinea and Ghana are currently adopting similar approaches to promote exports. All the projects are still relatively knew, but a few lessons can be drawn from their experiences.

Swaziland's Commercial Agricultural Production and Marketing Project (CAPM) has focused on promoting private sector marketing firms to service smallholder horticulturalists. Their experience highlights the risks challenging fledgling marketing firms competing with mature South African firms. There is a danger of over burdening these firms with production programming and agricultural extension responsibilities. Project managers are now seeking strategies to redirect some extension and production support activities through farmers' associations. A formal project evaluation will be completed shortly.

The experience of the Centre National des Investissements Privés reaffirms the importance of an enabling macro-economic and judicial environment. Despite promising feasibility studies, investors were unwilling to risk capital in a non-transparent system. The project also highlights the importance of keeping interventions private sector. It was implemented through a parastatal, but after four years, results were so unsatisfactory that a new project is now being designed to execute through a private sector NGO.

The Ghana Trade and Investment Program (TIP) has only been in the field two months, so little can yet be learned. Preliminary reports describe bureaucratic delays such as funds not yet released and auditing problems from funds not allocated to a specific account.

A number of studies of export promotion programs have been carried out in recent years. A USAID/PPC study carried out in

1991 distilled five basic, "lessons learned":

- Macro-economic policies must be in place.
- A project implementation unit is best able to provide the specialized technical knowledge needed by local exporters.
- Export promotion institutions can make an important contribution to building NTAEs, especially if the investment is made in a sector poised for take-off.
- The potential for most export promotion programs to be self-sustaining is not realistic, although charging for services is a good idea.
- Most promotional institutions only reach a small proportion of total export firms.

Macro-economic policies favoring exports are extremely important. Ninety percent of the variation in NTAEs from ten Latin American countries was accounted for by exchange rates (USAID/PPC 1991). Promotional institutions accounted for 5-30 percent of the growth in NTAEs and provided a 25 percent rate of return on AID's investment. Their assistance was valued by the firms they assisted, but promotional institutions reached only a small proportion of total export firms. Their most important service was market information and contacts.

Given the different needs of local and foreign firms, investment programs should not be combined with export promotion programs. Market information for foreign firms needs to focus on costs of production in the developing country, while market information for local firms needs to include price data in overseas markets and information on import regulations. Contacts for foreign firms should include referrals to local consulting firms and suppliers in addition to exporting firms. Contacts for local firms should focus on foreign buyers.

Market information is of two types: standardized information provided to a broad clientele and customized information for a targeted clientele. Standardized information for foreign investors is best provided by a government promotional agency with strong institutional ties to the private sector. Standardized information for local investors is well provided by a membership organization. Efforts providing basic information to a large number of firms may well have the greatest impact. Both of the above are sustainable, but political factors are likely to prevent them from targeting priority sectors.

Customized information for targeted foreign investors is best provided by an independent private entity. This expensive assistance must be carefully targeted to ensure maximum impact. A project implementation unit is best able to provide the specialized technical knowledge needed by local firms. Neither of these last two programs has the potential to be self-sustaining. Efforts to achieve financial independence may actually undermine program effectiveness.report.

C. Institutional Considerations

The institutional landscape of Uganda's efforts to promote exports and investments and to undertake policy analysis has been checkered. The numbers, types and the mixed effectiveness of the institutions involved has led to varied outcomes. As a result, the institutional structure for export and investment promotion has not been fully rationalized nor has a clearly-defined strategy and framework been developed. In the past few months, however, a number of developments have taken place or are currently underway which should set the stage for the establishment of a fully functioning, integrated strategy for export and investment promotion and policy analysis.

First, a national "Export Development Committee" (EDC) was established to develop a coordinated national export program. Second, the GOU has given approval for a major World Bank effort to build institutional capacities for export development. Third, under ANEPP, the GOU and USAID are jointly developing a framework which articulates the roles of the various export promotion institutions. Finally, the GOU has, in principle, agreed to the restructuring of the Uganda Export Promotion Council (UEPC) to draw a majority of its board members from the private sector and to give it greater autonomy.

D. Models Considered

When determining which model is "best" to use for promoting the expansion of NTAE, careful thought and consideration needs to be given to:

- Past and present export promotion efforts that are currently underway or planned
- Stage of development of the existing NTAE industry
- Identifying specific areas of opportunity: sectors/subsectors "poised for take-off"
- Specific informational and service needs of the NTAE industry
- Whether the program provide concentrated, customized assistance to a few targeted firms or standardized assistance diffused to a large number of firms
- Sustainability/capacity building requirements

The export promotion models which were considered for Uganda included:

- Membership organizations
- Government units
- Independent private entities
- Project implementations units

Strong membership organizations need to be driven by strong members. Although there are numerous membership organizations currently operating in Uganda, it was felt that none of them

are presently in a position to take on full responsibility for handling NTAE promotion. It is envisaged that the expansion of NTAE's begin to take-off, membership organizations will get stronger. It is anticipated that the IDEA project will be in a position to facilitate this growth thus increasing the capacities of membership group to take on more responsibility for export development.

Existing government units were examined carefully to determine the role they should play in NTAE development. It was decided that the government units currently involved in NTAE did have an important role to play in the future expansion of the NTAE industry but, by themselves, would not be in position to effectively provide the range of specialized technical knowledge and expertise currently needed by local NTAE firms.

Careful consideration was also given to the concept of establishing an independent private entity (non-profit or for profit), to carry out a NTAE program. Although there were many appealing aspects to this option it was determined that issues such as: the need to insure smallholder participation; developmental considerations; likelihood for sustainability or capacity building; providing customized services to a few firms versus standardized services to a much larger clientele; low value vs. high value product emphasis could not be adequately addressed by a purely private entity.

USAID and the IDEA Design Team's "preferred option" recommendation is to establish a semi-autonomous project implementation unit which would in the best position to provided the types of targeted and specialized training which are currently needed by Uganda's NTAE industry to expand exports. The project implementations unit, although un-sustainable in the long term, would be better able to provide the range of intensive and customized, information and service, which are presently most needed by Ugandan NTAEs.

The proposed structure would have direct ties to the exporters and producers as well as the GOU's export organizational structure, yet remain semi-autonomous. The units degree of autonomy would allow it to provide the kinds of specialized assistance which is necessary to build the basic capabilities of NTAE firms be profitable in the long-run.

E. Design Methodology

A great deal of thought, discussion and debate had already gone into determining the optimum institutional and organizational models and relationships for export promotion in Uganda, before the IDEA design team arrived in May 1993. The debate continues, but USAID and the design team feel that the following recommendations accurately reflect the "preferred option" of key participants in the export development business. The design team also feels that the process which was put in place to develop this "preferred option" which was both participatory and reiterative, resulted

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in an institutional and organizational arrangement which is workable in the Ugandan context.

First, the design team approached the Institutional/ Organizational analysis by first, conducting extensive interviews with over 100 individuals in Uganda. This was done in order to better determine the constraints as well as the specific types of information and services which are most needed by existing, as well as potential, Ugandan producers and exporters. These interviews included discussions with representatives from: producer groups, as well as individual producers (smallholders as well as commercial farmers); exporter associations and individual exports; government organizations and parastatals involved with exports; various agencies and organizations working in the area of export promotion and support; other donors; and many others.

Second, a thorough review of the literature on the topic of export promotion was made to determine "best approaches", and "Models" for promoting exports which have worked well in other countries. Special consideration was also given to "lessons learned" from export promotion experiences over the past two decades.

Third, USAID/Uganda, along with the design team, opened the process of project design to the public by establishing the IDEA Advisory Group which has met regularly to review and discuss the development of the project.

Fourth, an IDEA design Workshop was held during the middle of the design teams stay in Uganda. The Workshop, which was attended by 80 individuals, had as its objective "Brainstorming for a Better IDEA". Included in the workshop were group discussions which dealt with numerous issues including organizational structure. Recommendations from the workshop are incorporated throughout this PP.

As a result of the above approach, the design team feels that the following recommended "preferred option" for organizing and structuring the IDEA project, is also the "best" option for Uganda.

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ANNEX H
ECONOMIC ANALYSIS

PART A: MACROECONOMIC BACKGROUND

This section will provide a summary of the macroeconomic environment in Uganda and present an outline of the past performance and challenges for the future. It will then delineate the relationship between macroeconomic stability and growth of nontraditional agricultural exports.

A. Economic Performance and Problems

Uganda has a per capita income of under US$ 170[1], a reflection of two decades of civil strife and economic decline that has placed what was once known as "The Pearl of Africa" as one of the poorest countries in the world. At independence (1962), Uganda was bound for prosperity, its rich agricultural base a strong foundation for sustainable growth. However, the Museveni government in 1987 faced a different Uganda, one of financial imbalances and triple digit inflation. In the last 6 years, the Government of Uganda (GOU) has made significant advances in liberalizing its macroeconomic controls and creating a favorable environment for sustained growth.

Obote's economic and social progress following independence was suspended with Idi Amin's ascension to power in 1971. Political instability bred economic stagnation and the loss of life of up to 500,000 Ugandans. In addition, human resources were drained as educated Ugandans fled into voluntary exile and the Asians were forced to leave in 1972. Military escalation prompted government financing through bank borrowing which led to high rates of inflation. Between 1970 and 1980, GDP declined by about 25 percent (implying a decline in per capita GDP of 45 percent), exports by 60 percent, and import volumes by roughly 50 percent. The returned Obote Government initiated an economic recovery program in early 1981, but failed to achieve sustainable growth due to political instability and civil strife.

In January 1986, the National Resistance Movement, under the direction of Museveni, inherited an economy that faced several key constraints to broad-based development. The exchange rate was grossly overvalued, there were severe shortages of foreign exchange, and inflation was high. In addition, economic institutions were near collapse, most manufacturing plants had closed down, agricultural areas had been ravaged, and infrastructure had badly deteriorated. Major trunk roads required new investment and feeder roads needed maintenance. These factors

[1] World Bank Atlas. 1991.

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were exacerbated by the 1989 collapse of the International Coffee Agreement and the accompanying fall in world coffee prices, impairing an economy that relies on coffee revenue for most of its foreign exchange earnings.

The GOU, through the 1987 Economic Recovery Program (ERP), began to liberalize its macroeconomic controls and provide an attractive environment for private sector development. To stabilize the economy the GOU arrested growth in the fiscal debt through expenditure control measures and restored financial equilibrium.

1. Production

The average annual GDP growth rate in the 1988-91 period was 5.6 percent, approximately double the population rate. That rate rose to 7 percent in 1992/93 after a drought constrained growth rate of 2 percent the year before[2]. This is a considerable increase from a growth rate of 0.6 percent between 1965-1980 and 2.8 percent from 1980-1990.

The recent GDP growth is largely attributed to the resurgence of agriculture, averaging nearly 5 percent annually between 1987 and 1991, and over 9 percent in 1993. Agriculture contributed to 61 percent of GDP from 1986 to 1991. Nontraditional agricultural exports also have contributed to this increase, rising 75 percent between 1990 and 1991 to US$ 43.5 million. Partial explanations for this growth is that output was recovering from a low base and political security allowed for increased food production. More important factors are greater availability of inputs, the rehabilitation of trunk roads, and the dismantling of price and distribution controls.

Industry has made considerable gains, growing at an average annual growth rate of 13.7 percent between 1987 and 1991. However, industry also experienced a slump, growing only 3.8 percent in 1993 compared to 19.4 percent the previous year. The share of industry in GDP rose from about 8 percent to just under 12 percent in the same period. Manufacturing has shown similar progress, rising to 5.2 percent in the 1980s from -3.7 percent in the 1970s. Services are also rebounding but at a slower rate, increasing to 3.3 percent from 1.1 percent in the same period. Services accounted for 30 percent of GDP between 1986 and 1991.

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[2] The GOU fiscal year, in which most of the data is presented, is July through June. For example, references to "1991" or "1990/91" are to 1 July 1990 through 30 June 1991.

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This recent sectoral growth is partially due to the production of previously idle capacity (an industrial plant or farm land) after a decade of civil unrest, but it is a clear indication, nonetheless, of the success of policies and measures implemented under the 1987 ERP. Other contributing factors are an influx of foreign exchange in the form of import-support and the rehabilitation of trunk roads.

Investment and saving levels are low, reflecting poor financial services and lack of confidence in the macroeconomic environment. Gross domestic investment is 13 percent of GDP. Domestic savings rates are negative and account for less than 6 percent of GDP. Interest rates were liberalized in November 1992 and have since fallen from 40 percent to about 25 percent, reflecting in part the reduced inflation.

2. Balance of Payments and Debt

Weak productive sectors threaten a viable balance of payments and place an undue strain on the current account. The 1990 current account deficit stood at US$ 263.3 million but was estimated to decline to US$ 183.9 million the following year. The capital account surplus was US$ 177.5 million and fell to US$ 48.4 million in the same period.

Foreign exchange earnings are currently only 24 percent of foreign exchange requirements, a fall from 36 percent in 1992. Between 1987 and 1991 foreign exchange earnings fell 50 percent primarily due to a decline in coffee earnings by 60 percent. The price of Ugandan coffee in 1991 was 45 percent of the 1987 price which, in turn, was a 75 percent drop from the 1986 price. Non-coffee export earnings rose between 1989 and 1993 but this increase only made up for 10 percent of the drop in coffee earnings.

Debt service commitments have been steady and high, compounding BOP imbalances. The current budget deficit is 11.9 percent of GDP. Commitments are 40 percent higher than merchandise export earnings and 75 percent of all export earnings. Furthermore, the debt service commitment increased 3 percent between 1989 and 1993, requiring external support on the order of US$ 500 million a year to maintain credibility.

Uganda's debt service ratio is expect to decline from 128 percent in 1991/92 to 55 percent in 1995/96 due in part the projected rapid growth in nontraditional exports. Consequentially, pressures on the Bank of Uganda have eased and the level of reserves rose in 1991/92 above the IMF targeted amount.

3. Fiscal Environment

Monetary imbalances have increased the pressure for government expenditure reduction and revenue enhancing measures. Currently,

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government revenue is 8 percent of GDP (compared with 20 percent for the majority of developing African countries) and expenditures are 20 percent of GDP.

At 7 percent of GDP, Uganda's tax effort is one of the lowest in the world. Current measures involve changes in tax rates as well as efforts to broaden the tax base. Reliance on export taxes has been insufficient and untenable. Taxes on coffee, the primary export, accounted for 60 percent of tax revenue in the early 1980s and over 40 percent in 1986/87. However, faltering coffee deliveries has led to the decision to eliminate the export tax. A new, two-percent withholding tax was enacted on specified agricultural processing. Import duties also comprise a vital share of revenues. The tax on petroleum imports is 175 percent. Taxes on goods and services have also increased from 5 to 40 percent since 1986. To widen the tax base, Ministers and NRC members will now pay income taxes.

4. Money and Prices

The imbalance between government revenues and expenditures, and the link between the fiscal deficit and monetary expansion has been the primary cause for the high inflation rate in Uganda. The annual rate of inflation in the 1980s was 107 percent, but this was sharply curbed to 56.8 percent in 1989 and down to 22.4 percent at the end of 1990. However, this promising trend began to relapse as inflation crept up to 32.1 percent at the end of 1991 and jumped to above 60 percent in April 1992. This increase is partly attributable to the 1992 drought, GOU borrowing from the central bank, and the higher import bill due to the liberalized trade and exchange regimes. It is inferred that in April 1992 drought-related causes may have attributed to as much as a 16.3 percentage point increase in the inflation rate (from 42.5% to 58.8%). However, poor demand management should not be overlooked as it contributes to 25 plus percentage points above the target level of 15 percent. During the 1992/93 financial year the government confirmed their commitment to reform through austere expenditure cuts, consequently succeeding in lowering the inflation rate to -1.3 percent in May 1993.

The GOU has been successful in significantly depreciating the Uganda Shilling. In 1987, the US dollar was officially exchanged at an average rate of USh 44.7 with a spread between the official exchange rate and the free market exchange rate at about 266 percent. That margin narrowed to 15 percent in 1992 as the official exchange rate was adjusted to an average of USh 750 per dollar (a 17-fold depreciation). At this point, the government rescinded their management of the official rate and introduced the foreign exchange auction in January, 1992.

Currently there are two markets, the auction market and the bureau market. The open market exchange rate has remained stable during

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the 1992 financial year. The auction market is a mechanism for allocating import support funds. The bureau market is supplied by foreign exchange receipts from non-coffee exports and services, and private sector remittances. Plans are underway to merge the two markets by dissolving the auction market and introducing a unified inter bank market in foreign exchange.

5. Other Structural Issues

In addition to financial reform, there are other structural issues that have been equally important is providing for a viable macroeconomic framework for increased growth. These include civil service reform, military demobilization, privatization, enactment of the Departed Asians Property Custodian Board (DAPCB), and the Investment Code and Uganda Investment Authority (UIA).

Civil service reform has concentrated on rationalization of ministries and departments. This involves revisions of internal structures, decentralization of activities, optimum staffing profiles, and detailed implementation plans. Over 10,000 posts have been identified to be retrenched in early 1993. An effort is underway to increase real wages of civil servants who currently earn 10 percent of a living wage. Civil servants will soon receive a 33 percent increase in salaries, representing an increase in real wages.

Due to the improved security situation in Uganda, the government has initiated reductions in the size of the military by half over the course of three years. In 1992/93 23,800 of the targeted 50,000 soldiers were demobilized, enabling the GOU to strengthen expenditures in critical social and economic sectors. Education and health expenditures as a percent of total locally funded expenditure have increased by 9.7 and 5.5 percentage points respectively between 1989 and 1992.

Restructuring public enterprises is another area of government expenditure reduction and reorganization. This involves (a) liquidation of most loss-making parastatals; (b) divestiture of enterprises that would be better managed in the private sector; and (c) restructuring of the remaining parastatals engaged in the production of public goods. The GOU has made slow advances in restructuring public enterprises. The parastatal monopolies in the marketing and exporting of produce, particularly coffee, have been dismantled. Privatization of cotton ginneries are currently underway. Plans are underway to place nine parastatals on the market and restructure public utilities.

The DAPCB, enabling departed Asians to regain properties nationalized by the Amin regime in 1972, is an effort to provide transparent asset ownership and tenure which ensure a sound basis for production and marketing growth. The divestiture and rehabilitation of properties under the DACPB is expected to

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increase investment, employment, private income, and production. Secondary benefits include broadening of the tax base and significant contributions to export expansion, import substitution, and diversification of foreign exchange earnings. An estimated 7,000 properties are to be returned to the private sector, 3 percent agricultural, 4 percent agro-processing, 10 industrial, 3 percent residential, and the rest a mix of commercial and residential.

The Investment Code, designed to meet the demands of a developing competitive market economy,. To meet this need, the Uganda Investment Authority (UIA), in operation since mid-1991, was established under the Code to promote and facilitate investment projects through provision of a regulatory framework for local and foreign investment. It serves as a one-stop shop for investment projects, granting investment licenses and incentives. In its first year the level of activity, in terms of investment applications issued, received, processed and approved, far exceeded anticipated and budgeted operations.

6. Projections

Key parameters for the 1993/94 fiscal year are an inflation target of 7.5 percent and real GDP growth of 5 percent. Both indicators are viable given the commitment to restrict the growth of broad money (M2) to 13 percent.

The current macroeconomic reforms are laying the framework for a much needed supply response. Perhaps the 1994 elections will bring the necessary political confidence to attract a significant level of investment. Institutional maturity and capacity building will also encourage production.

The infrastructure required to raise farmer productivity is being rebuilt, including improvements in rural feeder roads, a regulatory investment mechanism, and trade liberalization. Uganda's comparative advantage in many high value crops and regional demand for maize and beans will stimulate the agricultural sector. Nontraditional exports such as cut flowers and essential oils and spices are expected to grow rapidly given easier access to credit and transport.

Increasing donor commitment is a sign of external confidence in the Ugandan economy. External grants are expected to be US$ 220 million, 28 percent import support and 72 percent project aid. Private sector development and foreign investment is expected to follow suit.

Despite the progress achieved to date, the GOU still faces the overriding challenge of poverty alleviation. Policies that accelerate economic growth and deliver social services to the poor are important. More specifically, transformation of the

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agricultural sector is crucial to sustainable growth and poverty reduction. It has the potential to feed the country, to provide food for regional markets, to export traditional and nontraditional products, and to produce industrial raw materials such as sugarcane and cotton. Agricultural success relies on the ability of the farmer to increase yields and this in turn relies on the relative prices within the economy. The macroeconomic environment is the key determinant of relative prices. The following sections will explore the relationship between macroeconomic stability and growth of nontraditional exports and the reverse relationship of the importance of nontraditional exports to macroeconomic stability.

B. How Macroeconomic Stability is Conducive for Agricultural Export Growth

Agriculture is dominant in the Ugandan economy, approximately 85 percent of the population is engaged in agriculture and it accounts for roughly 67 percent of the country's export earnings and 72 percent of GDP. It follows that sustainable growth is dependent upon the performance of the agricultural sector. The performance of the agricultural sector, in turn, is dependent upon macroeconomic policies which have a direct impact on the structure of incentives and income distribution.

Product and factor market distortions repress broad-based development as only a favored few receive rents, the poor are disproportionately taxed, and there is an inefficient allocation of scarce resources within the economy. Quantitative restrictions on imports and import and export licensing create an excess demand and thus require rationing in which only the few with access enjoy rich profits. Controlled markets also give incorrect market signals to investors leading to the misallocation of scarce resources. For example, subsidized credit and an overvalued Shilling can shift investment away from Uganda's abundant resource, labor, toward capital intensive growth.

