



**UGANDA: INVESTMENT IN DEVELOPING
EXPORT AGRICULTURE (IDEA)**

INPUT TO PROJECT DESIGN

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Submitted to:

USAID/Kampala, Uganda

Submitted by:

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July 10, 1993

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Reference: Investing in Developing Export Agriculture, 617-0125, Project Paper Sections Prepared Under IQC No. PCE-0001-I-00-2051-00

Dear Jim and Susan:

Chemonics International is pleased to deliver the draft project paper specified under Delivery Order No. 7, under IQC Contract No. PCE-0001-I-00-2051-00, which relates to the proposed "Investment in Developing Export Agriculture" project # 617-0125, in Uganda. The draft contains the sections required by A.I.D. Handbook 3, and as outlined under Article three, Statement of Work, Delivery Order No. 7.

This draft incorporates contributions made by the five IDEA team members: Kimball M. Kennedy III, institutional specialist/team leader; Bart Sensenig, rural sociologist/economist; David Neubert, production/marketing specialist; Perry Walker, agribusiness specialist and; David Picha, research/university training specialist. Their contributions would not have been possible without the cooperation and assistance they received throughout their stay in Uganda (May 16-June 25, 1993), from the Government of Uganda, private individuals, and USAID Mission staff in Kampala.

Further contributions were also incorporated into this draft following the IDEA Workshop, which was held at the Sheraton Hotel on June 14, 1993 and attended by 80 people representing a cross section of the GOU and other donors, as well as representatives of Uganda's private sector (see Annex I, Summary of Workshop Proceedings).

Finally, we also incorporated the changes suggested in your June 29, 1993 email. We very much appreciated your candor and professionalism, and we found your comments very insightful and useful in formulating this final draft. We would be pleased to respond to any further questions you may have concerning this document.

Sincerely yours,

A handwritten signature in dark ink, appearing to read 'Kimball M. Kennedy III', written in a cursive style.

Kimball M. Kennedy III
IDEA Team Leader

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A special note of thanks goes to Nimrod Waniala, deputy director of EPADU, who did an excellent job as master of ceremonies for the Design Workshop held on June 14, 1993, at the Sheraton. The workshop was attended by over 80 invited guests representing a broad cross section of NTAE interests in Uganda. The recommendations that were received from the workshop participants were taken into careful consideration and incorporated into the final design.

It is sincerely hoped that the participatory and collaborative process that has been put in place by the GOU and USAID/Uganda to further develop NTAEs will result in the successful finalization and implementation of the IDEA project.

LIST OF ACRONYMS

ac	acre
ACDI	Agricultural Cooperative Development International
ACP	African, Caribbean and Pacific countries
ADC	Agribusiness Development Center
AEATRI	Agricultural Engineering and Appropriate Technology Research
ANEPP	Agricultural Non-traditional Export Promotion Program
APDF	The Africa Project Development Facility
ARC	Agricultural Resource Center
ARN	Agricultural/Natural Resources Office, US/AID
BAT	British American Tobacco
BOU	Bank of Uganda
CB	The Co-operative Bank Ltd.
CEO	Chief Executive Officer
CIAT	Centro de Investigación de Agricultura Tropical
CIMYT	Centro de Investigación de Maíz y Trigo
COP	Chief of Party
DAO	District Agricultural Officer
DFCU	Development Finance Company of Uganda Ltd.
DFI	District Farm Institute
EC	European Community
EDC	Export Development Committee
EDP	Enterprise Development Project
EOPS	End of Project Status
EPADU	Export Policy Analysis and Development Unit
EPRC	Economic Policy Resource Center
FA	Field Assistant
FAO	Food and Agriculture, United Nations
FIRI	Fisheries Research Institute, Jinja
FMI	Food Marketing Institute
FORI	Forestry Research Institute, Kifu
FOSRI	Food Science and Technology Research Institute
FOT	Free On Truck
GDP	Gross Domestic Product
GOU	Government of Uganda
ha	hectare
HEA	Horticultural Exporters Association
HVH	High Value Horticulture
IBEA	Imperial British East Africa Company
IDEA	Investment in Development Export Agriculture
IESC	International Executive Service Corps
IFC	International Finance Corporation

IFT	Institute of Food Technologists
IITA	International Institute of Tropical Agriculture Institute
IPM	Integrated Pest Management
IRR	Internal Rate of Return
ITC	International Trade Center
JV	Joint Venture
KARI	Kawanda Agricultural Research Institute
kg	kilogram
KUF	Kabanyolo University Farm
LIRI	Livestock Health Research Institute, Tororo
LOE	Level of Effort
LOP	Life of Project
LT	Long Term
MAAIF	Ministry of Agriculture, Animal Industries and Forestry
MCIC	Ministry of Commerce, Industry and Cooperatives
MFAD	Manpower for Agricultural Development (A USAID Project)
MFEP	Ministry of Finance and Economic Planning
MIS	Market Information Service
MNS	Market News Service
MOES	Ministry of Education and Services
MTI	Ministry of Trade and Industry
MU	Makerere University
NAARI	Namulonge Agricultural and Animal Production Research Institute
NADB	National Agricultural Data Bank
NARO	National Agricultural Research Organization
NARS	National Agriculture Research System
NPA	Non Project Assistance
NPED	National Program for Export Diversification
NRA	National Resistance Army
NRC	National Resistance Council (Uganda's Parliament)
NRM	National Resistance Movement (The current regime)
NTAE	Non-traditional Agricultural Exports
NTE	Non-traditional Exports
NUMA	Northern Ugandan Manufacturer's Association
ODA	Overseas Development Administration
OPIC	Overseas Private Investment Corporation
PA	Project Assistance
PCC	Project Coordination Committee
PEC	Presidential Economic Council
PID	Project Identification Document
PMA	Produce Marketing Association
PP	Project Paper
PRC	People's Republic of China
PTA	Preferential Trade Area
PY	Project Year
RAO	Regional Agricultural Officer