Similarly, a distorted economy inadvertently taxes the agricultural sector. Inflation and an overvalued exchange rate are mechanisms that undervalue the social and economic value of the agricultural sector. Inflation distorts the price mechanism thus impairing the efficient allocation of resources. The World Bank has found that the impact of the exchange rate misalignment on agricultural incentives is more severe as compared to direct crop specific policies. It is estimated that in the 1970s Ugandan farmers were taxed up to 75 percent due, in part, to distorted macroeconomic policies.

Macroeconomic stability has yet to have a significant impact on productive investment in Uganda. Sustained macroeconomic stability is imperative to give people the confidence to undertake long-term investments in technology change in agriculture. A low fiscal deficit, a low and stable inflation rate, and a stable exchange and

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trade regime are indicative of macroeconomic stability. Macroeconomic stability also allows for growth in domestic savings, by the public and private sector, which is essential for a high rate of investment in farms. In 1990 domestic savings was only 5 percent of GDP and domestic investment was 11 percent.

Expansion of noncoffee exports requires credit, banking systems, ways to repatriate profits, access to foreign exchange and having a government that you can deal with reliably on regulatory matters. Macroeconomic stability enables the government to focus on the institutional development for privatization. This may include export processing zones, fiscal incentives, and commercially oriented public services. Through a well-defined partnership between the private and public sector, the government can assist in modernizing traditional export crop production; diversifying export crops; and increasing domestic value added through the production of high value crops and promotion of increased processing of agricultural commodities.

Macroeconomic stability is a prerequisite for the expansion of nontraditional exports because it ensures that the food prices remain low which in turn keep the cost of labor low. Inflation puts pressure on wage goods which transmits into higher labor costs. If rural wages rise then the return to investing in agriculture declines for the new entrepreneur.

Low food prices also play an important role in defining the terms of trade between food and higher value export crops. Relative prices are a signal for farmer's resource transfer (their own labor time and capital) from food production into commercialized agriculture. Indeed, the terms of trade for cash crops improved dramatically between 1990 and 1991. This relative price is influenced by policy measures such as the exchange rate devaluation, price and trade liberalization, and elimination of marketing monopolies and provides and isolated confirmation of the success of selected adjustment measures.

Strong macroeconomic indicators suggest that there has been an independent growth effect generated from policy measures. This can be seen in the recent rise in the terms of trade for cash crops. The terms of trade fell considerably between 1986 and 1989 but improved dramatically between 1990 and 1991.

C. How Nontraditional Export Growth in Conducive for Macroeconomic Stability

Macroeconomic stability is a condition for agricultural growth. However, the relationship is symbiotic - a strong agricultural sector strengthens the economic and political economy, thus supporting the macroeconomic environment.

Growth of noncoffee exports will improve the balance of payments

situation. Diversification of agricultural production is crucial because even if the price of coffee rebounded to its 1986 level there would still be a financing gap of US$ 300 million.

Export orientation also allows the economy to be better situated to adjust to external shocks. Foreign exchange revenue insulates against price fluctuations of key imports which could lead to macroeconomic imbalances.

A vibrant diversified agricultural economy mitigates, but doesn't relieve, the government from the burden of maintaining flexibility in its foreign exchange reserves. A diversified agricultural base will insure against production fluctuations. Nontraditional exports also dampens the effect of fluctuating international prices of key commodities.

Agricultural exports also play a crucial social role because they provide an immediate income effect to the rural sector. Given the disproportionately high prevalence of poverty in the rural areas (57 percent of the population compared to 38 percent in urban areas), and specifically the rural-urban wage differential, rural employment generation is key to social and political stability which in turn complements macroeconomic growth. It is estimated that a dollar in agricultural GDP contributes more to poverty alleviation than a dollar in GDP from industry or a dollar from services.

Increased rural incomes renders an important consumption link. It provides an effective demand for food and nonfood consumables thus expanding the domestic market and increasing GDP. There are also nonmarket linkages to rural services and small-scale industry that lead to the diversification of farm income.

D. Summary

After two decades of economic stagnation, the GOU has made impressive strides to achieve macroeconomic stability. Tighter fiscal and monetary control and a resurging agricultural sector have assisted in reducing the inflation rate, a key indicator of stability. The government is making advances in creating an appropriate policy environment and economic and social infrastructure to stimulate rapid private sector led growth. However, Uganda has yet to capture the wealth that lies in its agriculture sector. Nontraditional agricultural exports has the potential to increase rural incomes and make a significant dent in poverty alleviation. Macroeconomic stability contributes to the growth of the agricultural sector and, similarly, nontraditional agricultural exports reinforce the strength of the macroeconomy.

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PART B: BENEFIT-COST ANALYSIS

SUMMARY OF CONCLUSIONS

The internal rate of return for the Net Farmgate Benefit is 9 percent and 93 percent for the Net Benefit to the Rest of the Economy. The Rest of the Economy is all benefits earned as the commodity travels from the farmgate to the border. This includes profit to exporters and all income earned in input supply activities such as packaging and transport. The economic viability increases dramatically when the border price-determined returns to production for export is measured (the Rest of the Economy Benefit). The project is therefore economically viable given the high IRR for the Rest of the Economy Benefit, but the project would not be economically sound if the benefits were measure solely at the farmgate.

A sensitivity analysis was developed that examined how the internal rates of return fell when specified assumptions were made less favorable. A reduction in yields of maize and beans and area of production of all crops has the largest impact on both internal rates of return. Different labor rates and freight rates for cut flowers and vegetables only had marginal impacts. The Net Farmgate IRR became negative as yields and area were varied. The Farmgate IRR was more sensitive to changes in yields than it was to changes in area of production. Overall, increasing yields for maize and beans is very important at the farmgate level, but also to get a high return in the Rest of the Economy IRR.

OVERVIEW OF THE ANALYSIS

The IDEA project proposes to increase production and marketing of selected non-traditional agricultural exports. This follows from the project goal which is to increase incomes, particularly thoses of rural men and women, from agricultural non-traditional exports. This analysis evaluates the benefits and the costs of the project. It calculates the incremental net export revenue stream generated from the project, estimates the value of exports going to "rural households" and to the rest of the economy, and calculates the standard internal rate of return (IRR). This analysis also develops a sensitivity analysis, varying costs of production, yields, and area of production.

This analysis differentiates returns between the farmgate and the rest of the economy. This approach was taken to delineate the smallholder benefit, primarily in production of low value crops, from benefits accrued to the entrepreneur in high value crops. The rest of the economy benefit is the incremental benefit as the product travels from the farmgate to the border. Export activity expands beyond the farmgate so rural incomes other than of farmers will rise. Transport and packaging are examples of value added activities, whether urban or rural, that are included in the

benefit stream for the rest of the economy IRR. However, rural households, for this analysis, are defined as the farmer who is producing the commodity or working as a hired labor and doesn't include rural laborers in other export related activities. The benefit to those in production is the benefit at the farmgate.

This analysis measures earnings retained in country as returns on labor, profits and payment for inputs. The remainder is re-exported as direct costs and profits to aircargo carriers and other international input suppliers.

The commodities selected for the analysis were recommended through a selection process which involved a series of commodity-group studies and an informal evaluation by the Chemonics design team. The IDEA project is designed with flexibility in its commodity support. However, there is a consensus that maize, beans, cut flowers, vegetables, and essential oils and spices will be the targeted crops. These commodities may not be currently grown in Uganda but exhibit profitable gross margins.

The representative commodities are only examples and it is important to realize that the outcome of this analysis will change as the product mix changes. For the high value crops, Uganda may not get into dill production or, of the cut flowers, it may only concentrate on roses. However, the internal rates of return are fairly stable as the ratio of commodities with large unit returns to labor to low returns to labor is fairly certain. Two commodities with low returns to labor are maize and beans and the groups with higher returns are cut flowers, vegetables, and essential oils and spices.

The low value commodities are of particular significance because of their people impact. The number of beneficiaries estimated by year 5 of the project is 75,000. For the high value crops the numbers are lower: 1000 people in vegetables, 3000 people in essential oils and spices, and 1560 people in cut flowers.

One note should be made at this point on the benefits at the farmgate. The benefits to rural farm labor are calculated on the basis of wage rates for hired labor. These rates are used as a proxy for the returns to labor for all commodities and used to derive net border revenues (benefit to the exporter, row 4, Table 2). The benefits at the farmgate may be underestimated in the case where a farmer produces a high value crop using family labor. Labor would not be a cost in this case.

SENSITIVITY ANALYSIS

A sensitivity analysis tests what happens to the earning capacity of a project when the original assumptions vary. It is an effort to examine how much any one variable would have to change in an unfavorable direction before the project would no longer meet the

minimum level of acceptability. Prices, delay in implementation, yield, and costs are common areas where projections are subject to a high degree of uncertainty.

In this analysis fluctuations in four variables were examined: yield, hectares under production, labor rates, and freight rates. These variables were chosen because they appeared the most volatile and were intended to have a direct impact on both the farmgate and rest of economy benefits. It was assumed that yields for maize and beans will change the Net Farmgate Benefit IRR and that costs of production will have more of an impact on the Rest of the Economy IRR.

In table 3 and 4 the costs of production are varied. In Table 3 labor rates are changed to observe how sensitive the IRRs are to price assumptions. Labor rates for cut flowers and freight rates for cut flowers and vegetables were altered, holding other costs constant.

Table 3 shows that when the labor rates of cut flowers is lowered the Farmgate Benefit IRR remains the same and the Rest of the Economy IRR drops 3 percentage points to 90 percent. The lower wage rate was chosen because the wage rate used in the first analysis is what hired labor earns in Kenya. Uganda's rates are currently lower, but are likely to rise to rates comparable to Kenya.

Table 4 shows the effect of higher freight rates for cut flowers and vegetables. Uganda's freight rates are currently lower than Kenya's rates, however, Uganda is bound to lose its competitive advantage as increased demand pushes rates up. Higher freight rates causes the Net Farmgate Benefit IRR to rise from 9 percent to 11 percent. This is because the labor/export price is greater (which is multiplied by the net export border revenue which changed with higher freight rates). The Benefit to the Rest of the Economy IRR drops from 90 to 86 percent.

The maize and beans yields were changed (see Table 5), holding other variables as in Table 1. The yields are assumed to change by 17 percent during the 5 years of the project instead of the projected 33 percent used in the first analysis (Table 1). The without project base yields were also lowered. In 1994 the maize yield was 1 ton/ha instead of 1.45 ton/ha and bean yields are 0.7 instead of .75. These base yields are the lower bound of past yield ranges.

The impact of this assumption is significant: the Net Farmgate Benefit IRR drops from 9 to -8. By lowering the growth rate of yields and the base yield the project is no longer viable if the objective is only to raise rural incomes at the farmgate. However, the objective is more broadly defined and the net benefit to the Rest of the Economy IRR falls from 90 percent to 56 percent,

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remaining significantly positive.

In Table 6 the targeted hectares of the project were varied. If the amount of actual expanded area falls short of the targeted hectares by 40 percent then the Net Farmgate Benefit IRR falls from 9 percent to -6 percent and the Net Benefit to Rest of Economy IRR falls from 90 percent to 41 percent. Surprisingly, reduced expansion has more of an impact on the higher value crops than on maize and beans because their value per hectare is greater. In sum, the project is still viable given the positive value of the Rest of Economy Benefit.

The internal rates of return for the Rest of the Economy IRR and Farmgate Benefit IRR are very sensitive to changes in yields and area under production. It is surprising that the changes in costs of production had less of an impact on the Rest of Economy IRR than the changes in yields and area of production. Although the net export revenue is significantly less for maize and beans, their economic value should not be underestimated.

The remainder of these notes provides an explanation of the assumptions and methodology employed in the benefit-cost analysis displayed in Tables 1-10.

TABLE 1 - BENEFIT/COST ANALYSIS

This analysis provides the baseline for the sensitivity analysis undertaken in Tables 3, 4, 5, and 6.

All data for this analysis is taken from a series of commodity studies conducted by Andrew Sergeant of High Value Horticulture Plc. in early 1993. It is assumed that the first year of the project is 1994 because it is unlikely that money will be disbursed this year.

Row 1. Net Benefit to the Farmgate. Net benefit to the Rural Household - Project Costs (row 4 - row 3).

Row 2. Net Benefit to the Rest of the Economy. Rest of the Economy Net Benefit - Project Costs (row 5 - row 3).

Row 3. The project costs US$ 25 million, disbursed evenly over 5 years.

Row 4. Net Benefit to Rural Household. This farmgate benefit is calculated by taking the export benefit value (found in row 4 of Table 2) multiplied by the labor/export price in row 9. The figures in row 9 are derived from the individual commodity tables 8, 9, and 10.

For maize and beans no differentiation between in country and out of country costs was made. Instead, average costs were netted out

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(taken from Sergeant's work). For maize and beans, revenue was calculated from price and yield figures (row 7 and 8e).

The benefits differ depending on the market structure of the commodity. Maize and beans are produced by smallholders for regional consumption. The returns to family and hired labor represent the farmgate price of the commodity less non-labor costs. In the case of relatively high-value commodities such as cut flowers, produced on estates, the benefits would include returns to the entrepreneur who owns the estate.

Row 5. Rest of Economy Benefit. Benefits in Export Terms (row 4, Table 2) minus Net Benefits to the Rural Households.

Row 6. The number of incremental hectares of each commodity due to the project is the driving growth variable in this analysis. The hectares given are projections taken from Sergeant's study and research done by the Chemonics team. Sergeant predicts that if the international relief agency targets are met, this would require an extra 100,000 ha of maize and an extra 30,000 ha of beans. These values provide a goal for year 5 of the project. The projected amounts are given in 1998 (year 5 of the project) and an area expansion of equal increments is derived for the previous years. Following year 5 of the project no area expansion is expected.

Row 7. Yields for maize and beans are projected to rise due to increased use of improved seed varieties, animal traction, and storage systems. At the end of the year 5 of the project yields for maize and beans are estimated to increase by 33 percent (Chemonics team estimate), starting at a base of 1.45 tons/ha for maize and 0.75 tons/ha for beans. After the fifth year of the project the yields are assumed to remain unchanged. Yields for high value crops are not expected to change significantly during the project as Uganda is going to "jump start" these sectors, buying into the latest production technology.

Row 8. Here are some basics used to calculate row 4 of Table 2, the Net Benefit in export terms. These values are taken from the commodity tables, Tables 8, 9, and 10.

Row 9. The labor/producer price figures are the same as the Percent of Unit Value in Labor figures (Row 18 in Table 7).

The producer price/export price figures are derived by calculating the farmgate/border price ratio for maize and beans and the border/international price ratio for the high value crops. Prices are taken from the commodities provided by Sergeant and the analyses of the Chemonics team (see table A).

The labor/export price is derived by multiplying the labor/producer price column by the producer price/export price column.

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Table A: Commodity prices used for the benefit/cost analysis, USD/ton

	Farmgate	Border	Intl mkt
Maize	90 US$/ton	120 US$/ton	
Beans	110 US$/ton	176 US$/ton	
Cut flowers		110 US$/'000 stems	230 US$/stem
Vegetables		1.35 US$/kg	4.23 US$/kg
Essential Oils and Spices		5.57 US$/kg	5.94 US$/kg

Row 10. The Net Farmgate Benefit IRR is calculated from the undiscounted stream of net benefits in row 1.

Row 11. The Net Benefit to Rest of Economy IRR is calculated for the undiscounted stream of net benefits in row 2.

TABLE 2 - BENEFIT/COST ANALYSIS, Derivation of Table 1

This table is the same as Table 1 except for number 4, Benefits in Export Terms.

Row 4. Border revenue (taken from the commodity tables 8, 9, and 10) minus in country costs (row 9c) is multiplied by the incremental hectares due to the project (row 7). In country costs are total expenses (found in Sergeant's work) less freight and marketing costs. This analysis assumes that freight and marketing costs are incurred by the Ugandan exporter and are paid out of the country (ie: the freight company is foreign, not Ugandan).

TABLE 3 - BENEFIT/COST ANALYSIS, Varying Labor Rates

TABLE 4 - BENEFIT/COST ANALYSIS, Varying Freight Rates

TABLE 5 - BENEFIT/COST ANALYSIS, Varying Yields for Maize and Beans

TABLE 6 - BENEFIT/COST ANALYSIS, Varying Targeted Hectares under the Project

TABLE 7 - SOME BASICS FOR OCT 92

This table presents selected indicators from the commodity tables in order to facilitate cross comparisons.

TABLE 8 - CUT FLOWERS

The flowers chosen are those recommended by Sergeant as profitable for production in Uganda. Roses have particularly high gross margins.

1. Average yield is given in Sergeant's studies
2. Average producer price. Revenue/ha (at border) (row 3)/ave yield (row 1).
3a. Taken from row 40.a.
3b. Taken from row 40.b.
4a. In Country Variable Costs. Row 5a plus row 6.
4b. In Country Variable Costs. Row 5b plus row 6.
5a. and 5b. Labor rates given in Sergeant's work.
6. Other In Country Costs. From Sergeant's work - total expenses less freight, marketing, and labor costs.
7. Border Gross Margin. Row 3 minus row 4.
13a. and 13b. Labor rates given in Sergeant's work.
14. Unit Value Elements. Ave producer price at border * 1000 = price per 1000 stems
15. No family labor
16. Unit Value Elements - Hired labor (from row 5a and 5b)/Ave yield (row 1) * 1000 = Hired labor US$ per 1000 stems
17. Unit Value Elements - Other Inputs (from row 6)/Ave yield (row 1) * 1000 = Other inputs, US$ per 1000 stems
20. Percent of Unit Value in Labor for Hired Labor. Row 16a and 16b divided by row 14.
21. Number of hectares in production from Sergeant's studies.
22. Total Production ('000 stems). Number of hectares in production (row 21) multiplied by yield (stems/ha) (row 1).
23. Row 3a multiplied by row 21
24. (row 3) revenue/ha * # ha in production (row 22)
25. row 4 * row 22
26. row 5 * row 22
27. Total other inputs = row 25 - row 26
28. row 24 - row 25
29. Total production ('000 stems) = 1200/total # ha in production (row 22).
28. - 34. The sum of the individual commodity values of these variables in Shillings. (Row 21 - 26 in Shillings). The exchange rate used is USh 1200 to the US$.
29. Sum of total revenue for all flowers * 1200/1000 * sum of total production (row 22)
30. Sum of total revenue (row 23)/ # ha in production * 1200
31. Sum of total variable cost (row 24)/ # ha in production (row 21) * 1200

32. Sum of total labor (row 25)/ # ha in production (row 21) = Hired labor
33. Other Inputs. row 27/row 22 * 1200
34. Gross Margin. row 28/row 22 * 1200
35. Price at market taken from Sergeant's commodity reports

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36. Revenue = price at market (row 35) * yield (row 1)
37. Freight rates from Sergeant's commodity reports
38. Marketing costs = 22.5% of market revenue (row 36)
39. Revenue/ha (at market) (row 36) - freight (row 37) - marketing costs (row 38) = revenue/ha at border
40. Number of hectares currently in production taken from Sergeant's studies and Chemonics team estimates.
41. Total revenue (at border) = row 39 * row 40

TABLE 9 - VEGETABLES

The methodology employed in this is the same as for cut flowers.

It is interesting to note that at the higher freight rate of 1.82 US$/kg large scale baby courgette, small scale babycorn, chilie, okra are no longer profitable to export. At the higher freight rate, the small scale production of babycorn in the highland area does remain marginally attractive. At the lower freight rate of 1.49 US$/kg all vegetables have positive gross margins.

TABLE 10 - ESSENTIAL OILS AND SPICES

The methodology employed in this is the same as for cut flowers.

Mint/Menthol exhibits a negative gross margin at the border, therefore, it should not be produced in Uganda. However, the assumptions made in this analysis should be kept in mind as mint/menthol may be profitable in different circumstances.

The essential oils and spices chosen are those recommended by Sergeant. Cardamon has been planted in Uganda, but due to insufficient data, it was not included in this analysis. One investor has developed 80 hectares of cardamon and plans to expand to 200 hectares. In 1992 about 4 tons of cardamon was exported.

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TABLE 1 - BENEFIT/COST ANALYSIS
US dollars

		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1	Net Benefit at the Farmgate		(4,452,977)	(3,758,543)	(2,801,327)	(1,886,331)	(501,674)	4,498,647	4,498,969	4,499,290	4,499,611	4,499,9[illegible]
2	Net Benefit to Rest of Economy		(2,876,412)	(486,338)	2,199,936	5,209,319	8,729,727	14,849,816	15,969,905	17,089,994	18,210,083	19,330,17[illegible]
3	Project Costs - total US$ 25 million		5,000,000	5,000,000	5,000,000	5,000,000	5,000,000					
4	Net Benefit to the Rural Household		547,023	1,241,487	3,086,673	5,134,889	4,498,926	4,498,647	4,498,969	4,499,290	4,499,611	4,499,9[illegible]
	Maize		484,262	1,093,711	1,841,427	2,741,795	3,808,501	3,808,501	3,808,501	3,808,501	3,808,501	3,808,501
	Beans		57,034	134,798	234,640	366,829	630,638	630,638	630,638	630,638	630,638	630,638
	Cut flowers		5,207	12,307	21,442	32,763	57,560	57,560	57,560	57,560	57,560	57,560
	Vegetables		440	526	786	1,050	1,313	1,576	1,838	2,101	2,364	2,627
	Essential Oils and Spices		59	117	176	235	294	352	411	470	529	587
5	Rest of Economy Benefit		2,123,588	4,514,664	7,199,936	10,209,319	13,729,727	14,849,816	15,969,905	17,089,994	18,210,083	19,330,17[illegible]
	Maize		929,716	2,099,699	3,535,140	5,263,664	7,311,499	7,311,499	7,311,499	7,311,499	7,311,499	7,311,499
	Beans		79,166	187,104	325,972	498,072	875,363	875,363	875,363	875,363	875,363	875,363
	Cut flowers		870,184	1,738,478	2,604,733	3,466,604	4,319,378	5,164,770	6,070,161	6,945,553	7,820,945	8,696,3[illegible]
	Vegetables		61,070	122,513	183,769	245,025	306,281	367,538	428,794	490,050	551,306	612,5[illegible]
	Essential Oils and Spices		183,441	366,883	550,324	733,765	917,206	1,100,648	1,284,089	1,467,530	1,650,971	1,834,41[illegible]
6	Number of incremental ha proposed in the project											
	Maize		20,000	40,000	60,000	80,000	100,000	100,000	100,000	100,000	100,000	100,000
	Beans		6,000	12,000	18,000	24,000	30,000	30,000	30,000	30,000	30,000	30,000
	Cut flowers		15	30	45	60	75	90	105	120	135	150
	Vegetables		40	80	120	160	200	240	280	320	360	400
	Essential Oils and Spices		300	600	900	1,200	1,500	1,800	2,100	2,400	2,700	3,000
7	Yield increase of 33 percent over 5 years of project, ton/ha											
	Maize		1.45	1.55	1.66	1.78	1.90	1.90	1.90	1.90	1.90	1.90
	Beans		0.75	0.79	0.83	0.87	1.00	1.00	1.00	1.00	1.00	1.00

		Maize	Beans	Cut Flowers	Vegetables	Ess Oils & Spices
8	Ave Costs US$/ha	59.8	67.3	91352.2	8643.5	769.6
	Ave Revenue (at border) US$/ha	95.0	81.3	102599.2	3819.4	1169.1
	Out of Country Costs US$/ha	na	na	33291.1	7443.7	247.0
	In Country costs US$/ha			44239.8	2061.4	577.5
	Ave labor cost US$/ha	50.8	51.6	5347.3	6.2	0.5
	Ave sales price US$/ton (at farmgate)	90.0	110.0			

10	Net Farmgate Benefit IRR	9	
11	Net Benefit to Rest of Economy IRR	93	

9. Share of Exports to Rural Labor	Labor/ ProdPrice	ProdPrice/ ExpPrice*	Labor/ ExpPrice
Maize	45.665	75.000	34.242
Beans	67.000	82.500	41.87[illegible]
Cut flowers, high w	7.027	54.407	3.8[illegible]
Vegetables	0.126	39.775	0.0[illegible]
Ess Oils & Spices	0.094	101.787	0.09[illegible]

* The producer in the case of maize and beans is the smallholder who receives the farmgate price, the exporter receiving the export price.
For the high value crops the producer is the exporter so the two prices he or she faces are the border price, which is the producer price in this case, and the international market price, the export price, the difference being the freight and marketing costs.

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TABLE 2 - BENEFIT/COST ANALYSIS, Derivation of Table 1
US dollars

		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1	Net Benefit at the Farmgate		(4,452,977)	(3,756,643)	(2,901,327)	(1,886,331)	(501,674)	4,498,647	4,498,969	4,499,290	4,499,611	4,499,931
2	Net Benefit to Rest of Economy		(2,876,412)	(486,336)	2,199,938	5,209,319	8,729,727	14,849,816	15,969,905	17,089,994	18,210,083	19,330,172
3	Project Costs - total US$ 25 million		5,000,000	5,000,000	5,000,000	5,000,000	5,000,000					
4	Net Benefit in Export Terms		2,670,611	5,756,121	9,209,611	13,343,969	18,229,053	19,948,463	20,468,874	21,589,284	22,709,695	23,830,105
	Maize		1,414,000	3,193,400	5,378,867	8,005,449	11,120,000	11,120,000	11,120,000	11,120,000	11,120,000	11,120,000
	Beans		136,200	321,900	560,813	866,806	1,506,000	1,506,000	1,506,000	1,506,000	1,506,000	1,506,000
	Cut flowers		876,392	1,760,763	2,626,176	3,601,567	4,376,968	5,252,360	6,127,741	7,003,133	7,878,525	8,753,917
	Vegetables		61,519	123,038	184,557	246,076	307,594	369,113	430,632	492,151	553,670	615,189
	Essential Oils and Spices		183,500	367,000	550,500	734,000	917,500	1,101,000	1,284,500	1,468,000	1,651,500	1,835,000
5	Net Benefit to the Rural Household		547,023	1,241,457	2,069,673	3,134,969	4,498,326	4,498,647	4,498,969	4,499,290	4,499,611	4,499,931
	Maize		484,282	1,093,711	1,841,427	2,741,795	3,808,501	3,808,501	3,808,501	3,808,501	3,808,501	3,808,501
	Beans		57,034	134,796	234,840	366,826	630,638	630,638	630,638	630,638	630,638	630,638
	Cut flowers		5,207	12,307	21,442	32,763	57,580	57,580	57,580	57,580	57,580	57,580
	Vegetables		440	526	766	1,060	1,313	1,576	1,838	2,101	2,364	2,626
	Essential Oils and Spices		59	117	176	236	294	352	411	470	529	587
6	Rest of Economy Benefit		2,123,588	4,514,664	7,199,938	10,209,319	13,729,727	14,849,816	15,969,905	17,089,994	18,210,083	19,330,172
	Maize		929,718	2,099,689	3,536,140	5,263,654	7,311,499	7,311,499	7,311,499	7,311,499	7,311,499	7,311,499
	Beans		79,166	187,104	325,972	499,072	875,363	875,363	875,363	875,363	875,363	875,363
	Cut flowers		870,184	1,728,476	2,604,733	3,468,804	4,319,378	5,194,770	6,070,161	6,945,553	7,820,945	8,696,336
	Vegetables		61,079	122,513	183,769	245,025	306,281	367,538	428,794	490,050	551,306	612,563
	Essential Oils and Spices		183,441	366,883	550,324	733,765	917,206	1,100,648	1,284,089	1,467,530	1,650,971	1,834,413
7	Number of incremental ha proposed in the project											
	Maize		20,000	40,000	60,000	80,000	100,000	100,000	100,000	100,000	100,000	100,000
	Beans		6,000	12,000	18,000	24,000	30,000	30,000	30,000	30,000	30,000	30,000
	Cut flowers		15	30	45	60	75	90	105	120	135	150
	Vegetables		40	80	120	160	200	240	280	320	360	400
	Essential Oils and Spices		300	600	900	1,200	1,500	1,800	2,100	2,400	2,700	3,000
8	Yield increase of 3 percent over 5 years of project, ton/ha											
	Maize		1.45	1.55	1.66	1.78	1.90	1.90	1.90	1.90	1.90	1.90
	Beans		0.75	0.79	0.83	0.87	1.00	1.00	1.00	1.00	1.00	1.00

		Maize	Beans	Cut Flowers	Vegetables	Ess Oils & Spices
9	Ave Costs, US$/ha	59.8	67.3	91352.2	9643.5	769.5
	Ave Revenue (at border) US$/ha	95.0	81.3	102599.2	3619.4	1189.1
	Out of Country Costs US$/ha	na	na	33291.1	7443.7	247.0
	In Country Costs US$/ha			44239.8	2081.4	577.5
	Ave labor cost US$/ha	50.6	51.6	5347.3	6.2	0.5
	Ave sales price US$/kg (at farmgate)	80.0	110.0			

10. Share of Exports to Rural Labor, Percentages	Labor/ ProdPrice	ProdPrice/ ExpPrice*	Labor/ ExpPrice
Maize	45.665	75.000	34.249
Beans	67.000	62.500	41.875
Cut flowers, high v	7.027	54.407	3.823
Vegetables	0.126	39.775	0.050
Ess Oils & Spices	0.094	101.787	0.095

11	Net Farmgate Benefit IRR	9
12	Net Benefit to Rest of Economy IRR	93

* The producer in the case of maize and beans is the smallholder who receives the farmgate price, the exporter receiving the export price.
For the high value crops the producer is the exporter so the two prices he or she faces are the border price, which is the producer price in this case, and the international market price the export price, the difference being the freight and marketing costs

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TABLE 3 - BENEFIT/COST ANALYSIS, Varying Labor Rates
US dollars

		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1	Net Benefit at the Farmgate		(4,452,977)	(3,758,549)	(2,901,327)	(1,866,331)	(501,674)	4,498,647	4,498,969	4,499,290	4,499,611	4,499,933
2	Net Benefit to Rest of Economy		(2,876,412)	(466,336)	2,199,936	5,209,319	8,729,727	14,849,816	15,969,905	17,089,994	18,210,083	19,330,172
3	Project Costs - total US$ 25 million		5,000,000	5,000,000	5,000,000	5,000,000	5,000,000					
4	Net Benefit to the Rural Household		547,023	1,241,457	2,098,673	3,134,669	4,498,326	4,498,647	4,498,969	4,499,290	4,499,611	4,499,933
	Maize		484,282	1,241,457	2,098,673	3,134,669	4,498,326	4,498,647	4,498,969	4,499,290	4,499,611	4,499,933
	Beans		57,034	1,093,711	1,841,427	2,741,796	3,808,501	3,808,501	3,808,501	3,808,501	3,808,501	3,808,501
	Cut flowers		5,207	134,796	234,640	358,626	630,638	630,638	630,638	630,638	630,638	630,638
	Vegetables		5,207	12,307	21,442	32,763	57,580	57,580	57,580	57,580	57,580	57,580
	Essential Oils and Spices		440	526	786	1,060	1,313	1,676	1,838	2,101	2,364	2,626
5	Rest of Economy Benefit		2,123,588	4,514,664	7,199,936	10,209,319	13,729,727	14,849,816	15,969,905	17,089,994	18,210,083	19,330,172
	Maize		2,123,588	4,514,664	7,199,936	10,209,319	13,729,727	14,849,816	15,969,905	17,089,994	18,210,083	19,330,172
	Beans		929,718	2,099,689	3,536,140	5,263,664	7,311,499	7,311,499	7,311,499	7,311,499	7,311,499	7,311,499
	Cut flowers		79,166	187,104	325,872	498,072	875,363	875,363	875,363	875,363	875,363	875,363
	Vegetables		870,164	1,738,476	2,604,733	3,468,804	4,319,378	5,194,770	6,070,161	6,945,553	7,820,945	8,696,336
	Essential Oils and Spices		61,079	122,513	183,769	245,025	306,281	367,538	428,794	490,050	551,306	612,562
6	Number of incremental ha proposed in the project											
	Maize		20,000	40,000	60,000	80,000	100,000	100,000	100,000	100,000	100,000	100,000
	Beans		6,000	12,000	18,000	24,000	30,000	30,000	30,000	30,000	30,000	30,000
	Cut flowers		15	30	45	60	75	90	105	120	135	[illegible]
	Vegetables		40	80	120	160	200	240	280	320	360	400
	Essential Oils and Spices		300	600	900	1,200	1,500	1,800	2,100	2,400	2,700	3,000
7	Yield increase of 33 percent over 5 years of project, ton/ha											
	Maize		1.45	1.55	1.65	1.75	1.80	1.80	1.80	1.80	1.80	1.80
	Beans		0.75	0.79	0.83	0.87	1.00	1.00	1.00	1.00	1.00	1.00

		Maize	Beans	Cut Flowers	Vegetables	Ess Oils & Spices
8	Ave Costs, US$/ha	59.8	67.3	91352.2	9643.5	769.5
	Ave Revenue (at border) US$/ha	95.0	81.3	0.0		0.0
	Out of Country Costs US$/ha	na	na	33291.1	7443.7	247.0
	In Country costs US$/ha			30891.3	0.4	577.5
	Ave labor cost US$/ha	50.8	51.6	5347.3	6.2	0.5
	Ave sales price US$/ton (at farmgate)	90.0	110.0			

9.	Share of Exports to Rural Labor	Labor/ ProdPrice	ProdPrice/ ExpPrice*	Labor/ ExpPrice
	Maize	45.665	75.000	34.249
	Beans	67.000	62.500	41.875
	Cut flowers, low w	2.067	62.500	1.292
	Vegetables	0.126	54.407	0.069
	Ess Oils & Spices	0.094	39.775	0.037

10	Net Farmgate Benefit IRR	9
11	Net Benefit to Rest of Economy IRR	93

* The producer in the case of maize and beans is the smallholder who receives the farmgate price, the exporter receiving the export price. For the high value crops the producer is the exporter so the two prices he or she faces are the border price, which is the producer price in this case, and the international market price, the export price, the difference being the freight and marketing costs.

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TABLE 4 - BENEFIT/COST ANALYSIS, Varying Freight Rates
US dollars

		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1	Net Benefit at the Farmgate		(4,414,560)	(3,663,248)	(2,791,262)	(1,722,883)	(340,342)	4,709,882	4,748,008	4,792,130	4,836,254	4,880,378
2	Net Benefit to Rest of Economy		(2,983,714)	(718,402)	1,863,318	4,751,333	8,173,871	14,171,273	15,168,674	16,166,076	17,163,478	18,160,880
3	Project Costs - total US$ 25 million		5,000,000	5,000,000	5,000,000	5,000,000	5,000,000					
4	Net Benefit to Exporter		2,501,725.76	5,598,361.63	9,061,866.79	13,026,449.48	17,833,626.82	18,878,154.86	19,916,680.35	20,958,206.11	21,999,731.88	23,041,257.64
	Maize		1,414,000.00	3,193,400.00	5,376,667.00	8,006,446.92	11,120,000.00	11,120,000.00	11,120,000.00	11,120,000.00	11,120,000.00	11,120,000.00
	Beans		136,200.00	321,900.00	560,812.50	856,687.50	1,508,000.00	1,508,000.00	1,508,000.00	1,508,000.00	1,508,000.00	1,508,000.00
	Cut flowers		634,766.66	1,669,573.76	2,804,360.63	3,339,147.50	4,173,934.38	5,008,721.25	5,843,508.13	6,678,295.00	7,513,081.88	8,347,868.75
	Vegetables		23,238.89	46,477.78	69,716.67	92,955.56	116,194.44	139,433.33	162,672.22	185,911.11	209,150.00	232,388.89
	Essential Oils and Spices		183,500.00	367,000.00	550,500.00	734,000.00	917,500.00	1,101,000.00	1,284,500.00	1,468,000.00	1,651,500.00	1,835,000.00
5	Net Benefit to the Rural Household		585,440	1,318,756	2,208,636	3,277,117	4,659,758	4,703,882	4,748,008	4,792,130	4,836,254	4,880,378
	Maize		484,292	1,093,711	1,841,427	2,741,796	3,808,501	3,808,501	3,808,501	3,808,501	3,808,501	3,808,501
	Beans		57,034	134,798	234,840	358,826	630,636	630,636	630,636	630,636	630,636	630,636
	Cut flowers		43,998	87,996	131,994	175,992	219,989	263,987	307,985	351,983	395,981	439,978
	Vegetables		18	37	55	73	92	110	129	147	165	184
	Essential Oils and Spices		108	215	323	430	538	646	753	861	968	1,076
6	Rest of Economy Benefit		2,008,266	4,281,597	6,863,318	9,751,333	13,173,871	14,171,273	15,168,674	16,166,076	17,163,478	18,160,880
	Maize		929,718	2,099,689	3,536,140	5,263,664	7,311,499	7,311,499	7,311,499	7,311,499	7,311,499	7,311,499
	Beans		79,166	187,104	326,972	498,072	875,363	875,363	875,363	875,363	875,363	875,363
	Cut flowers		790,766	1,581,578	2,372,367	3,163,156	3,953,945	4,744,734	5,535,523	6,326,312	7,117,101	7,907,890
	Vegetables		23,221	46,441	69,662	92,882	116,103	139,323	162,544	185,764	208,985	232,205
	Essential Oils and Spices		183,392	366,785	550,177	733,570	916,962	1,100,354	1,283,747	1,467,139	1,650,532	1,833,924
7	Number of incremental ha proposed in the project											
	Maize		20,000	40,000	60,000	80,000	100,000	100,000	100,000	100,000	100,000	100,000
	Beans		6,000	12,000	18,000	24,000	30,000	30,000	30,000	30,000	30,000	30,000
	Cut flowers		15	30	45	60	75	90	105	120	135	150
	Vegetables		40	80	120	160	200	240	280	320	360	400
	Essential Oils and Spices		300	600	900	1,200	1,500	1,800	2,100	2,400	2,700	3,000
8	Yield increase of 33 percent over 5 years of project, ton/ha											
	Maize		1.45	1.55	1.66	1.78	1.90	1.90	1.90	1.90	1.90	1.90
	Beans		0.75	0.79	0.83	0.87	1.00	1.00	1.00	1.00	1.00	1.00

		Maize	Beans	Cut Flowers	Vegetables	Ess Oils & Spices
9	Ave Costs US$/ha	59.8	67.3	91352.2	9643.5	769.5
	Ave Revenue (border) US$/ha	95.0	81.3	99602.2	2662.4	1189.1
	high freight rates for flowers & vegetables					
	Out of Country Costs US$/ha	na	na	33291.1	7443.7	247.0
	In Country costs US$/ha			44239.8	2081.4	577.5
	Ave labor cost US$/ha	80.8	51.6	5347.8	6.2	0.6
	Ave sales price US$/ton (at farmgate)	90.0	110.0			

9. Share of Exports to Rural Labor	Labor/ ProdPrice	ProdPrice/ ExpPrice*	Labor/ ExpPrice
Maize	45.665	75.000	34.249
Beans	67.000	62.500	41.875
Cut flowers, high w	7.027	75.000	5.271
Vegetables	0.126	62.500	0.079
Ess Oils & Spices	0.094	62.500	0.059

10	Net Farmgate Benefit IRR	11
11	Net Benefit to Rest of Economy IRR	86

* The producer in the case of maize and beans is the smallholder who receives the farmgate price the exporter receiving the export price
For the high value crops the producer is the exporter so the two prices he or she faces are the border price, which is the producer price in this case, and the international market price, the export price, the difference being the freight and marketing costs

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TABLE 5 – BENEFIT/COST ANALYSIS, Varying Yields for Maize and Beans
US dollars

		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
1	Net Benefit at the Farmgate		(4.746.476)	(4.426.088)	(4.094.361)	(3.580.268)	(3.026.368)	2.168.576	2.370.281	2.580.040	2.798.177	3.025.0[illegible]
2	Net Benefit to Rest of Economy		(3.426.914)	(1.738.721)	70.930	2.009.470	4.084.536	10.540.231	12.009.351	13.492.432	14.990.033	16.502.7[illegible]
3	Project Costs – total US$ 25 million		5.000.000	5.000.000	5.000.000	5.000.000	5.000.000					
4	Benefits in Export Terms		1.827.611	3.838.181	6.036.569	8.440.212	11.069.153	12.798.807	14.379.632	16.072.473	17.788.211	19.527.76[illegible]
	Maize		604.000	1.352.000	2.252.640	3.316.021	4.546.727	4.969.876	5.407.871	5.863.366	6.337.121	6.829.8[illegible]
	Beans		103.200	243.360	422.899	643.549	908.373	1.016.468	1.128.887	1.245.802	1.367.395	1.493.8[illegible]
	Cut flowers		675.392	1.750.783	2.626.175	3.501.567	4.376.958	5.252.350	6.127.741	7.003.133	7.878.525	8.753.91[illegible]
	Vegetables		61.519	123.038	184.567	246.076	307.594	369.113	430.632	492.151	553.670	615.18[illegible]
	Essential Oils and Spices		183.500	367.000	550.500	734.000	917.500	1.101.000	1.284.500	1.468.000	1.651.500	1.835.00[illegible]
5	Net Benefit to the Rural Household		254.524	574.902	966.639	1.430.742	1.974.617	2.168.576	2.370.281	2.580.040	2.798.177	3.025.0[illegible]
	Maize		206.865	463.046	771.509	1.135.365	1.557.669	1.702.139	1.852.148	2.008.158	2.170.408	2.339.14[illegible]
	Beans		43.215	101.807	177.006	269.466	380.361	425.646	472.721	521.680	572.598	625.55[illegible]
	Cut flowers		3.946	9.306	16.161	24.606	34.731	38.664	43.162	47.632	52.281	57.11[illegible]
	Vegetables		440	526	788	1.050	1.313	1.576	1.838	2.101	2.364	2.62[illegible]
	Essential Oils and Spices		59	117	176	235	294	352	411	470	529	587
6	Rest of Economy Benefit		1.573.086	3.291.279	5.070.930	7.009.470	9.084.536	10.540.231	12.009.351	13.492.432	14.990.033	16.502.7[illegible]
	Maize		397.136	888.962	1.481.181	2.179.656	2.990.939	3.267.739	3.555.723	3.855.228	4.166.714	4.490.65[illegible]
	Beans		59.985	141.453	245.893	374.083	527.992	590.822	656.166	724.123	794.798	868.30[illegible]
	Cut flowers		671.446	1.741.479	2.610.014	3.478.981	4.342.228	5.213.486	6.084.580	6.955.501	7.826.244	8.696.801
	Vegetables		61.079	122.513	183.769	245.026	306.281	367.538	428.794	490.050	551.306	612.563
	Essential Oils and Spices		183.441	366.883	550.324	733.765	917.206	1.100.648	1.284.089	1.467.530	1.650.971	1.834.413
7	Number of incremental ha proposed in the project											
	Maize		20.000	40.000	60.000	80.000	100.000	100.000	100.000	100.000	100.000	100.00[illegible]
	Beans		6.000	12.000	18.000	24.000	30.000	30.000	30.000	30.000	30.000	30.00[illegible]
	Cut flowers		15	30	45	60	75	90	105	120	135	150
	Vegetables		40	80	120	160	200	240	280	320	360	400
	Essential Oils and Spices		300	600	900	1.200	1.500	1.800	2.100	2.400	2.700	3.000
8	Yield increase of 17 percent over 5 years of project, ton/ha											
	Maize		1.00	1.04	1.08	1.12	1.17	1.22	1.27	1.32	1.37	1.4[illegible]
	Beans		0.70	0.73	0.76	0.79	0.82	0.85	0.89	0.92	0.96	1.00

		Maize	Beans	Cut Flowers	Vegetables	Ess Oils & Spices
9	Ave Costs US$/ha	59.6	67.3	91352.2	9843.5	769.5
	Ave Revenue (at border) US$/ha	95.0	81.3	102599.2	3619.4	1169.1
	Out of Country Costs US$/ha	na	na	33291.1	7443.7	247.0
	In Country costs US$/ha			44239.8	2081.4	677.6
	Ave labor cost, US$/ha	50.8	51.6	5347.3	6.2	0.5
	Ave sales price US$/ton (at farmgate)	90.0	110.0			

10. Share of Exports to Rural Labor, Percentages	Labor/ ProdPrice	ProdPrice/ ExpPrice*	Labor/ ExpPrice
Maize	45.665	75.000	34.245
Beans	67.000	62.500	41.875
Cut flowers	7.027	54.407	3.823
Vegetables	0.126	39.775	0.050
Ess Oils & Spices	0.094	101.787	0.095

11	Net Farmgate Benefit IRR	–8
12	Net Benefit to Rest of Economy IRR	58

* The producer in the case of maize and beans is the smallholder who receives the farmgate price, the exporter receiving the export price.
For the high value crops the producer is the exporter so the two prices he or she faces are the border price, which is the producer price in this case, and the international market price, the export price, the difference being the freight and marketing costs

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TABLE 6 - BENEFIT/COST ANALYSIS, Varying Targeted Hectares under the Project
US dollars

		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	20[illegible]
1	Net Benefit at the Farmgate		(4,495,549)	(4,108,735)	(3,648,605)	(3,097,605)	(2,363,605)	2,616,360	2,616,360	2,616,360	2,616,360	2,616,36[illegible]
2	Net Benefit to Rest of Economy		(3,367,331)	(2,046,216)	(564,363)	1,103,362	3,017,222	8,017,222	8,017,222	8,017,222	8,017,222	8,017,2[illegible]
3	Project Costs - total US$ 25 million		5,000,000	5,000,000	5,000,000	5,000,000	5,000,000					
4	Benefits in Export Terms		2,127,120	3,848,061	5,798,801	8,006,804	10,633,602	10,633,602	10,633,602	10,633,602	10,633,602	10,633,60[illegible]
	Maize		1,414,000	2,306,050	3,564,376	5,003,406	6,672,000	6,672,000	6,672,000	6,672,000	6,672,000	6,672,0[illegible]
	Beans		65,376	154,512	269,190	411,311	722,880	722,880	722,880	722,880	722,880	722,88[illegible]
	Cut flowers		525,235	1,060,470	1,575,706	2,100,940	2,626,175	2,626,175	2,626,175	2,626,175	2,626,175	2,626,17[illegible]
	Vegetables		30,750	61,519	92,278	123,038	153,797	153,797	153,797	153,797	153,797	153,7[illegible]
	Essential Oils and Spices		91,750	183,500	275,250	367,000	458,750	458,750	458,750	458,750	458,750	458,7[illegible]
5	Net Benefit to the Rural Household		614,452	891,267	1,351,194	1,902,332	2,616,360	2,616,360	2,616,360	2,616,360	2,616,360	2,616,36[illegible]
	Maize		484,262	820,369	1,227,618	1,713,622	2,285,101	2,285,101	2,285,101	2,285,101	2,285,101	2,285,101
	Beans		27,376	64,702	112,723	172,236	302,706	302,706	302,706	302,706	302,706	302,70[illegible]
	Cut flowers		2,500	5,006	10,292	15,726	27,636	27,636	27,636	27,636	27,636	27,636
	Vegetables		264	316	473	630	788	788	788	788	788	788
	Essential Oils and Spices		29	59	88	117	147	147	147	147	147	147
6	Rest of Economy Benefit		1,612,669	2,953,784	4,445,607	6,100,862	8,017,222	8,017,222	8,017,222	8,017,222	8,017,222	8,017,222
	Maize		929,718	1,574,767	2,366,760	3,269,784	4,366,899	4,366,899	4,366,899	4,366,899	4,366,899	4,366,89[illegible]
	Beans		38,000	89,810	156,467	239,074	420,174	420,174	420,174	420,174	420,174	420,174
	Cut flowers		522,735	1,044,582	1,566,413	2,088,214	2,608,536	2,608,536	2,608,536	2,608,536	2,608,536	2,608,53[illegible]
	Vegetables		30,495	61,204	91,806	122,407	153,009	153,009	153,009	153,009	153,009	153,00[illegible]
	Essential Oils and Spices		91,721	183,441	275,162	366,883	458,603	458,603	458,603	458,603	458,603	458,60[illegible]
7	60 percent of incremental ha proposed in the project											
	Maize		20,000	30,000	40,000	50,000	60,000	60,000	60,000	60,000	60,000	60,00[illegible]
	Beans		2,880	5,760	8,640	11,520	14,400	14,400	14,400	14,400	14,400	14,40[illegible]
	Cut flowers		9	18	27	36	45	45	45	45	45	4[illegible]
	Vegetables		20	40	60	80	100	100	100	100	100	100
	Essential Oils and Spices		150	300	450	600	750	750	750	750	750	75[illegible]
8	Yield increase of 33 percent over 5 years of project, ton/ha											
	Maize		1.45	1.55	1.66	1.78	1.90	1.90	1.90	1.90	1.90	1.90
	Beans		0.75	0.79	0.83	0.87	1.00	1.00	1.00	1.00	1.00	1.0[illegible]

		Maize	Beans	Cut Flowers	Vegetables	Ess Oils & Spices
9	Ave Costs US$/ha	59.8	67.3	91352.2	9643.5	769.8
	Ave Revenue (at border) US$/ha	95.0	81.3	102569.2	3819.4	1189.1
	Out of Country Costs US$/ha	na	na	33291.1	7443.7	247.0
	In Country costs US$/ha			44239.8	2081.4	577.8
	Ave labor cost US$/ha	50.8	51.6	5347.3	6.2	0.5
	Ave sales price US$/ton (at farmgate)	90.0	110.0			

10. Share of Exports to Rural Labor	Labor/ ProdPrice	ProdPrice/ ExpPrice*	Labor/ ExpPrice
Maize	45.67	75.00	34.2[illegible]
Beans	67.00	62.50	41.8[illegible]
Cut flowers	7.03	54.41	3.8[illegible]
Vegetables	0.13	39.78	0.05
Ess Oils & Spices	0.09	101.79	0.10

11	Net Farmgate Benefit IRR	-6
12	Net Benefit to Rest of Economy IRR	42

* The producer in the case of maize and beans is the smallholder who receives the farmgate price, the exporter receiving the export price.
For the high value crops the producer is the exporter so the two prices he or she faces are the border price, which is the producer price in this case, and the international market price, the export price, the difference being the freight and marketing costs

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TABLE 7 - SOME BASICS FOR OCT 92

		MAIZE	BEANS	FLOWERS**	VEGTABLES**	ESSENTIAL OILS AND SPICES
1.	Average Yield (kg/ha)	1450.00	750.00	823,333	2756.10	709,111
2.	Average Producer Price (Sh/kg) *	107.00	175.00	169	1588.04	2067.26
3.	Border Revenue (Sh/ha)	155,150	131,250	141,800,816	4,376,780	1,221,601
4.	Variable Costs (Sh/ha)	136,100	68,725	58,171,786	2,491,463	619,562
5.	Hired Labor (Sh/ha)	51,800	27,300	8,093,360	307,522	65,441
6	Other Inputs (Sh/ha)	84,300	41,425	50,078,426	2,183,941	554,121
7.	Gross Margin (Sh/ha)	19,050	62,525	83,629,029	1,885,317	602,039
8.	Labor Days Expended	171	164	n.a.	n.a.	n.a.
9.	Family Labor	97	125	n.a.	n.a.	n.a.
10.	Hired Labor	74	39	n.a.	n.a.	n.a.
11.	Labor Rates (Sh/ha)	414	548	7,855,900.00	307,466.67	50,100.00
12.	Family Labor (Sh/ha)	196	500	n.a.	n.a.	n.a.
13	Hired Labor (Sh/ha)	700	700	n.a.	n.a.	n.a.
14	Unit Value Elements (Sh/kg)	107	175	172.23	1,588.04	1.72
15.	Family Labor (Sh/kg) ***	13	83	101.57	684.05	0.85
16.	Hired Labor (Sh/kg)	36	36	9.83	111.58	0.09
17.	Other Inputs (Sh/kg)	58	55	60.82	792.40	0.78
18.	Percent of Unit Value in Labor	46	68	5.71	7.14	0.00
19.	Family Labor	12	48	n.a.	n.a.	n.a.
20.	Hired Labor	33	21	5.71	7.14	0.00
21.	Acreage (1991)					
22.	Total (ha)	420,000	510,000	11.10	80.22	21.04
23.	In Exports (ha)	16,535	19,073	8.88	64.18	16.83
24.	Exports (MT)	33,070	14,419	1,200,000.00	600,000.00	319,000.00
25.	Average Yield (kg/ha)(stems/ha)	2,000	756	823,333.33	3,619	968.42
26.	Share (pct)	4	4	80	80	80

NOTES: * Price cited for cut flowers is in Shillings per stem
** For flowers, figures are for low freight and high labor rates. For vegetables, figures are for low freight
*** For cut flowers, vegetables, and essential oils and spices, the "family labor" is the returns to the firm, and is unlikely to be family labor.

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TABLE 8 CUTFLOWERS

		Aster [illegible]	Aster Novi belgii	Dolphinium bellador	Gypsophila	Polyanthus tuberose	Rose sweetheart	Rose spray	Rose tea hybrid	Rose outdoor	Solidago	Trachelium	Veronica	TOTAL	AVERAGE
1	Average Yield (stems/ha)	750 000	700,000	400,000	900,000	900,000	1,000,000	1,300,000	1,000,000	600,000	600,000	600 000	700,000		823 333 33
2	Ave Prod Price (border) ($ stem) 3 a US$/ha	0 12	0 07	0 10	0 17	0 09	0 10	0 15	0.10	0 13	0 13	0 10	0 07		0 11
3 a	Border Revenue/ha low freight	88,513	49,523	60,000	89,775	38,700	270 210	198,974	304,710	77,007	62 414	100 [illegible]	49 470		111 140 13
b	Border Revenue/ha high freight	77 812 50	34,312 50	57,100 00	(6 412 50)	30,400 50	261 000 00	116,700 00	287,004 00	69,004 00	73,297 50	68,832 50	36 007 00		98 892 21
4 a	In Country Variable Costs high wage	38 814	30,272	31,054	54,443	10,701	68 422	70,120	71,044	41,700	34,400	48 [illegible]	24 071		44,239 75
b	In Country Variable Costs low wage	35 088	17,101	23,310	30 200	15,404	49 067	49,704	51,110	30,100	19 504	29 018	19 070		30 881 25
5 a	Hired Labor, high wage	5 041	4,031	5,461	4,031	2,751	10,023	10,073	10,000	8,100	5,041	4 031	4 031		5 548 50
b	Hired Labor low wage	1 403 00	1,421 00	1,006 00	1 421 00	800 00	3,213 00	3,213 00	3,213 00	2,400 00	1,403 00	1,421 (0)	1 421 00		
6	Other In Country Inputs	31,573	19,770	21,710	34,070	14,001	45 704	48,401	47,000	30,001	18,071	28,407	15 557		29 985 0
7	Border Gross Margin														
a	low freight high wage	50 000	21,291	37 200	30 300	12,000	200 700	98,045	180,176	38,202	48 014	52 510	21 000		[illegible]
b	low freight low wage	38 458 50	32,301 50	49,544 00	57 470 00	17,304 50	227,213 00	168,270 00	213,000 00	48,007 00	62 050 50	70,001 50	29 501 00		80 257 00
c	high freight high wage	41 188 50	8,040 50	25 448 00	33 000 00	8,047 50	101,570 00	48,007 00	108,300 00	30,200 00	30 007 50	41,070 50	12 018 00		50 852 44
d	high freight low wage	44 798 50	17,121 50	33 704 00	57 113 00	8,044 50	212 070 00	67,000 00	210,000 00	40,004 00	53 733 50	60,014 50	19 [illegible] 00		[illegible]
8	Labor (days expended)														
9	Family Labor														
10	Hired Labor														
11	Labor Rates (US$/ha)														
12	Family Labor														
13 a	Hired Labor														
	@ $1 000 US$/month US$/ha	5 041 00	4,031 00	5,461 00	4 031 00	2,751 00	10,023 00	10,023 00	10,000 00	8,100 00	5,041 00	4,031 (0)	4 031 00		5 548 50
b	Hired Labor														
	@ 15 000 US$/month US$/ha	1 403 00	1,421 00	1,006 00	1 421 00	800 00	3,213 00	3,213 00	3,213 00	2,400 00	1,403 00	1,421 (0)	1 421 00		1,825 50
14	Unit Value Elements ($ US$/stems)	110	60	100	171	84	150	130	170	130	127	160	60		120 32
15	Family Labor														
16 a	Hired Labor high wage	0 791	0 641	15 050	0 704	7 000	0 068	0 100	7,000	10 000	7 700	7 000	0 001		0 49
b	Hired Labor low wage	1 077	1 000	4 015	2 004	0 004	1 700	2 070	0 140	4 015	2 040	2 [illegible]	2 000		2 [illegible]
17 a	Other Inputs low freight	113	60	140	100	60	147	171	160	110	110	152	60		120 84
b	Other Inputs high freight														
18	Percent of Unit Value in Labor														
19	Family Labor														
20 a	Hired Labor high wage	0 020	0 700	0 002	0 100	0 007	0 046	7 000	4.100	10 004	0 117	4 015	10 304		7 007
b	Hired Labor, low wage	1 007	2 000	2 015	1 015	2 401	1 100	2 000	1 014	0 000	1 700	1 413	3 057		2 007
	TO SUM ACROSS														
21	Number of ha in production	6	11	3	30	1	14	8	10	17	16	3	8	135	
23	Total production (000 stems)	4 000	7,000	1,200	18,000	400	24,040	9,000	10,000	8,000	10,010	1,053	6,020	111,000	
24	Total Revenues ($ pre border)	572 000	524,000	101,500	3 375,000	48,002	3,011,000	1,304,004	3,047,100	1,304,004	1,309,100	311 700	300 710	19,730 001	
25	Total Variable Costs	234,330	200,000	64,002	1,050,040	37,000	000 074	002,071	710,040	600,300	620,700	140 002	213 001	8 457 [illegible]	
26	Total Labor	30 202	51,200	18,303	173,016	8,023	190,737	80,001	160,200	130,007	77,031	14 078	41 547	000 303	
27	Total Other Inputs	202 007	240,475	70,570	1,700,002	23,042	607,200	401,410	600,310	000,310	402,120	134 016	172 344	9 500,700	
28	Total Gross Margin	330 500	229,200	66,010	1,415,002	10,107	2,003 074	712,014	1,001,740	602,201	720,400	162 [illegible]	185 020	8,202,022	
	IN SHILLINGS														
29	Average Yield (stems/ha)													823 333	
30	Average Producer Price (Sh/stem)													100	
31	Border Revenue low freight (Sh/ha)													141,000,010	
32	Variable Costs (Sh/ha)													50 171 700	
33	Hired Labor (Sh/ha)													9,000 300	
34	Other Inputs (Sh/ha)													50 070,470	
35	Gross Margin (Sh/ha)													69 020 020	
36	Price/stem (market)	0 25	0 21	0 31	0 30	0 20	0 25	0 25	0 01	0 20	0 20	0 31	0 17		0 26
37	Revenue/ha (market)	187 500	157,500	124,000	154,000	67,000	460,000	300,000	400,000	160,000	162,500	105 300	110 000		212,001 67
38 a	Freight @ 1 00 US$/kg	35 000	72,040	32,240	25,575	38,004	72 040	70,000	90,007	38,303	43,524	80 778	45 740		53 000 92
b	Freight @ 2 25 US$/kg	87 500 00	87,750 00	39,000 00	30 000 00	40,404 00	87,750 00	116,714 00	00,071 00	46,300 00	52 000 00	81,475 (0)	55 330 00		64 043 00
39	Marketing Costs	42 100	36 420	37 000	34 000	10,000	101 200	67 000	104,000	38,700	36 003	43 041	26 775		47 006 03
40 a	Revenue/ha (border) @ 1 00 US$/kg	88 513	49 523	60 000	90,775	32,700	270 210	198,974	304,710	77,007	62 414	100 [illegible]	46 470		111 140 13
b	Revenue/ha (border) @ 2 25 US$/kg	77 813	34 313	57,100	69,412	20,400	261,000	116,700	287,004	69,004	73 200	80 832	36 007		98 892 21
41	Current number of ha	0 40	10 60	3 00	30 00	1 40	13 00	9 30	10 00	10 00	15 40	3 10	8 00		11 10
42 a	Total Revenue (border) @ 1 00 US$/kg	572 000	524,000	101 500	3 375 000	48,002	3,011,000	1,304,004	3,047,100	1,304,004	1,309,100	311 700	300 710		1,311 057 50
b	Total Revenue (border) @ 2 25 US$/kg	488 000	469,713	171,300	3 102,002	88,072	3,001,000	969,324	2,070,040	1,101,402	1,120 020	279,701	317,220		1 160 000 75

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TABLE 9 VEGETABLES

		KAMPALA/ENTEBBE REGION						HIGHLAND AREA				
		a) Large scale production			b) Small scale production			a) Small scale production				
		Asparagus Green	Babycorn	Baby Courgette	Asparagus Green	Babycorn	Chilli	Okra	Babycorn	Mangetout	TOTAL	AVERAGE
1	Average Yield (kg/ha)	3,000.00	600.00	2,000.00	2,800.00	500.00	8,000.00	6,000.00	500.00	3,000.00		3,619.4
	US$/ha											
2	Average producer price/kg (border)	2.58	2.00	1.42	2.58	2.00	0.60	0.54	2.00	1.42		1.60
3 a	Revenue/ha (border) low freight	7,748	1,199	2,840	6,456	999	4,820	3,256	999	4,260		3,619
b	Revenue/ha (border) high freight	6,757.50	1,000.50	2,180.00	5,631.25	833.75	2,180.00	1,275.00	833.75	3,270.00		2,662
4	In Country Variable Cost	3,243.00	977.00	2,425.00	2,676.00	872.00	3,270.00	2,053.00	812.00	2,405.00		2,081
	Labor Cost	417.00	146.00	146.00	344.00	230.00	212.00	123.00	275.00	413.00		
	Other In Country Costs	2,826.00	831.00	2,279.00	2,332.00	642.00	3,058.00	1,930.00	537.00	1,992.00		
5 a	Gross Margin (border) low freight	4,504.50	221.50	415.00	3,780.25	126.75	1,550.00	1,202.00	186.75	1,855.00		1,538
b	Gross Margin (border) high freight	3,514.50	23.50	(245.00)	2,955.25	(38.25)	(1,090.00)	(778.00)	21.75	865.00		581
6	Labor rates (US$/ha)	417.00	146.00	146.00	344.00	230.00	212.00	123.00	275.00	413.00		258.22
7	Total other in country inputs cost (US$/ha	3,243.00	976.00	2,424.00	2,782.00	884.00	3,260.00	2,053.00	813.00	2,405.00		2,091.11
8	Unit Value Elements (US$/kg)	1.22	1.67	1.39	1.26	2.19	0.43	0.38	2.18	0.94		1.30
9	Labor	0.14	0.24	0.07	0.14	0.46	0.08	0.02	0.55	0.14		0.20
10	Other Inputs	1.08	1.63	1.21	1.11	1.73	0.41	0.34	1.63	0.80		1.10
11	Percent of Unit Value in Labor	0.11	0.13	0.06	0.11	0.21	0.08	0.06	0.25	0.15		0.13
	TO SUM ACROSS											
12	Number of Hectares in Production	20.00	20.00	20.00	20.00	20.00	16.00	16.00	16.00	16.00	164.00	
13	Total production (kg)	60,000.00	12,000.00	40,000.00	50,000.00	10,000.00	128,000.00	96,000.00	8,000.00	48,000.00	452,000.00	
14.	Total Revenues (US$ pre-border)	154,950.00	23,970.00	56,800.00	129,125.00	19,975.00	77,120.00	52,080.00	15,990.00	68,160.00	598,160.00	
15	Total Variable Costs (US$)	64,860	19,540	48,500	53,520	17,440	52,320	32,848	12,992	38,480	340,500.00	
16	Total Labor	8,340.00	2,920.00	2,920.00	6,880.00	4,600.00	3,392.00	1,968.00	4,400.00	6,608.00	42,028.00	
17	Total Other Inputs	56,520.00	16,620.00	45,580.00	46,640.00	12,840.00	48,928.00	30,880.00	8,592.00	31,872.00	298,472.00	
18	Total Gross Margin (US$)	90,090.00	4,430.00	8,300.00	75,605.00	2,535.00	24,800.00	19,232.00	2,998.00	29,680.00	257,660.00	
	IN SHILLINGS											
19	Average Yield (kg/ha)										2,756	
20	Average Producer Price (Sh/kg)										1,588	
21	Border Revenue (Sh/ha)										4,376,780	
22	Variable Costs (Sh/ha)										2,491,463	
23	Hired Labor (Sh/ha)										307,522	
24	Other Inputs (Sh/ha)										2,183,941	
25	Gross Margin (Sh/ha)										1,885,317	
26	Price/kg (at market) (US$)	5.43	4.65	3.88	5.43	4.65	2.79	2.71	4.65	3.88		4.23
27	Revenue/ha (at market)	16,290.00	2,790.00	7,760.00	13,575.00	2,325.00	22,320.00	16,260.00	2,325.00	11,640.00		
28 a	Freight @ 1.49 US$/kg	4,470.00	894.00	2,980.00	3,725.00	745.00	11,920.00	8,940.00	745.00	4,470.00		
b	Freight @ 1.82 US$/kg	5,460.00	1,092.00	3,640.00	4,550.00	910.00	14,560.00	10,920.00	910.00	5,460.00		
29	Marketing Costs @ 25.0% of market revs	4,072.50	697.50	1,940.00	3,393.75	581.25	5,580.00	4,065.00	581.25	2,910.00		
30 a	Revenue/ha (border) low freight	7,748	1,199	2,840	6,456	999	4,820	3,256	999	4,260		3,619.42
b	Revenue/ha (border) high freight	6,758	1,001	2,180	5,631	834	2,180	1,275	834	3,270		
31	Number of ha	67.00	70.00	70.00	67.00	70.00	70.00	70.00	70.00	108.00		80.22
32	Total Border Revenue	519,082.50	83,895.00	198,800.00	432,856.75	69,912.50	337,400.00	227,850.00	69,912.50	715,680.00		295,011.25

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TABLE 10 ESSENTIAL OILS AND SPICES

		Geranium Oil	Minty Menthol	Ginger	Chilies	Paprika	Chamomile	Cumin	Coriander	Dill	Fennel	Vanilla	Pyrethrum	TOTAL	AVE. RAIA
1	Average Yield (kg/ha)	65 00	50 00	3 000 00	500 00	3,000 00	900 00	800 00	1,000 00	600 00	600 00	400 00	500 00		888 42
2	Ave producer price kg (farmer) (US$)	38 05	13 79	0 83	1 54	0 83	2 43	1 18	1 00	0 78	1 18	4 00	0 77		5 57
3	Revenue (at border) (US$/ha)	2 538 00	770 00	1 677 50	788 00	1,885 00	1,215 00	1,080 00	1,083 00	463 00	708 00	1,600 00	385 00		1 189 13
4	In Country Variable Cost (US$/ha)	888 00	894 00	1 410 50	581 00	800 00	800 00	323 00	433 00	330 00	330 00	250 00	247 00	8 885 50	977 44
5	Labor rates	40 00	35 00	85 00	30 00	30 00	50 00	15 00	15 00	15 00	15 00	100 00	50 00		41 75
6	Total other inputs cost (US$/ha)	818 00	819 00	1,331 50	525 00	470 00	750 00	308 00	418 00	315 00	315 00	150 00	197 00		535 71
7	Gross Margin	1 670 00	(94 00)	481 00	207 00	1,085 00	405 00	757 00	650 00	123 00	375 00	1,350 00	138 00		611 69
8	Unit value Elements	13 35	15 25	0 47	1 12	0 14	1 00	0 36	0 43	0 36	0 55	0 63	0 46		2 51
10	Labor	0 75	0 63	0 05	0 07	0 01	0 10	0 02	0 02	0 03	0 03	0 25	0 10		0 11
11	Other inputs	12 60	14 63	0 44	1 05	0 13	1 00	0 34	0 40	0 53	0 53	0 38	0 36		2 25
12	Percent of Unit value in Labor	0 06	0 04	0 08	0 06	0 07	0 05	0 05	0.05	0 05	0 05	0 40	0 20		0 05
	TO SUM AT ROSS														
13	Number of ha in production	385 00	880 00	167 00	400 00	214 00	150 00	na	na	na	na	750 00	1 600 00	4 605	
14	Total production (kg)	25 025 00	80 000 00	501 000 00	200 000 00	740,000 00	75 000 00	0 00	0 00	0 00	0 00	300,000 00	833 000 00	2 733 000	
15	Total Revenues (Dirs. pre - border)	977 130 00	887,810 00	313 542 50	317 200 00	388,110 00	182 250 00	0 00	0 00	0 00	0 00	1 200,000 00	641 410 00	4 708 753	
16	Total variable Costs	334 180 00	748 882 00	236 568 50	274 400 00	168 304 00	121 150 00	0 00	0 00	0 00	0 00	188 000 00	411 942 00	2 387 444	
17	Total Labor	18 885 00	31 238 00	14 185 00	14 400 00	7,704 00	7 500 00	0 00	0 00	0 00	0 00	75,000 00	83 300 00	252 219	
20	Total Other Inputs	315 315 00	731 387 00	222 380 50	210 000 00	160,600 00	113 650 00	0 00	0 00	0 00	0 00	114,000 00	328 202 00	2 135 475	
21	Total Gross Margin	642 950 00	(79,012 00)	78 987 00	82 800 00	200,806 00	60 800 00	0 00	0 00	0 00	0 00	1 012,000 00	229 908 00	2 320 156	
	BY SHRUBLANDS														
22	Average Yield (kg/ha)													700 111	
23	Average Producers Price (Sh/kgm)													2 087	
24	Average Farmers Value (Sh/ha)													1 221 861	
25	Variable Costs (Sh/ha)													819 582	
26	Hired Labor (Sh/ha)													86 441	
27	Other Inputs (Sh/ha)													554 121	
28	Gross Margin (Sh/ha)													812 038	
29	Price kg (at market) (US$)	40 00	18 00	1 00	2 00	0 60	3 00	1 25	1 10	0 80	1 25	4 00	0 60		5 91
30	Revenue ha (at market)	2 500 00	840 00	3 000 00	1 000 00	3,180 00	1 800 00	1,125 00	1,100 00	480 00	750 00	1,600 00	400 00		1 463 56
31	Freight	12 00	10 00	1 080 00	207 00	1,200 00	270 00	60 00	60 00	40 00	40 00	0 00	0 00		253 42
32	Cost of processing	50 00	60 00	42 50	25 00	20 00	15 00	5 00	5 00	5 00	5 00	0 00	15 00		21 04
33	Revenue ha (at border)	2 538 00	770 00	1 677 50	788 00	1,885 00	1 215 00	1,080 00	1,083 00	463 00	708 00	1,600 00	385 00		1 189 13
34	Number of ha	385 00	880 00	167 00	400 00	214 00	150 00	na	na	na	na	750 00	1 600 00		385 42
35	Total Border Revenue	977 130 00	887 810 00	313 542 50	317 200 00	388,110 00	182,250 00	0 00	0 00	0 00	0 00	1 200,000 00	641 410 00		382 173 27

ANNEX I

INITIAL ENVIRONMENTAL EXAMINATION

PROJECT TITLE: UGANDA

PROJECT TITLE: INVESTMENT IN DEVELOPING AGRICULTURAL EXPORTS (IDEA) PROJECT, 617-0125

FUNDING: FYs: 1994-2000 US$: 25 Mill.

IEE PREPARED BY: B. Byers, USAID/Washington, R&D/ENR

ENVIRONMENTAL ACTION RECOMMENDED:

Positive Determination:	_____
Negative Determination:	_____
Categorical Exclusion:	_____
Deferral:	X

SUMMARY OF FINDINGS:

The purpose of the Investment in Developing Agricultural Exports (IDEA) Project is to increase rural men's and women's incomes from selected non-traditional agricultural exports (NTAEs) by addressing production and marketing constraints. The closely related Agricultural Non-Traditional Export Promotion Program (ANEPP), in existence since 1988, seeks to achieve the same goal by addressing macroeconomic policy, legal, and regulatory constraints to increasing NTAEs primarily through non-project assistance (NPA).

The potential negative environmental impacts of this project will be mitigated, and its potential environmental benefits maximized, by a joint IDEA-ANEPP Environmental Monitoring, Evaluation and Mitigation Plan (EMEMP), which will consist of:

1) Environmental Impact Reviews (EIRs) of the five NTAE crop sectors targeted for promotion by the project. These EIRs will be used to identify any potentialenvironmental impacts and to provide the background information necessary to design the environmental component of the monitoring and evaluation plan for the project, to identify environmental concerns with specific sectors and crops, and to identify actions to mitigate potential negative environmental impacts of NTAE expansion.

2) An Environmental Monitoring and Evaluation plan, integrated into the overall M & E plan for the IDEA Project, and also the M & E plans for ANEPP and the APE Project, that will allow the detection of unsustainable negative environmental impacts of project-assisted activities and the modification of those activities as necessary to mitigate the negative impacts.

3) Establishing a set of procedures for systematically assessing the environmental implications of IDEA- and

ANEPP-assisted development activities. It is recommended that this project receive a **deferral**, until the completion of EIRs for the five NTAE crop sectors, with and the design and implementation of the EMEMP, as summarized above, required as a covenant (or conditions precedent).

CONCURRENCE:

Bureau Environmental Officer: APPROVED: ✓

DISAPPROVED: _____

DATE: 8/4/93

CLEARANCE:

GC/Africa: [illegible] DATE: 7/12/93

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I. Project Purpose and Description

The Investment in Developing Agricultural Exports (IDEA) Project is planned as a six-year, $25 million project, the purpose of which is to increase rural men's and women's incomes and returns to labor from selected non-traditional agricultural exports (NTAEs). The project will use a demand-driven, private sector-oriented approach in assisting producers and exporters to initiate and expand exports of selected NTAEs. Five NTAE crop sectors have been targeted for assistance by the project: 1) maize, beans, and oil crops; 2) spices and essential oils; 3) cut flowers; 4) vegetables, and; 5) fruits. The IDEA Project will address production and marketing constraints to expanding the range and value of exports in these crop sectors.

The closely related Agricultural Non-Traditional Export Promotion Program (ANEPP), in existence since 1988, seeks to achieve the same goal of increasing rural men's and women's incomes by addressing macroeconomic policy, legal, and regulatory constraints to increasing NTAEs primarily through non-project assistance (NPA).

II. Potential Environmental Impacts

The IDEA Project potentially could have both positive and negative environmental impacts. Environmental benefits could result from the project if an increase in rural men's and women's incomes leads to reduced pressures to expand cultivation into uncultivated lands, especially lands that are erosion-prone, forested, are wetlands, or have high value for biodiversity conservation. Positive environmental impacts could also result if the project can promote environmentally-sustainable intensification and increased yields through better technologies and cultural practices, such as through the use of more productive and pest-resistant varieties, soil conservation and maintenance of soil fertility, or reduced use of pesticides through integrated pest management (IPM).

However, the project also has potential negative environmental impacts. General concerns include:

1) Expansion of cultivated area of NTAEs or domestic food crops, especially in erosion-prone or fragile, marginal lands; forests; wetlands; parks or protected areas; or other areas of high value for biodiversity conservation. Pressure for expansion of cultivated area might come either from the direct expansion of NTAE acreage, or from the displacement of domestic food crops by NTAE expansion. Socioeconomic changes stimulated by NTAE promotion and increased production, including changes in land tenure, could lead to this pressure for expansion of cultivated area.

2) Unsustainable technologies and practices in NTAE production, such as those that lead to net soil erosion or

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loss of soil fertility, or the use of pesticides in ways that lead to the evolution of pesticide resistance in pest populations or that kill natural predators of pests. This concern relates especially to those NTAEs grown by small-scale farmers who may not have either the resources or knowledge required to apply environmentally sound production methods toward new and unfamiliar crops.

3) Pollution resulting from NTAE production and processing. Of special concern is aquatic pollution from non-point sources attributable to NTAE expansion (either through intensification or expansion of acreage), such as increased sediment, nutrient, and/or pesticide loads in rivers and lakes in areas of NTAE production. Waste discharges and pollution resulting from NTAE processing activities may be a concern, but in general such point source pollution is easier to control than that from non-point sources. Aquatic pollution already appears to threaten the fisheries potential of Uganda, and fish exports are themselves an important and growing NTAE sector.

While the potential for both positive and negative impacts of IDEA Project-assisted NTAE expansion is very real, it is difficult if not impossible to accurately predict the net environmental impact -- the balance between positive and negative impacts -- of the project at this stage of its design and implementation. This conclusion results largely from the complex, partly indirect, gradual and long-term nature of the anticipated impacts of this project, as well as the impacts of the closely related ANEPP program.

In order to achieve its purpose of promoting a sustainable increase in the incomes and returns to labor of rural men and women in Uganda, the IDEA Project must be as concerned about the environmental soundness, viability and sustainability of its NTAE promotion activities as with their economic and social soundness, viability, and sustainability. In order to prevent and/or mitigate unwanted or unexpected negative environmental impacts and to maximize the environmental benefits of the IDEA Project -- in other words to realize the highest possible net positive environmental impact -- an Environmental Monitoring, Evaluation and Mitigation Plan (EMEMP) will be designed and implemented for the life of the project.

Due to their closely related sectoral development objectives, the EMEMP will cover the environmental monitoring and assessment requirements for both the new IDEA Project and ongoing ANEPP interventions. Given the importance of environmental soundness and sustainability to both the IDEA Project and ANEPP, this Plan (EMEMP) should be seen not as a hurdle to be overcome, but rather as a useful and important tool in designing and implementing the projects, necessary for maximizing the net environmental benefit of NTAE promotion and thereby ensuring the overall success of both ANEPP and IDEA.

The design of a joint EMEMP to address the M & E problems of both IDEA and ANEPP (as well as those of the APE Project) is difficult because of ANEPP's broad national scope and objectives and IDEA's more limited, project-oriented focus. The environmental impacts of NTAE promotion in Uganda over time will be impossible to ascertain with any reasonable degree of certainty without some type of multi-tiered M & E system, as recommended in the joint EMEMP. A local-level environmental assessment component must be included to ascertain any potential impacts from IDEA and to provide for mitigation measures. This is in keeping with bothe the GOU NEAP process and the ANEPP, APE and IDEA program objectives.

The five sectors that have now been chosen for NTAE promotion by the IDEA Project would seem, at first glance, broad and widespread enough to encompass a substantial portion of the total NTAE production occurring throughout Uganda. The extent to which this is true will be determined by the Environmental Impact Reviews of each sector (see below). In practice, the five crop sectors targetted by IDEA would serve as NTAE indicators, representative of what is occurring in NTAE development nation-wide. The potential benefits of this approach are obvious. Only environmental impacts of crops in these sectors would need to be monitored, as opposed to all NTAEs in Uganda. However, the potential liabilities of this approach are also important to note. Focussing Mission monitoring efforts exclusively on these five "indicator" NTAE sectors would exclude monitoring a variety of NTAE-related development activities occurring in Uganda. Of particular concern are potential negative environmental impacts of expansion of potentially "renewable" NTAEs, such as forest products, fisheries, and wildlife products, which would not be monitored because these sectors are not targetted for promotion by the IDEA Project. As the project develops and is implemented, monitoring efforts may need to expand from the five targetted sectors to include other NTAE-related development activities.

III. Environmental Monitoring, Evaluation and Mitigation Plan (EMEMP)

The EMEMP for the IDEA Project will consist of:
1) Environmental Impact Reviews (EIRs) of the five NTAE sectors/crops targeted for promotion by the project;
2) An Environmental Monitoring and Evaluation plan, integrated into the overall M & E plan for the project, and;
3) A set of procedures for systematically assessing the environmental implications of NTAE promotion activities. These activities are summarized below:

A. Environmental Impact Reviews (EIRs)

The potential environmental benefits and negative impacts discussed earlier will be reviewed in detail for each of the five NTAE crop sectors targeted for assistance by the IDEA Project: 1) maize, beans, and oil crops; 2) spices and essential oils;

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3) cut flowers; 4) vegetables, and; 5) fruits. These EIRs should ideally be done as the first step in the EMEMP. They will serve to identify potential concerns, and to identify indicators of positive and negative environmental impact for each of the targeted NTAE crop sectors and specific crops. The EIRs can thereby inform the design of the monitoring and evaluation program to be implemented as part of the EMEMP.

These EIRs will also play a role in the mitigation of negative environmental impacts of NTAE promotion. They may identify such strong concerns or such potentially large net negative environmental impacts for specific crops that the project should reconsider its promotion of such crops as NTAEs. The EIRs will also identify and recommend the most environmentally sound technologies and practices (pest management, soil conservation practices, etc.) for each NTAE crop sector and crop, and/or identify NTAE sectors or crops for which research is needed to find ways to produce the crop in an environmentally sustainable manner. Needed research recommended in these EIRs can then be supported by the IDEA Project through its research support to the National Agricultural Research Organization (NARO) and other qualified organizations.

The EIRs will need to address: 1) the production process for each NTAE crop, including cultivation (e.g., soil requirements, soil conservation and fertility management, use of exotic and/or chemical inputs, potential pests and pest management, crop varieties available, need for irrigation or water management), harvesting, processing (e.g., need for supplemental materials or energy; waste products and pollution; sighting of new, or expansion of existing plants, machinery, and associated infrastructure; plant discharges and surveillance requirements), and marketing (e.g., quality control considerations, chemical residue analysis, quarantine requirements); 2) potential environmental concerns raised by the information in 1), above, for each targeted NTAE crop; 3) geographical considerations related to 1) and 2), above; potential impacts of expansion of each NTAE crop in different regions, related to soils, climate, watersheds, topography, and location of parks and protected areas; 4) environmentally-relevant socioeconomic considerations in order to identify the potential for indirect environmental impacts due to social and economic changes stimulated by NTAE expansion, such as changes in land tenure patterns, concentration of land ownership, reduction in average food security due to displacement of subsistence food crops by NTAEs, population displacement, or changes in population density, and; 5) potential indicators of environmental benefit and negative environmental impact.

Considerable information relevant to these EIRs has already been compiled in the series of five reports on "Opportunities for Non-Traditional Agricultural Exports for Uganda," prepared for the Export Policy Analysis and Development Unit (EPADU) of the GOU Ministry of Finance and Economic Planning (report on "Fruits" not yet published). Adequate EIRs will also require further

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background research on the environmental impacts of IDEA-targeted NTAEs and environmental "best practices" for producing and processing these crops. Interviews with USAID/Uganda, relevant GOU organizations, and NTAE producers and exporters, and site visits to a sample of potential or actual production areas will also be needed. Some of the NTAE crop sectors targeted for emphasis by IDEA are much more diverse and complex than others, and there are large differences in their potential for negative environmental impacts. Consequently, the levels of effort required to prepare an adequate EIR for the five targeted crop sectors may differ considerably; the required level of effort must still be determined.

B. Environmental Monitoring and Evaluation

The Environmental Monitoring and Evaluation component of the EMEMP for the IDEA Project must be integrated into the project's overall M & E plan. The overall M & E plan will require coordinated collection, storage, retrieval, integration, and analysis of agricultural and agroeconomic, environmental, and socioeconomic data from the national, district, and local levels.

Four steps are needed to implement the environmental M & E component: 1) Design the monitoring and evaluation program; 2) Compile baseline data to establish an EMEMP baseline; 3) Implement a periodic data collection program, and; 4) Integrate and analyze agricultural and agroeconomic, environmental, and socioeconomic data periodically to assess progress, identify problems, and modify interventions.

1) Environmental Monitoring and Evaluation Program Design
The design of the environmental monitoring and evaluation program will require further work to:
a) Identify sources and types of environmental information currently available at the national, district, and local level in Uganda. The M & E plan should employ a shared approach to monitoring, with IDEA/ANEPP contributing NTAE-related data and the APE Project contributing environmental and natural resources related data. IDEA/ANEPP monitoring therefore must be designed in conjunction with monitoring for the APE Project-assisted NEAP efforts and by the National Environmental Information Center (NEIC). This will provide a more programmatic (versus project-specific, piecemeal) approach to monitoring.
b) Finalize a list of environmental indicators for NTAE impacts, by comparing recommended indicators of positive and negative environmental impacts identified in NTAE crop sector EIRs with information about what indicator data are currently being collected, or which could be collected with appropriate USAID assistance.
c) Develop a set of agreed-upon procedures for periodically obtaining or collecting data on these indicators from national, district, and local levels in a timely manner throughout the LOP. The estimated amount and source of resources required for this purpose should be specified and budgeted.
d) Develop an agreed-upon procedure for periodically integrating,

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analyzing, and assessing agroeconomic, environmental, and socioeconomic information, and making the results available to USAID project managers, relevant GOU institutions and agencies, and private sector producers and exporters. The estimated amount and source of resources required for this purpose should be specified and budgeted.

2) Compile Baseline Data to Establish an EMEMP Baseline
Once a final list of environmental impact indicators has been finalized (see 1)b), above), sources of indicator data identified or collection procedures determined, a baseline set of indicator data can be compiled.

3) Implement a Periodic Data Collection Program
Carry out periodic data collection at national, district, and local levels as agreed upon during the design of the environmental M & E plan (see 1)c), above).

4) Integrate and Analyze Data and Disseminate Findings
Periodically integrate and analyze all data and disseminate the results of this process available to relevant actors, such as relevant GOU agencies, NGOs, and the private sector, as agreed upon during the design of the environmental M & E plan (see 1)d), above).

The EMEMP will be designed both to carry out a monitoring program encompassing the five sectors targetted for NTAE promotion by the IDEA Project, and encompassing the global scope and objectives of the ANEP Program's policy reforms, i.e., all NTAE development occurring nation-wide.

C. Environmental Assessment Procedures

The third component of the joint EMEMP for the IDEA Project and ANEPP involves establishing a set of procedures for systematically assessing the environmental implications of IDEA- and ANEPP-assisted development activities. The APE Project has already budgeted substantial local currency funds to support environmental assessments (EAs) of development activities in Uganda. It is expected that the NEAP process in Uganda, with USAID APE Project support, will lead to national legislation that establishes a system of environmental assessment procedures for the country over the next few years. Through close coordination with the APE Project, the IDEA Project can also support the development of national EA procedures and legislation, at the same time that it is building capacity within the NTAE sector to comply with such national EA procedures once they are mandated by legislation. Some APE Project funds budgeted for EAs might be applied to environmental assessments of NTAE promotion activities. Such funds should also be supplemented by a similar fund within the IDEA Project for this same purpose. In agreement with current NEAP plans, these EAs should be completed to the maximum extent possible with locally-secured environmental expertise, with the goal of building Ugandan capacity for environmental assessment. However, a modest amount of foreign

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exchange may be needed to procure expatriate technical assistance for some assessments.

IV. Implementation Considerations:

A. Completion of Environmental Impact Reviews (EIRs) for each of the five NTAE sectors targetted for promotion by IDEA, the design of a complete EMEMP, and the beginning of its implementation will be required as a covenant (or conditions precendent) for the IDEA Project.

B. Sufficient funds must be programmed in the PP to properly implement the agreed upon environmental requirements, including the EIRs and design of the EMEMP and its implementation throughout the life of the project. The agree-upon EMEMP components should therefore be costed out in the PP budgetary requirements prior to PP finalization/authorization to ensure that the covenant (or conditions precedent) can be met.

C. TA to complete some type of more detailed PP Environmental Review prior to the finalization/authorization of the PP will be necessary, e.g., to complete the necessary EIRs.

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ANNEX J
ILLUSTRATIVE COMMODITY LIST FOR MAKERERE UNIVERSITY

a. DEPARTMENT OF FOOD TECHNOLOGY

Staff Support Equipment:

	Qty	Enduser	Source/O	Est. Cost	Yr. of Purch.
.Computer	2	MU	Code 000	4,800	FY95
.Printer	1	MU	Code 000	1,000	FY95
.Standby power	1	MU	Code 000	600	FY95
.System saver	1	MU	Code 000	100	FY95
.Security Lock-down	1	MU	Code 000	200	FY95
.Supplies		MU	Code 000	400	FY95
.Photocopier	1	MU	Code 935	8,000	FY95
.Typewriter	1	MU	Code 935	1,500	FY95

				16,600	

Food Microbiology Lab:

.Student Microscope	6	MU	Code 935	15,402	FY95
.Clinical Centrif.	2	MU	Code 935	1,550	FY95
.Sterilizer	1	MU	Code 935	1,860	FY95
.Tissue Culture Hood	1	MU	Code 935	1,595	FY95
.Colorimeter, d/beam	1	MU	Code 935	1,219	FY95
.Colony counters	2	MU	Code 935	1,200	FY95
.T/loading balances	2	MU	Code 935	990	FY95
.Incubators	3	MU	Code 935	1,725	FY95
.Portable autoclaves	2	MU	Code 935	600	FY95
.Water bath (D/C)	1	MU	Code 935	1,040	FY95
.Water bath (S/B)	1	MU	Code 935	1,856	FY95
.Misc. reagents, media & glassware		MU	Code 935	3,000	FY95

Sub-Total				32,037	

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Food Chemistry Lab:

.K/nitrogen analyzer	1	MU	Code 935	6,595	FY95
.Burrets, 10ml	6	MU	Code 935	242	FY95
.Refractometer	1	MU	Code 935	477	FY95
.S/Extraction units	8	MU	Code 935	1,084	FY95
.Extraction rack	1	MU	Code 935	1,185	FY95
.Thimbles, etc		MU	Code 935	205	FY95
.Polarimeter	1	MU	Code 935	2,700	FY95
.S-down transformer	1	MU	Code 935	58	FY95
.Measuring tube	1	MU	Code 935	75	FY95
.Misc. reagents/ glassware		MU	Code 935	2,000	FY95
Sub-Total				14,621	

Chemical Assurance Lab:

.Roter	1	MU	Code 935	3,000	FY95
.R/spectrophotometer	1	MU	Code 935	8,110	FY95
.X-Y Recorder	1	MU	Code 935	2,700	FY95
.Atomic Absorption Spectrophotometer	1	MU	Code 935	14,000	FY95
.Fume Exhauster	1	MU	Code 935	800	FY95
.Hollow Cathode Lamps	1	MU	Code 935	2,000	FY95
.Rotating Evaporator	1	MU	Code 935	995	FY95
.Ash Analyzer	1	MU	Code 935	3,655	FY95
.Moisture Analyzer	1	MU	Code 935	1,325	FY95
.Fat Extrac. System	1	MU	Code 935	5,735	FY95
.Kjeldahl Unit	1	MU	Code 935	3,300	FY95
.Burrets	6	MU	Code 935	242	FY95
.Fume Hood	1	MU	Code 935	3,956	FY95
.Refractometer	1	MU	Code 935	2,850	FY95
.Polarimeter	1	MU	Code 935	2,700	FY95
.Analytical balance	1	MU	Code 935	2,025	FY95
.Magnetic stirrers	6	MU	Code 935	600	FY95
.6-Plate M-stirrer	1	MU	Code 935	708	FY95
.Stirring bar kits	6	MU	Code 935	300	FY95
.S-down transformer	2	MU	Code 935	191	FY95
.F/P Depression equip.	1	MU	Code 935	150	FY95
.Chemicals, media Reagents,Glassware		MU	Code 935	10,000	FY95
Sub-Total				69,342	
T O T A L				132,600	

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b. **DEPARTMENT OF AGRICULTURAL ECONOMICS**

Staff Support Equipment:

	Qty	Enduser	Source/O	Est. Cost	Yr. of Purch.
.Computer	2	MU	Code 000	4,800	FY95
.Printer	1	MU	Code 000	1,000	FY95
.Standby power	1	MU	Code 000	600	FY95
.System saver	1	MU	Code 000	100	FY95
.Security Lock-down	1	MU	Code 000	200	FY95
.Supplies		MU	Code 000	400	FY95
	Sub-Total			7,100	
Revival of the East African Journal of Rural Development			Code 935	10,000	FY95
	T O T A L			17,100	

c. **DEPARTMENT OF AGRICULTURAL ENGINEERING**

Staff Support Equipment:

	Qty	Enduser	Source/O	Est. Cost	Yr. of Purch.
.Computer	2	MU	Code 000	2,400	FY95
.Printer	1	MU	Code 000	1,000	FY95
.Standby power	1	MU	Code 000	600	FY95
.System saver	1	MU	Code 000	100	FY95
.Security Lock-down	1	MU	Code 000	200	FY95
.Supplies		MU	Code 000	400	FY95
	Sub-Total			4,700	

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Processing and Storage:

	Qty	Enduser	Source/O	Est. Cost	Yr. of Purch.
.Nikon shadow-graph	1	MU	Code 935	750	FY95
.Platform scale	1	MU	Code 935	400	FY95
.Air Comparison Pycrometer	1	MU	Code 935	350	FY95
.Airflow Plani-meter	1	MU	Code 935	500	FY95
.Instion T/Mach.	1	MU	Code 935	1,200	FY95
. " C/Rheometer	1	MU	Code 935	1,000	FY95
.Stormer Viscom.	1	MU	Code 935	1,500	FY95
.Extensometer	1	MU	Code 935	500	FY95
.Vanier Callip	20	MU	Code 935	1,000	FY95
.Micronpmeters	20	MU	Code 935	1,000	FY95
.Moisture met.	20	MU	Code 935	2,000	FY95
.Grinder	2	MU	Code 935	1,300	FY95
.Tyler sieves	12	MU	Code 935	1,200	FY95
.Rotary Washer	2	MU	Code 935	500	FY95
.Separtor	2	MU	Code 935	600	FY95
.G/airflow met.	2	MU	Code 935	400	FY95
.Countronic G/M	2	MU	Code 935	4,000	FY95
.Test wt. kit	2	MU	Code 935	2,000	FY95
.Sampling sp.	10	MU	Code 935	200	FY95
.Vacuum sampler	1	MU	Code 935	500	FY95
		Sub-Total		20,900	
		T O T A L		25,600	

d. **AGRICULTURAL EDUCATION CENTER**

Staff Support Equipment:

	Qty	Enduser	Source/O	Est. Cost	Yr. of Purch.
.Computer	2	MU	Code 000	2,400	FY95
.Printer	1	MU	Code 000	1,000	FY95
.Standby power	1	MU	Code 000	600	FY95
.System saver	1	MU	Code 000	100	FY95
.Security Lock-down	1	MU	Code 000	200	FY95
.Supplies		MU	Code 000	400	FY95
	Sub-Total			4,700	
Scholarstic material			Code 935	20,000	FY95
	T O T A L			24,700	

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5C(1) - COUNTRY CHECKLIST	
Listed below are statutory criteria applicable to the eligibility of countries to received the following categories of assistance: (A) both Development Assistance and Economic Support Funds; (B) Development Assistance funds only; or (C) Economic Support Funds only.	
A. COUNTRY ELIGIBILITY CRITERIA APPLICABLE TO BOTH DEVELOPMENT ASSISTANCE AND ECONOMIC SUPPORT FUNDS ASSISTANCE	
1. **Narcotics**	
a. Negative certification (FY 1991 Appropriations Act Sec. 559(b)): Has the President certified to the Congress that the government or the recipient country is failing to take adequate measures to prevent narcotic drugs or other controlled substances which are cultivated, produced or processed illicitly, in whole or in part, in such country or transported through such country, from being sold illegally within the jurisdiction of such country to United States Government personnel or their dependents or from entering the United States unlawfully?	No
b. Positive certification (FAA Sec. 481(h)). (This provision applies to assistance of any kind provided by grant, sale, loan, lease, credit, guaranty, or insurance, except assistance from the Child Survival Fund or relating to international narcotics control, disaster and refugee relief, narcotics education and awareness, or the provision of food or medicine.) If the recipient is a "major illicit drug producing country" (defined as a country producing during a fiscal year at least five metric tons of opium or 500 metric tons of coca or marijuana) or a "major drug-transit country" (defined as a country that is a significant direct source of illicit drugs significantly	

affecting the United States, through which such drugs are transported, or through which significant sums or drug-related profits are laundered with the knowledge or complicity of the government):	
(1) does the country have in place a bilateral narcotics agreement with the United States, or a multilateral narcotics agreement?	N/A
(2) has the President in the March 1 International Narcotics Control Strategy Report (INSCR) determined and certified to the Congress (without Congressional enactment, within 45 days of continuous session, of a resolution disapproving such a certification), or has the President determined and certified to the Congress on any other date (with enactment by Congress of a resolution approving such certification), that (a) during the previous year the country has cooperated fully with the United States or taken adequate steps on its own to satisfy the goals agreed to in a bilateral narcotics agreement with the United States or in a multilateral agreement, to prevent illicit drugs produced or processed in or transported through such country from being transported into the United States, to prevent and punish drug profit laundering in the country, and to prevent and punish bribery and other forms of public corruption which facilitate production or shipment of illicit drugs or discourage prosecution of such acts, or that (b) the vital national interests of the United States require the provision of such assistance?	a. N/A b. N/A
c. **Government Policy** (1986 Anti-Drug Abuse Act of 1986 Sec. 2013(b)). (This section applies to the same categories of assistance subject to the restrictions in FAA Sec. 481(h), above.) If recipient country is a "major drug-transit country" (as defined to the purpose of FAA Sec 481(h)), has the President submitted a report to Congress listing such country as one: (a) which, as a matter of government policy, encourages or facilitates the production	a. N/A

or distribution of illicit drugs; (b) in which any senior official of the government engages in, encourages, or facilitates the production or distribution or illegal drugs; (c) in which any member of a U.S. Government agency has suffered or been threatened with violence inflicted by or with the complicity of any government officer; or (d) which fails to provide reasonable cooperation to lawful activities of U.S. drug enforcement agents, unless the President has provided the required certification to Congress pertaining to U.S. national interests and the drug control and criminal prosecution efforts of that country?	b. N/A c. N/A d. N/A
2. Indebtedness to U.S. citizens (FAA Sec. 620(c): If assistance is to a government, is the government indebted to any U.S. citizen for goods or services furnished or ordered where: (a) such citizen has exhausted available legal remedies, (b) the debt is not denied or contested by such government, or (c) the indebtedness arises under an unconditional guaranty of payment given by such government or controlled entity?	a. No b. No c. No
3. Seizure of U.S. Property (FAA Sec. 620(e) (1)): If assistance is to a government, has it (including any government agencies or subdivisions) taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of U.S. citizens or entities beneficially owned by them without taking steps to discharge its obligations toward such citizens or entities?	No
4. Communist countries (FAA Secs. 620(a), 620(f), 620D; FY 1991 Appropriations Act Secs. 512, 545): Is recipient country a Communist country? If so, has the President: (a) determined that assistance to the country is vital to the security of the United States, that the recipient country is not controlled by the international Communist conspiracy, and that such assistance will further promote the independence of the recipient country from international communism, or (b) removed a country from applicable	No

restrictions on assistance to communist countries upon a determination and report to Congress that such action is important to the national interest of the United States? Will assistance be provided either directly or indirectly to Angola, Cambodia, Cuba, Iraq, Libya, Vietnam, Iran or Syria? Will assistance be provided to Afghanistan without a certification, or will assistance be provided inside afghanistan through the Soviet-controlled government or Afghanistan?	
5. Mob Action (FAA Sec. 620(j)): Has the country permitted, or failed to take adequate measures to prevent, damage or destruction by mob action of U.S. property?	No
6. OPIC Investment Guaranty (FAA Sec. 620(1): Has the country failed to enter into an investment guaranty agreement with OPIC?	No
7. Seizure of U.S. Fishing Vessels (FAA Sec. 620(o); Fishermen's Protective Act of 1967 (as amended) Sec. 5): (a) Has the country seized, or imposed any penalty or sanction against, any U.S. fishing vessel because of fishing activities in international waters? (b) If so, has any deduction required by the Fishermen's Protective Act been made?	a. N/A b. N/A
8. Loan Default (FAA Sec. 620(q); FY 1991 Appropriations Act Sec. 518 (Brooke Amendment)): (a) Has the government of the recipient country been in default for more than six months on interest or principal of any loan to the country under the FAA? (b) Has the country been in default for more than one year on interest or principal on any U.S. loan under a program for which the FY 1990 Appropriations Act appropriates funds?	a. No b. No
9. Military Equipment (FAA Sec. 620(s)): If contemplated assistance is development loan or to come from Economic support Funds, has the Administrator taken into account the percentage of the country's budget and amount of the country's foreign exchange or other resources spent on military equipment?	Support will not come from Economic Support Funds.

(Reference may be made to the annual "Taking Into Consideration" memo: "Yes, taken into account by the Administrator at time of approval of Agency OYB." This approval by the Administrator of the Operational Year Budget can be the basis for an affirmative answer during the fiscal year unless significant changes in circumstances occur.)	
10. Diplomatic Relations with U.S. (FAA Sec. 620(t)): Has the country severed diplomatic relations with the United States? If so, have relations been resumed and have new bilateral assistance agreements been negotiated and entered into since such resumption?	No
11. U.N. Obligations (FAA Sec. 620(u)): What is the payment status of the country's U.N. obligations? If the country is in arrears, were such arrearages taken into account by the A.I.D. Administrator in determining the current A.I.D. Operational Year Budget? (Reference may be made to the "Taking into Consideration" memo.)	Uganda is not in arrears on U.N. obligations
12. International Terrorism	
a. Sanctuary and support (FY 1991 Appropriations Act Sec. 556; FAA Sec. 620A): Has the country been determined by the president to: (a) grant sanctuary from prosecution to any individual or group which has committed an act of international terrorism, or (b) otherwise support international terrorism, unless the President has waived this restriction on grounds of national security or for humanitarian reasons?	a. No b. No
b. Airport Security (ISDCA of 1985 Sec. 552(b). Has the Secretary of State determined that the country is a high terrorist threat country after the Secretary of Transportation has determined, pursuant to section 1115(e)(2) of the Federal Aviation Act of 1958, that an airport in the country does not maintain and administer effective security measures?	No

13. Discrimination (FAA Sec. 666(b)): Does the country object, on the basis of race, religion, national origin or sex, to the presence of any officer or employee of the U.S. who is present in such country to carry out economic development programs under the FAA?	No
14. Nuclear Technology (FAA Secs. 669, 670): Has the country, after August 3, 1977, delivered to any other country or received nuclear enrichment or reprocessing equipment, materials, or technology, without specified arrangements or safeguards, and without special certification by the President?	No
Has it transferred a nuclear explosive device to a non-nuclear weapon state, or if such a state, either received or detonated a nuclear explosive device?	No
If the country is a non-nuclear weapon state, has it, on or after August 8, 1985, exported (or attempted to export) illegally from the United States any material, equipment, or technology which would contribute significantly to the ability of a country to manufacture a nuclear explosive device? (FAA Sec. 620E permits a special waiver of Sec. 669 or Pakistan.)	No
15. Algiers Meeting (ISDCA of 1981, Sec. 720): Was the country represented at the Meeting of Ministers of Foreign Affairs and Heads of Delegations of the Non-Aligned Countries to the 36th General Assembly of the U.N. on Sept. 25 and 28, 1981, and did it fail to disassociate itself from the communique issued?	No
If so, has the President taken it into account? (Reference may be made to the "Taking into Consideration" memo.)	N/A
16. Military Coup (FY 1991 Appropriations Act Sec. 513): Has the duly elected Head of Government of the country been deposed by military coup or decree ?	No
If assistance has been terminated, has the President notified Congress that a democratically elected government has taken office prior to the resumption of assistance?	N/A

17. Refugee Cooperation (FY 1991 Appropriations Act Sec. 539): Does the recipient country fully cooperate with the international refugee assistance organizations, the United States, and other governments in facilitating lasting solutions to refugee situations, including resettlement without respect to race, sex, religion, or national origin?	Yes
18. Exploitation of Children (FY 1991 Appropriations Act Sec. 599D, amending FAA Sec. 116): Does the recipient government fail to take appropriate and adequate measures, within its means, to protect children from exploitation, abuse or forced conscription into military or paramilitary services?	No
B. COUNTRY ELIGIBILITY CRITERIA APPLICABLE ONLY TO DEVELOPMENT ASSISTANCE ("DA")	
1. Human Rights Violations (FAA Sec. 116): Has the Department of State determined that this government has engaged in a consistent pattern of gross violations of internationally recognized human rights?	No
If so, can it be demonstrated that contemplated assistance will directly benefit the needy?	N/A
2. Abortions (FY 1991 Appropriations Act Sec. 535): Has the President certified that use of DA funds by this country would violate any of the prohibitions against use of funds to pay for the performance of abortions as a method of family planning, to motivate or coerce any person to practice abortions, to pay for the performance of involuntary sterilization as a method of family planning, to coerce or provide any financial incentive to any person to undergo sterilizations, to pay for any biomedical research which relates, in whole or in part, to methods of, or the performance of, abortions or involuntary sterilization as a means of family planning?	No

C. COUNTRY ELIGIBILITY CRITERIA APPLICABLE ONLY TO ECONOMIC SUPPORT FUNDS ("ESF")	
Human Rights Violations (FAA Sec. 502B): Has it been determined that the country has engaged in a consistent pattern of gross violations of internationally recognized human rights?	No
If so, has the President found that the country made such significant improvement in its human rights record that furnishing such assistance is in the U.S. national interest?	N/A

5C(2) - ASSISTANCE CHECKLIST Listed below are statutory criteria applicable to the assistance resources themselves, rather than to the eligibility of a country to receive assistance. This section is divided into three parts. Part A includes criteria applicable to both Development Assistance and Economic Support Funds resources. Part B include criteria applicable only to Development Assistance resources. Part C includes criteria applicable only to Economic Support Funds.	
A. CRITERIA APPLICABLE TO BOTH DEVELOPMENT ASSISTANCE AND ECONOMIC SUPPORT FUNDS	
1. Host Country Development Efforts (FAA Sec. 601(a)): Information and conclusions on whether assistance will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture, and commerce; and (f) strengthen free labor unions.	**Yes. IDEA will stimulate private investment and trade in agricultural exports. Items a., b., and e. will be met through the project.**
2. U.S. Private Trade and Investment (FAA Sec. 601(b)): Information and conclusions on how assistance will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).	**US consulting firms will implement the program. As much procurement as possible will come from the U.S. Development of viable export projects may encourage U.S. investment in Uganda.**

3. Congressional Notification	
a. General requirement (FY 1991 Appropriations Act Secs. 523 and 591; FAA Sec. 634A): If money is to be obligated for an activity not previously justified to Congress, or for an amount in excess of amount previously justified to Congress, has Congress been properly notified (unless the notification requirement has been waived because of substantial risk to human health or welfare)?	Congressional Notification will be sent to Congress as required.
b. Notice of new account obligation (FY 1991 Appropriations Act Sec. 514): If funds are being obligated under an appropriation account to which they were not appropriated, has the President consulted with and provided a writtenjustification to the House and Senate Appropriations Committees and has such obligation been subject to regular notification procedures?	N/A
c. Cash transfers and nonproject sector assistance (FY 1991 Appropriations Act Sec. 575(b) (3)): If funds are to be made available in the form of cash transfer or nonproject sector assistance, has the Congressional notice included a detailed description of how the funds will be used, with a discussion of U.S. interests to be served and a description of any economic policy reforms to be promoted?	N/A
4. Engineering and Financial Plans (FAA Sec. 611(a)): Prior to an obligation in excess of $500,000, will there be: (a) engineering, financial or other plans necessary to carry out the assistance; and (b) a reasonably firm estimate of the cost to the U.S. of the assistance?	a. Yes b. Yes
5. Legislative Action (FAA Sec. 611(s)(2)): If legislative action is required within recipient country with respect to an obligation in excess of $500,000, what is the basis for a reasonable expectation that such action will be completed in time to permit orderly accomplishment of the purpose of the assistance?	Legislative action is not required.

6. **Water Resources** (FAA Sec. 611(b); FY 1991 Appropriations Act Sec. 501): If project is for water or water-related land resource construction, have benefits and costs been computed to the extent practicable in accordance with the principles, standards, and procedures established pursuant to the Water Resources Planning Act (42 U.S.C. 1962, et seq.)? (See A.I.D. Handbook 3 for guidelines.)	N/A
7. **Cash Transfer and Sector Assistance** (FY 1991 Appropriations Act Sec. 575(b)): Will cash transfer or nonproject sector assistance be maintained in a separate account and not commingled with other funds (unless such requirements are waived by Congressional notice for nonproject sector assistance)?	N/A
8. **Capital Assistance** (FAA Sec. 611(e)): If project is capital assistance (e.g., construction), and total U.S. assistance for it will exceed $1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability to maintain and utilize the project effectively?	N/A
9. **Multiple Country Objectives** (FAA Sec. 601(a)): Information and conclusions on whether projects will encourage efforts of the country to: (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and savings and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture and commerce; and (f) strengthen free labor unions.	Yes. Through developing exports to countries in Europe and Africa, the project will foster activities in a., b., and e.
10. **U.S. Private Trade** (FAA Sec. 601(b)): Information and conclusions on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).	US consulting firms will implement the program. As much procurement as possible will come from the U.S. Development of viable export projects may encourage U.S. investment in Uganda

11. Local Currencies	
a. Recipient Contributions (FAA Secs. 612(b), 636(h)): Describe steps taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services, and foreign currencies owned by the U.S. are utilized in lieu of dollars.	The GOU will contribute Ush 1 billion.
b. U.S.-Owned Currency (FAA Sec. 612(d)): Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?	US does not own excess foreign currency of the country.
c. Separate Account (FY 1991 Appropriations Act Sec. 575). If assistance is furnished to a foreign government under arrangements which result in the generation of local currencies:	
(1) Has A.I.D. (a) required that local currencies be deposited in a separate account established by the recipient government,	a. N/A
(b) entered into an agreement with that government providing the amount of local currencies to be generated and the terms and conditions under which the currencies so deposited may be utilized, and	b. N/A c. N/A
(c) established by agreement the responsibilities of A.I.D. and that government to monitor and account for deposits into and disbursements from the separate account?	N/A
(2) Will such local currencies, or an equivalent amount of local currencies, be used only to carry out the purposes of the DA or ESF chapters of the FAA (depending on which chapter is the source of the assistance) or for the administrative requirements of the United States Government?	N/A
(3) Has A.I.D. taken all appropriate steps to ensure that the equivalent of local currencies disbursed from the separate account are used for the agreed purposes?	

(4) If assistance is terminated to a country, will any unencumbered balances of funds remaining in a separate account be disposed of for purposes agreed to by the recipient government and the United States Government?	Yes
12. Trade Restrictions	
a. Surplus Commodities (FY 1991 Appropriations Act Sec. 521(a)): If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity?	No
b. Textiles (Lautenberg Amendment) (FY 1991 Appropriations Act Sec. 521(c)): Will the assistance (except for programs in Caribbean Basin Initiative countries under U.S. Tariff Schedule "Section 807," which allows reduced tariffs on articles assembled abroad from U.S.-made components) be used directly to procure feasibility studies, prefeasibility studies, or project profiles of potential investment in, or to assist the establishment of facilities specifically designed for, the manufacture for export to the United States or to third country markets in direct competition with U.S. exports, of textiles, apparel, footwear, handbags, flat goods (such as wallets or coin purses worn on the person), work gloves or leather wearing apparel?	N/A
13. Tropical Forests (FY 1991 Appropriations Act Sec. 533(c)(3)): Will funds be used for any program, project or activity which would (a) result in any significant loss of tropical forests, or (b) involve industrial timber extraction in primary tropical forest areas?	a. No b. No

14. Sahel Accounting (FAA Sec. 121(d)): If a Sahel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (either dollars or local currency generated therefrom)?	N/A
15. PVO Assistance	
a. Auditing and registration (FY 1991 Appropriations Act Sec. 537): If assistance is being made available to a PVO, has that organization provided upon timely request any document, file, or record necessary to the auditing requirements of A.I.D., and is the PVO registered with A.I.D.?	N/A
b. Funding sources (FY 1991 Appropriations Act, Title II, under heading "Private and Voluntary Organizations"): If assistance is to be made to a United States PVO (other than a cooperative development organization), does it obtain at least 20 percent of its total annual funding for international activities from sources other than the United States Government?	N/A
16. Project Agreement Documentation (State Authorization Sec. 139 (as interpreted by conference report)): Has confirmation of the date of signing of the project agreement, including the amount involved, been cabled to State L/T and A.I.D. LEG within 60 days of the agreement's entry into force with respect to the United States, and has the full text of the agreement been pouched to those same offices? (See Handbook 3, Appendix 6G for agreements covered by this provision).	Mission will comply when date of signing is confirmed.
17. Metric System (Omnibus Trade and Competitiveness Act of 1988 Sec. 5164, as interpreted by conference report, amending Metric Conversion Act of 1975 Sec. 2, and as implemented through A.I.D. policy): Does the assistance activity use the metric system of measurement in its procurements, grants, and other business-related activities, except to the	No. Most procurement will be for computers and office equipment.

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extent that such use is impractical or is likely to cause significant inefficiencies or loss of markets to United States firms? Are bulk purchases usually to be made in metric, and are components, subassemblies, and semi-fabricated materials to be specified in metric units when economically available and technically adequate? Will A.I.D. specifications use metric units of measure from the earliest programmatic stages, and from the earliest documentation of the assistance processes (for example, project papers) involving quantifiable measurements (length, area, volume, capacity, mass and weight), through the implementation stage?	N/A
18. Women in Development (FY 1991 Appropriations Act, Title II, under heading "Women in Development"): Will assistance be designed so that the percentage of women participants will be demonstrably increased?	Yes
19. Regional and Multilateral Assistance (FAA Sec. 209): Is assistance more efficiently and effectively provided through regional or multilateral organizations? If so, why is assistance not so provided? Information and conclusions on whether assistance will encourage developing countries to cooperate in regional development programs.	Increase in regional trade may enhance regional cooperation on related matters.
20. Abortions (FY 1991 Appropriations Act, Title II, under heading "Population, DA," and Sec. 525):	
a. Will assistance be made available to any organization or program which, as determined by the President, supports or participates in the management of a program of coercive abortion or involuntary sterilization?	No
b. Will any funds be used to lobby for abortion?	No
21. Cooperatives (FAA Sec. 111): Will assistance help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward a better life?	To the extent that agricultural cooperatives participate, it will assist their members to increase their income.

22. U.S.-Owned Foreign Currencies	
a. Use of currencies (FAA Secs. 612(b), 636(h); FY 1991 Appropriations Act Secs. 507, 509): Describe steps taken to assure that, to the maximum extent possible, foreign currencies owned by the U.S. are utilized in lieu of dollars to meet the cost of contractual and other services.	N/A
b. Release of currencies (FAA Sec. 612(d)): Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release?	The US does not own excess Ugandan currency.
23. Procurement	
a. Small business (FAA Sec. 602(a)): Are there arrangements to permit U.S. small business to participate equitably in the furnishing of commodities and services financed?	Small businesses are expected to supply commodities and technical services.
b. U.S. procurement (FAA Sec. 604(a)): Will all procurement be from the U.S. except as otherwise determined by the President or determined under delegation from him?	Yes
c. Marine insurance (FAA Sec. 604(d)): If the cooperating country discriminates against marine insurance companies authorized to do business in the U.S., will commodities be insured in the United States against marine risk with such a company?	N/A
d. Non-U.S. agricultural procurement (FAA Sec. 604(e)): If non-U.S. procurement of agricultural commodity or product thereof is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity? (Exception where commodity financed could not reasonably be procured in U.S.)	Yes
e. Construction or engineering services (FAA Sec. 604(g)): Will construction or engineering services be procured from firms of advanced developing countries which are otherwise eligible	

under Code 941 and which have attained a competitive capability in international markets in one of these areas? (Exception for those countries which receive direct economic assistance under the FAA and permit United States firms to compete for construction or engineering services financed from assistance programs of these countries.)	No
f. Cargo preference shipping (FAA Sec. 603)): Is the shipping excluded from compliance with the requirement in section 901(b) of the Merchant Marine Act of 1936, as amended, that at least 50 percent of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U.S. flag commercial vessels to the extent such vessels are available at fair and reasonable rates?	No
g. Technical Assistance (FAA Sec. 621(a)): If technical assistance is financed, will such assistance be furnished by private enterprise on a contract basis to the fullest extent practicable?	Yes
Will the facilities and resources of other Federal agencies be utilized, when they are particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs?	Yes, Peace Corps
h. U.S. air carriers (International Air Transportation Fair Competitive Practices Act, 1974): If air transportation of persons or property is financed on grant basis, will U.S. carriers be used to the extent such service is available?	Yes
i. Termination for convenience of U.S. Government (FY 1991 Appropriations Act Sec. 504): If the U.S. Government is a party to a contract for procurement, does the contract contain a provision authorizing termination of such contract for the convenience of the United States?	Yes, Standard Clauses

j. Consulting services (FY 1991 Appropriations Act Sec. 524): If assistance if for consulting service through procurement contract pursuant to 5 U.S.C. 3109, are contract expenditures a matter of public record and available for public inspection (unless otherwise provided by law or Executive order)?	Yes
k. Metric conversion (Omnibus Trade and Competitiveness Act of 1988, as interpreted by conference report, amending Metric Conversion Act of 1975 Sec. 2, and as implemented through A.I.D. policy): Does the Assistance program use the metric system of measurement in its procurements, grants, and other business-related activities, except to the extent that such use is impractical or is likely to cause significant inefficiencies or loss of markets to United States firms?	Yes
Are bulk purchases usually to be made in metric, and are components, subassemblies, and semi-fabricated materials to be specified in metric units when economically available and technically adequate?	Yes
Will A.I.D. specifications use metric units of measure from the earliest programmatic stages, and from the earliest documentation of the assistance processes (for example, project papers) involving quantifiable measurements (length, area, volume, capacity, mass and weight), through the implementation stage?	Yes
l. Competitive Selection Procedures (FAA Sec. 601(e)): Will the assistance utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise?	Yes
24. Construction	
a. Capital project (FAA Sec. 601(d)): If capital (e.g., construction) project, will U.S. engineering and professional services be used?	N/A
b. Construction contract (FAA Sec. 611(c)): If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable?	N/A

c. Large Projects, Congressional approval (FAA Sec. 620(k)): If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U.S. not exceed $100 million (except for productive enterprises in Egypt that were described in the Congressional Presentation), or does assistance have the express approval of Congress?	N/A
25. U.S. Audit Rights (FAA Sec. 301(d)): If fund is established solely by U.S. contributions and administered by an international organization, does Controller General have audit rights?	N/A
26. Communist Assistance (FAA Sec. 620(h). Do arrangements exist to insure that United States foreign aid is not used in a manner which, contrary to the best interests of the United States, promotes or assists the foreign aid projects or activities of the Communist-bloc countries?	Yes
27. Narcotics	
a. Cash reimbursements (FAA Sec. 483): Will arrangements preclude use of financing to make reimbursements, in the form of cash payments, to persons whose illicit drug crops are eradicated?	Yes
b. Assistance to narcotics traffickers (FAA Sec. 487): Will arrangements take "all reasonable steps" to preclude use of financing to or through individuals or entities which we know or have reason to believe have either: (1) been convicted of a violation of any law or regulation of the United States or a foreign country relating to narcotics (or other controlled substances); or (2) been an illicit trafficker in, or otherwise involved in the illicit trafficking of, any such controlled substance?	1. Yes 2. Yes

28. Expropriation and Land Reform (FAA SEc. 620(g)): Will assistance Preclude use of financing to compensate owners for expropriated or nationalized property, except to compensate foreign nationals in accordance with a land reform program certified by the President?	Yes
29. Police and Prisons (FAA Sec. 660): Will assistance preclude use of financing to provide training, advice, or any financial support for police, prisons, or other law enforcement forces, except for narcotics programs?	No
30. CIA Activities (FAA Sec. 622): Will assistance preclude use of financing for CIA activities?	Yes
31. Motor Vehicles (FAA Sec. 636(i)): Will assistance preclude use of financing for purchase, sale, long-term lease, exchange or guaranty of the sale of motor vehicles manufactured outside U.S., unless a waiver is obtained?	Yes
32. Military Personnel (FY 1991 Appropriations Act Sec. 503): Will assistance preclude use of financing to pay pensions, annuities, retirement pay, or adjusted service compensation for prior or current military personnel?	Yes
33. Payment of U.N. Assessments (FY 1991 Appropriations Act Sec. 505): Will assistance preclude use of financing to pay U.N. assessments, arrearages or dues?	Yes
34. Multilateral Organization Lending (FY 1991 Appropriations Act Sec. 506): Will assistance preclude use of financing to carry out provisions of FAA Section 209(d) (transfer of FAA funds to multilateral organizations for lending)?	Yes
35. Export of Nuclear Resources (FY 1991 Appropriations Act Sec. 510): Will assistance preclude use of financing to finance the export of nuclear equipment, fuel, or technology?	Yes

36. Repression of Population (FY 1991 Appropriations Act Sec. 511): Will assistance preclude use of financing for the purpose of aiding the efforts of the government of such country to repress the legitimate rights of the population of such country contrary to the Universal Declaration of Human Rights?	Yes
37. Publicity or Propaganda (FY 1991 Appropriations Act Sec. 516): Will assistance be used for publicity or propaganda purposes designed to support or defeat legislation pending before Congress, to influence in any way the outcome of a political election in the United States, or for any publicity or propaganda purposes not authorized by Congress?	No
38. Marine Insurance (FY 1991 Appropriations Act Sec. 563): Will any A.I.D. contract and solicitation, and subcontract entered into under such contract, include a clause requiring that U.S. marine insurance companies have a fair opportunity to bid for marine insurance when such insurance is necessary or appropriate?	Yes
39. Exchange for Prohibited Act (FY 1991 Appropriations Act Sec. 569): Will any assistance be provided to any foreign government (including any instrumentality or agency thereof), foreign person, or United States person in exchange for that foreign government or person undertaking any action which is, if carried out by the United States Government, a United States Official or employee, expressly prohibited by a provision of United States law?	No

B. CRITERIA APPLICABLE TO DEVELOPMENT ASSISTANCE ONLY	
1. Agricultural Exports (Bumpers Amendment) (FY 1991 Appropriations Act Sec. 521(b), as interpreted by conference report for original enactment): If assistance is for agricultural development activities (specifically, any testing or breeding feasibility study, variety improvement or introduction, consultancy, publication, conference, or training), are such activities: (1) specifically and principally designed to increase agricultural exports by the host country to a country other than the United States, where the export would lead to direct competition in that third country with exports of a similar commodity grown or produced in the United States, and can the activities reasonably be expected to cause substantial injury to U.S. exporters of a similar agricultural commodity; or (2) in support of research that is intended primarily to benefit U.S. producers?	Project assisted exports may compete with U.S. exports but are not expected to have a significant impact on U.S. exporters. An evaluation of export impact will be conducted prior to the provision of commodity specific assistance.
2. Tied Aid Credits (FY 1991 Appropriations Act, Title II, under heading "Economic Support Fund"): Will DA funds be used for tied aid credits?	N/A
3. Appropriate Technology (FAA Sec. 107): Is special emphasis placed on use of appropriate technology (defined as relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)?	Yes, through technical assistance and local currency incentive grants.
4. Indigenous Needs and Resources (FAA Sec. 281(b)): Describe extent to which the activity recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civic education and training in skills required for effective participation in governmental and political processes essential to self-government.	IDEA requires broad based participation and fosters private initiatives.

5. Economic Development (FAA Sec. 101(a)): Does the activity give reasonable promise of contributing to the development of economic resources, or to the increase of productive capacities and self-sustaining economic growth?	Yes
6. Special Development Emphases (FAA Secs. 102(b), 113, 281(a)): Describe extent to which activity will: (a) effectively involve the poor in development by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, dispersing investment from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using appropriate U.S. institutions; (b) encourage democratic private and local governmental institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries.	IDEA will increase incomes, particularly of the rural poor and will involve: a. poor in agricultural exports, c. support of self-help efforts, d. promotion of participation by women, and e. promotion of regional cooperation in agricultural trade.
7. Recipient Country Contribution (FAA Secs. 110, 124(d): Will the recipient country provide at least 25 percent of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed" country)?	Yes
8. Benefit to Poor Majority (FAA Sec. 128(b)): If the activity attempts to increase the institutional capabilities of private organizations or the government of the country, or if it attempts to stimulate scientific and technological research, has it been designed and will it be monitored to ensure that the ultimate beneficiaries are the poor majority?	Yes, IDEA includes an extensive monitoring and evaluation activity to assure beneficiary impact.

9. Abortions (FAA Sec. 104(f); FY 1991 Appropriations Act, Title II, under heading "Population, DA," and Sec. 535):	N/A
a. Are any of the funds to be used for the performance of abortions as a method of family planning or to motivate or coerce any person to practice abortions?	N/A
b. Are any of the funds to be used to pay for the performance of involuntary sterilization as a method of family planning or to coerce or provide any financial incentive to any person to undergo sterilizations?	N/A
c. Are any of the funds to be made available to any organization or program which, as determined by the President, supports or participates in the management of a program of coercive abortion or involuntary sterilization?	N/A
d. Will funds be made available only to voluntary family planning projects which offer, either directly or through referral to, or information about access to, a broad range of family planning methods and services?	N/A
e. In awarding grants for natural family planning, will any applicant be discriminated against because of such applicant's religious or conscientious commitment to offer only natural family planning?	N/A
f. Are any of the funds to be used to pay for any biomedical research which relates, in whole or in part, to methods of, or the performance of, abortions or involuntary sterilization as a means of family planning?	N/A
g. Are any of the funds to be made available to any organization if the President certifies that the use of these funds by such organization would violate any of the above provisions related to abortions any involuntary sterilization?	N/A

10. Contract Awards (FAA Sec. 601(e)): Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise?	Yes
11. Disadvantaged Enterprises (FY 1991 Appropriations Act Sec. 567): What portion of the funds will be available only for activities of economically and socially disadvantaged enterprises, historically black colleges and universities, colleges and universities having a student body in which more than 40 percent of the students are Hispanic Americans, and private and voluntary organizations which are controlled by individuals who are black Americans, Hispanic Americans, or Native Americans, or how are economically or socially disadvantaged (including women)?	N/A
12. Biological Diversity (FAA Sec. 119(g): Will the assistance: (a) support training and education efforts which improve the capacity of recipient countries to prevent loss of biological diversity; (b) be provided under a long-term agreement in which the recipient country agrees to protect ecosystems or other wildlife habitats; (c) support efforts to identify and survey ecosystems in recipient countries worthy of protection; or (d) by any direct or indirect means significantly degrade national parks or similar protected areas or introduce exotic plants or animals into such areas?	a. N/A b. N/A c. N/A d. No
13. Tropical Forests (FAA Sec. 118; FY 1991 Appropriations Act Sec. 533(c)-(e) & (g)):	
a. A.I.D. Regulation 16: Does the assistance comply with the environmental procedures set forth in A.I.D. Regulation 16?	Yes
b. Conservation: Does the assistance place a high priority on conservation and sustainable management of tropical forests? Specifically, does the assistance, to the fullest extent	N/A

feasible: (1) stress the importance of conserving and sustainable managing forest resources; (2) support activities which offer employment and income alternatives to those who otherwise would cause destruction and loss of forests, and help countries identify and implement alternatives to colonizing forested areas; (3) support training programs, educational efforts, and the establishment or strengthening of institutions to improve forest management; (4) help end destructive slash-and-burn agriculture by supporting stable and productive farming practices; (5) help conserve forests which have not yet been degraded by helping to increase production on lands already cleared or degraded; (6) conserve forested watersheds and rehabilitate those which have been deforested; (7) support training, research, and other actions which lead to sustainable and more environmentally sound practices for timber harvesting, removal, and processing; (8) support research to expand knowledge of tropical forests and identify alternatives which will prevent forest destruction, loss, or degradation; (9) conserve biological diversity in forest areas by supporting efforts to identify, establish, and maintain a representative network of protected tropical forest ecosystems on a worldwide basis, by making the establishment of protected areas a condition of support for activities involving forest clearance or degradation, and by helping to identify tropical forest ecosystems and species in need of protection and establish and maintain appropriate protected areas; (10) seek to increase the awareness of U.S. Government agencies and other donors of the immediate and long-term value of tropical forests; (11) utilize the resources and abilities of all relevant U.S. government agencies; (12) be based upon careful analysis of the alternatives available to achieve the best sustainable use of the land; and (13) take full account of the environmental impacts of the proposed activities on biological diversity?	1. N/A 2. Yes 3. No 4. Yes 5. Yes 6. No 7. No 8. No 9. No 10. No 11. N/A 12. Yes 13. No

c. Forest degradation: Will assistance be used for: (1) the procurement or use of logging equipment, unless an environmental assessment indicates that all timber harvesting operations involved will be conducted in an environmentally sound manner and that the proposed activity will produce positive economic benefits and sustainable forest management systems; (2) actions which will significantly degrade national parks or similar protected areas which contain tropical forests, or introduce exotic plants or animals into such areas; (3) activities which would result in the conversion of forest lands to the rearing of livestock; (4) the construction, upgrading, or maintenance of roads (including temporary haul roads for logging or other extractive industries) which pass through relatively undergraded forest lands; (5) the colonization of forest lands; or (6) the construction of dams or other water control structures which flood relatively undergraded forest lands, unless with respect to each such activity an environmental assessment indicates that the activity will contribute significantly and directly to improving the livelihood of the rural poor and will be conducted in an environmentally sound manner which supports sustainable development?	1. No 2. No 3. No 4. No 5. No 6. No
d. Sustainable forestry: If assistance relates to tropical forests, will project assist countries in developing a systematic analysis of the appropriate use of their total tropical forest resources, with the goal of developing a national program for sustainable forestry?	N/A
e. Environmental impact statements: Will funds be made available in accordance with provisions of FAA Section 117(c) and applicable A.I.D. regulations requiring an environmental impact statement for activities significantly affecting the environment?	Yes

14. Energy (FY 1991 Appropriations Act Sec. 533(c)): If assistance relates to energy, will such assistance focus on: (a) end-use energy efficiency, least-cost energy planning, and renewable energy resources, and (b) the key countries where assistance would have the greatest impact on reducing emissions from greenhouse gases?	N/A
15. Sub-Saharan Africa Assistance (FY 1991 Appropriations Act Sec. 562, adding a new FAA chapter 10 (FAA Sec. 496)): If assistance will come from the Sub-Saharan Africa DA account, is it: (a) to be used to help the poor majority in sub-Saharan Africa through a process of long-term development and economic growth that is equitable, participatory, environmentally sustainable, and	a. Yes
self-reliant; (b) to be used to promote sustained economic growth, encourage private sector development, promote individual initiatives, and help to reduce the role of central governments in areas more appropriate for the private sector;	b. Yes
(c) being provided in accordance with the policies contained in FAA section 102;	c. Yes
(d) being provided in close consultation with African, United States and other PVOs that have demonstrated effectiveness in the promotion of local grassroots activities on behalf of long-term development in Sub-Saharan Africa;	d. Yes
(e) being used to promote reform of sectoral economic policies, to support the critical sector priorities of agricultural production and natural resources, health, voluntary family planning services, education, and income generating opportunities, to being about appropriate sectoral restructuring of the Sub-Saharan African economies, to support reform in public administration and finances and to establish a favorable environment for individual enterprise and self-sustaining development, and to take into account, in assisted policy reforms, the need to protect vulnerable groups; (f) being used to increase agricultural production in ways that protect and restore the natural resource base, especially food production, to maintain and improve basic transportation and communication networks,	e. Yes

to maintain and restore the renewable natural resource base in ways that increase agricultural production, to improve health conditions with special emphasis on meeting the health needs of mothers and children, including the establishment of self-sustaining primary health care systems that give priority to preventive care, to provide increased access to voluntary family planning services, to improve basic literacy and mathematics especially to those outside the formal educational system and to improve primary education, and to develop income-generating opportunities for the unemployed and underemployed in urban and rural areas?	f. Yes. IDEA will foster sustainable agricultural practices and provide income-generating activities to the unemployed in the rural areas.
16. Debt-for-Nature Exchange (FAA Sec. 463): If project will finance a debt-for-nature exchange, describe how the exchange will support protection of: (a) the world's oceans and atmosphere, (b) animal and plant species, and (c) parks and reserves; or describe how the exchange will promote: (d) natural resource management, (e) local conservation programs, (f) conservation training programs, (g) public commitment to conservation, (h) land and ecosystem management, and (i) regenerative approaches in farming, forestry, fishing, and watershed management.	N/A
17. Deobligation/Reobligation (FY 1991 Appropriations Act Sec. 515): If deob/reob authority is sought to be exercised in the provision of DA assistance, are the funds being obligated for the same general purpose, and for countries within the same region as originally obligated, and have the House and Senate Appropriations Committees been properly notified?	
18. Loans	
a. Repayment capacity (FAA Sec. 122(b)): Information and conclusion on capacity of the country to repay the loan at a reasonable rate of interest.	N/A

b. Long-range plans (FAA Sec. 122(b)): Does the activity give reasonable promise of assisting long-range plans and programs designed to develop economic resources and increase productive capacities?	N/A
c. Interest rate (FAA Sec. 122(b)): If development loan is repayable in dollars, is interest rate at least 2 percent per annum during a grace period which is not to exceed ten years, and at least 3 percent per annum thereafter?	N/A
d. Exports to United States (FAA Sec. 620(d)): If assistance is for any productive enterprise which will compete with U.S. enterprises, is there an agreement by the recipient country to prevent export to the U.S. of more than 20 percent of the enterprise's annual production during the life of the loan, or has the requirement to enter into such an agreement been waived by the President because of a national security interest?	N/A
19. Development Objectives (FAA Secs. 102(a), 111, 113, 281(a)): Extent to which activity will: (1) effectively involve the poor in development, by expanding access to economy at local level, increasing labor-intensive production and the use of appropriate technology, spreading investment out from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using the appropriate U.S. institutions; (2) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward better life, and otherwise encourage democratic private and local governmental institutions; (3) support the self-help efforts of developing countries; (4) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (5) utilize and encourage regional cooperation by developing countries?	1. IDEA is broad based and participatory. 2. IDEA fosters individual initiative. 3. IDEA is based on self-help principles. 4. IDEA provides special measures to ensure the participation of women. 5. IDEA promotes regional cooperation by developing countries.

20. Agriculture, Rural Development and Nutrition, and Agricultural Research (FAA Secs. 103 and 103A):	
a. Rural poor and small farmers: If assistance is being made available for agriculture, rural development or nutrition, describe extent to which activity is specifically designed to increase productivity and income of rural poor; or if assistance is being made available for agricultural research, has account been taken of the needs small farmers, and extensive use of field testing to adapt basic research to local conditions shall be made.	IDEA will provide technical assistance to small farmers. Research provided will be adaptive and include on-farm crop testing.
b. Nutrition: Describe extent to which assistance is used in coordination with effort carried out under FAA Section 104 (Population and Health) to help improve nutrition of the people of developing countries through encouragement of increased production of crops with greater nutritional value; improvement of planning, research, and education with respect to nutrition, particularly with reference to improvement and expanded use of indigenously produced foodstuffs, and the undertaking of pilot or demonstration programs explicitly addressing the problem of malnutrition of poor and vulnerable people.	N/A
c. Food security: Describe extent to which activity increases national food security by strengthening national food reserves, with particular concern for the needs of the poor, through measures encouraging domestic projection, building national food reserves, expanding available storage facilities, reducing post harvest food losses, and improving food distribution.	IDEA will encourage increased production, reduction of post harvest losses, and improved food distribution.
21. Population and Health (FAA Secs 104 (b) and (c): If assistance is being made available for population or health activities, describe extent to which activity emphasizes low-cost, integrated delivery systems for health, nutrition and family planning for the poorest people, with particular attention to the needs of	N/A

mothers and your children, using paramedical and auxiliary medical personnel, clinics and health posts, commercial distribution systems, and other modes of community outreach.	
22. **Education and Human Resources Development** (FAA Sec. 105): If assistance is being made available for education, public administration, or human resource development, describe (a) extent to which activity strengthens nonformal education, makes formal education more relevant, especially for rural families and urban poor, and strengthens management capability of institutions enabling the poor, and strengthens management capability of institutions enabling the poor, and strengthens management capability of institutions enabling the poor to participate in development; and (b) extent to which assistance provides advanced education and training of people of developing countries in such disciplines as are required for planning and implementation of public and private development activities.	a. IDEA will provide TA to farmers and exporters in the areas of production, processing, management, business, and trade. IDEA will strengthen local institutions. IDEA will provide local in-service training. b. IDEA will provide for long- and short-term training.
23. **Energy, Private Voluntary Organizations, and Selected Development Activities** (FAA Sec. 106): If assistance is being made available for energy, private voluntary organizations, and selected development problems, describe extent to which activity is:	N/A
a. concerned with date collection and analysis, the training of skilled personnel, research on and development of suitable energy sources, and pilot projects to test new methods of energy production; and facilitative of research on and development and use of small-scale, decentralized, renewable energy sources for rural areas, emphasizing development of energy resources which are environmentally acceptable and require minimum capital investment;	N/A
b. concerned with technical cooperation and development, especially with U.S. private and voluntary, or regional and international development, organizations;	N/A

c. research into, and evaluation of, economic development processes and techniques;	N/A
d. reconstruction after natural or manmade disaster and programs of disaster preparedness;	N/A
e. for special development problems, and to enable proper utilization of infrastructure and related projects funded with earlier U.S. assistance;	N/A
f. for urban development, especially small, labor-intensive enterprises, marketing systems for small producers, and financial or other institutions to help urban poor participate in economic and social development.	N/A
24. Sahel Development (FAA Secs. 120-21). If assistance is being made available for the Sahelian region, describe: (a) extent to which there is international coordination in planning and implementation; participation and support by African countries and organizations in determining development priorities; and a long-term, multidonor development plan which calls for equitable burden-sharing with other donors; (b) whether a determination has been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of projects funds (dollars or local currency generated therefrom).	N/A

C. CRITERIA APPLICABLE TO ECONOMIC SUPPORT FUNDS ONLY	
1. Economic and Political Stability (FAA Sec. 531(a)): Will this assistance promote economic and political stability? To the maximum extent feasible, is this assistance consistent with the policy directions, purposes, and programs of Part I of the FAA?	DFA money is used; no ESF funds are used. Therefore N/A
2. Military Purposes (FAA Sec. 531(e)): Will this assistance be used for military or paramilitary purposes?	N/A
3. Commodity Grants/Separate Accounts (Faa Sec. 609): If commodities are to be granted so that sale proceeds will accrue to the recipient country, have Special Account (counterpart) arrangements been made?	N/A
4. Generation and Use of Local Currencies (FAA Sec. 531(d)): Will ESF funds made available for commodity import programs or other program assistance be used to generate local currencies? If so, will at least 50 percent of such local currencies be available to support activities consistent with the objectives of FAA sections 103 through 106?	N/A
5. Cash Transfer Requirements (FY 1991 Appropriations Act, Title II, under heading "Economic Support Fund," and Sec. 575(b)). If assistance is in the form of a cash transfer:	N/A
a. Separate account: Are all such cash payments to be maintained by the country in a separate account and not to be commingled with any other funds?	N/A

b. Local currencies: Will all local currencies that may be generated with funds provided as a cash transfer to such a country also be deposited in a special account, and has A.I.D. entered into an agreement with that government setting forth the amount of the local currencies to be generated, the terms and conditions under which they are to be used, and the responsibilities of A.I.D. and that government to monitor and account for deposits and disbursements?	N/A
c. U.S. Government use of local currencies: Will all such local currencies also be used in accordance with FAA Section 609, which requires such local currencies to be made available to the U.S. government as the U.S. determines necessary for the requirements of the U.S. Government, and which requires the remainder to be used for programs agreed to by the U.S. Government to carry out the purposes for which new funds authorized by the FAA would themselves be available?	N/A
d. Congressional notice: Has Congress received prior notification providing in detail how the funds will be used, including the U.S. interests that will be served by the assistance, and, as appropriate, the economic policy reforms that will be promoted by the cash transfer assistance?	N/A

ANNEX M
DETAILED SURVEY METHODOLOGIES

A. Targeted commodity studies for tracking Incomes

A Targeted Commodity Baseline Survey and two follow-up surveys will provide information which will be necessary to fully measure changes in incomes, returns to labor and non-traditional export production of men and women engaged directly and indirectly in NTAE production and marketing throughout the life of the project.

Tracking impact on the income of men and women engaged in the NTAE sector requires surveys to collect information beyond that available in existing reports. These surveys have two objectives:

- Determining changes in income and employment distributions of men and women in the targeted NTAE sectors
- Determining whether increased income of men and women in these sectors has improved their quality of life

Surveys will obtain gender-disaggregated data on the number of employees and company wage bill for each enterprise engaged in production, processing, marketing or exporting of supported NTAE products, thus tracking impacts on the income of affected men and women.

Analysis will compare firms in different sub-sectors, large vs. small companies, and Ugandan vs. joint-venture or foreign-owned firms, assessing impact measured by number of new jobs, total number of employees, and wages for men and women.

A.1 Survey Design

IDEA plans three surveys: a *Targeted Commodity Baseline Survey (for selected NTAEs)*[1], initiated within six months of project start, a *Mid-term Survey* at the beginning of year three, and a *Final Survey* in year five. All three should follow essentially the same design. The research contractor selected will refine the final design based on information from the field. The following design is provided as a guide.

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[1] There is a Pilot Baseline survey currently going on for tracking rural men's and women's income. Depending on the outcome, it is envisaged that it will be blown out to cover a larger sample representative of the whole country to form the Major Baseline survey report before Project start, which can then be followed by the Targeted Commodity Baseline Survey specifically for IDEA Project.

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A panel of initial respondents should be traced throughout, and a sample of entrepreneurs entering the sector added at each stage. Data from these surveys will be used for both monitoring and evaluation.

The Targeted Commodity Baseline Survey will establish initial values for employment and personal income in the non-traditional export sector. The survey will sample heads of enterprises throughout the chain linking producers and exporters. The interview will cover number of employees and wages by gender, for each enterprise. Thus, the Mid-term and Final Surveys will reflect impact on men and women throughout the economic sector.

A.2 Sampling

For high-value NTAE crops, only a few firms are exporting and the baseline survey should be able to cover all of these. For grains and beans, a listing of the universe can be compiled with the assistance of associations such as the Uganda Grain Exporters Association (UGEA). The Targeted Commodity Baseline Survey sample could then be drawn from this listing using a systematic random sampling method.

A sub-sample of 20 exporters--two each for floriculture, vegetables, and "other" and four each for spices, cereals, and beans--will be selected for pursuing the universe of suppliers, wholesalers, transporters and producers. Suppliers and producers will be identified by tracing the chain back from the exporting firm to the producer. Detailed procedures for sampling each sector will be developed based on the initial socio-economic studies described below in the special studies section. An average of four producers and two processors will be sub-sampled for each exporter, for a total sample of 40 processors/distributors and 80 producers.

For the Mid-term and Final Surveys, the same panel of respondents will be interviewed. Even those who have left the business will be followed up, in so far as possible, to obtain reasons for quitting. In addition, forty new exporters (10 per sub-sector) will be added, sampled from new firms entering the field. This will result in exporter sample sizes of 40 and 80 respectively. Three producers and two processor/distributors will be interviewed for each exporter, bringing total sample sizes to 240 and 360 respectively (Exhibit IV-4).

Exhibit IV-4
Samples Sizes for Baseline, Mid-term and Final Surveys

SURVEY	EXPORTERS	PROCESSORS/ DISTRIBUTORS	PRODUCERS	TOTAL
Targeted commodity Baseline	20	40	80	140
Mid-Term	40	80	120	240
Final	60	120	180	360

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A.3 Interviews

The interview schedule will be brief, focusing on a few key variables: the amount and value of exports, earnings of the firm, number of employees, and wages. The same schedule will be used for exporters, producers, processors, and distributors. Data will be tabulated by background variables such as gender, product, and firm size.

Producers, processors and distributors supplying NTAE exporters will be interviewed to capture the results of NTAE growth on those who are the principal suppliers of the exporting firms. The chain between producer and exporter will vary by product. In some cases, the exporting firm may also be the producer, but in all sectors there will be some differentiation between exporters, producers and others. The category of "processors and distributors" includes all wholesalers, transporters, brokers and handlers linking producer and exporter. This general categorization should apply across industry sectors.

Analysis will present the income distribution of individuals engaged in non-traditional exports, whose lives may be expected to be improved due to direct and indirect effects of increasing non-traditional exports. Mid-term and final surveys will permit evaluating the actual impact of the IDEA Project.

B. Methodology for Socio-economic Studies

In each sector, a quota sample of eighty respondents will be selected in accordance with Exhibit II-5, to ensure variation across enterprise size and gender difference:

Exhibit IV-5: Quotas for Socio-economic Studies

Size of Enterprise	Men	Women
Large	20	20
Small	20	20

Interviewers will obtain descriptions of the types and sizes of enterprises at various vertical positions in the production, distribution and exporting chain, and the job positions and activities involved in the process. Then, they will study the socio-cultural characteristics of individuals engaged in the sectors, in order to assess who will reap the major benefits. Particular attention will be paid to reporting impacts in a gender-disaggregated fashion, and to understanding any special constraints based on gender.

C. Methodology for Border Trade Study

The Border Trade study will concentrate on the Kenya, Sudan and Rwanda borders and will focus on cereals and beans. As in the socio-economic studies, a quota sample will be used to assure variation by gender and size of enterprise. One hundred sixty traders will be interviewed, equal numbers of men and women and equal number of small versus medium or large enterprises.

The interview will provide the information needed to describe the traders' activities, identify major constraints, and assess the impact of changes introduced by IDEA and ANEPP. Analysis will assess differential impact by type and size of enterprise and gender, and will consider implications for IDEA of the special situations and constraints of border traders.

ANNEX N

AID/W CABLES CONFERRING AUTHORITIES

DO NOT REMOVE FROM BACKING SHEET UNTIL READY FOR FILE

UNCLASSIFIED STATE 294859

ACTION: AID-2 INFO: AMB DCM

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RECEIVED 28 SEP 1993 USAID/UGANDA

LOC: 51 547
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CN: 51275
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E.O. 12356: N/A
TAGS:
SUBJECT: AUTHORIZATION TO OBLIGATE $750,000 IN FY 93: INVESTMENT IN DEVELOPING EXPORT AGRICULTURE (IDEA) - 617-0125

REF: (A) 92 STATE 309693 (B) STATE 281014.

1. DIRECTOR, AFR/EA HEREBY AUTHORIZES THE MISSION DIRECTOR, USAID/UGANDA, OR THE PERSON ACTING IN THAT CAPACITY, TO OBLIGATE UP TO DOLS. 750,000 (SEVEN HUNDRED FIFTY THOUSAND) FOR THE IDEA PROJECT, 617-0125, IN FY 93.

2. REF A, PARA 9F, DAA/AFR DELEGATED AUTHORITY TO THE MISSION DIRECTOR, USAID/UGANDA, TO APPROVE THE PID AND PP IN THE FIELD FOR AN FY 94 OBLIGATION. REF A TRANSMITTED THE OUTCOME OF AID/W REVIEW OF THE FY 94 ABS FOR UGANDA ON 23 SEPTEMBER 1992. SINCE THIS DELEGATION OF AUTHORITY, THE NAME OF THE PROJECT HAS CHANGED, HOWEVER, PROJECT GOAL, PURPOSE AND ELEMENTS REMAIN UNCHANGED.

3. LIFE OF PROJECT FUNDING LEVELS FOR IDEA IS DOLS 25 MILLION. INITIAL OBLIGATION WAS ORIGINALLY PLANNED FOR FY 94, BUT MISSION REQUESTED SOME FUNDING DURING FY 93 IN ORDER TO BEGIN EARLY IMPLEMENTATION. THE BUREAU IDENTIFIED DOLS 750,000 TO FUND INITIAL IMPLEMENTATION OF IDEA IN FY 93 AND TRANSMITTED BUDGET ALLOWANCE FOR THIS AMOUNT PER REF B.

4. PLEASE ADVISE AFR/DP BY IMMEDIATE CABLE AND FAX WHEN DOLS 750,000 OBLIGATION IS MADE.
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RUEHNR/AMEMBASSY NAIROBI PRIORITY
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CHRG: AID
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E.O. 12356: N/A
TAGS:
SUBJECT: SSX ALLOWANCE - UGANDA

1. APPROPRIATION 72-11X1014, BUDGET PLAN CODE GSSX-93-21617-KG13 ESTABLISHED FOR DOLLARS 750,000 FOR PROJECT 617-0125, INVESTING IN DEVELOPING EXPORT AGRICULTURE. TOTAL ALLOWED TO DATE UNDER THIS BPC IS DOLLARS 750,000. NOTE: THESE ARE SECTION 517 FUNDS.

2. ADVICE OF ALLOWANCE FOLLOWS.
CHRISTOPHER
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UNCLASSIFIED STATE 281014

DUE DATE 9/15
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