RC	Resistance Council (I through V from village to District levels)
RET	Research/Education/Training
ROI	Return on Investment
SAARI	Serere Agricultural and Animal Production Research Institute
SOW	Scope of Work
ST	Short Term
TA	Technical Assistance
UCA	Uganda Co-operative Alliance Ltd.
UCB	Uganda Commercial Bank
UCFA	Uganda Commercial Farmers Association
UCFA	Uganda Commercial Farmer's Association
UDB	Uganda Development Bank
UEDA	Ugandan Export Development Agency
UEPC	Uganda Export Promotion Council
UFA	Uganda Floricultural Association
UFFVA	United Fresh Fruit and Vegetable Association
UGEA	Uganda Grain Exporter's Association
UHEA	Uganda Horticultural Exporters Association
UIA	Uganda Investment Authority
UIA	Uganda Investment Authority
UM	University of Makerere
UMA	Uganda Manufacturers Association
UN	United Nations
UNCCI	Uganda National Chamber of Commerce and Industry
UNCCI	Uganda Nation Chamber of Commerce and Industry
UNDP	United Nations Development Programme
UNFA	Uganda National Farmers Association
UNFA	Uganda National Farmer's Association
UNICEF	United Nations Children's Education Fund ??
UNIV	University: Makerere University
UPFA	Uganda Progressive Farmer's Association
UPFA	Uganda Progressive Farmer's Association
US\$	United States dollar
USA	United States of America
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
Ush	Uganda shilling
VCF	Venture Capital Fund
VOCA	Volunteers in Overseas Cooperative Assistance
WB	World Bank
WFP	World Food Program

EXECUTIVE SUMMARY

This document provides design input for the Investment in Developing Export Agriculture (IDEA) project as envisioned by USAID/Kampala. The project is intended to support the Government of Uganda's (GOU) objective of diversification in agricultural exports by strengthening non-traditional agricultural export (NTAE) promotion capabilities.

IDEA is a \$__ million, five-year project to assist Uganda in promoting and diversifying non-traditional agricultural exports (NTAEs), thereby improving incomes for NTAE producers and exporters. In the Ugandan context, where coffee exports account for over 95 percent of all foreign exchange earnings, non-traditional agricultural exports are defined broadly as "all non-coffee agricultural exports." This unique definition includes low-value food crops such as maize and beans for which there is a large demand in the regional market. Thus, the IDEA Project has two major components:

- High-value non-traditional exports to world markets
- Low-value food crop exports to regional markets

Initially, both components will concentrate on a few targeted crops which have been identified as having high export potential:

High-value crops

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

Low-value crops

- Cereals
- Beans
- Oilseeds

Over time, IDEA will include 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.

A. Rationale

Over 95 percent of Uganda's foreign exchange earnings depend on coffee exports. With the fall in world coffee prices from a high of \$3.10/kg in 1980 to under \$1.00 today, this situation has become economically untenable. Since 1986, President Museveni has targeted export diversification as a major economic goal, and has pursued the policies of

political inclusiveness and economic liberalization needed to pave the way for peace and progress.

International donors have rallied around President Museveni and his constant efforts to reverse the effects of previous mismanagement. Agreements with the IMF and World Bank to stabilize the economy were closely followed by a return of donor interest in supporting this solid and committed government. Rampant inflation was curbed, dropping from triple digits to under twenty percent, and state control over the agricultural sector, the backbone of the economy, has been dismantled. With such impressive improvements in the macro-economic policy environment, the time is now ripe for project-based technical assistance to assist exporting firms.

The GOU has recently approved a broad-based World Bank Export Promotion and Development Program to build both institutional and infrastructure export capacities. This umbrella program will integrate the export development initiatives of various donors. USAID's IDEA project will constitute an important element in this combined effort.

B. Project Purpose

The purpose of the IDEA project is "to increase incomes, particularly rural men's and women's returns to labor, from selected agricultural non-traditional exports." Thus, beyond augmenting and diversifying non-traditional agricultural exports and contributing to national foreign exchange earnings, the project is concerned with income benefits to individuals and families. This formulation also indicates concern for an equitable distribution of benefits to rural smallholders, both men and women. At the end of the project, Uganda should have a functioning NTAE private enterprise sector and a full range of export support services. Makerere University should have training programs producing graduates prepared for the NTAE sector, and a demand-driven contract research program targeted at NTAE problems.

C. Approach

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

- **Exporter emphasis:** technical assistance to both high- and low-value NTAE firms, to help make export projects financially viable.
- **Vertical integration:** coordinating all elements necessary for successful exports, from production through final shipping.
- **Experiential learning:** providing immediate earnings from targeted high-potential exports, then applying lessons learned to institutionalize NTAE capacities.
- **Capacity building:** building NTAE capacities of firms, producers, private sector associations, service providers, and related government agencies.

The project implementation unit, the ADC, will cease to exist at the end of the project, having instilled NTAE support services throughout the Ugandan private sector. This approach is intended to build industries, not bureaucracies.

D. The Agribusiness Development Center

The IDEA project will be implemented through the Agribusiness Development Center (ADC), which will provide technical assistance and export promotion services to NTAE firms and producers. The ADC will function like a demand-driven private sector entity, and will charge for its services. Its charges, however, will be calculated to permit relatively wide utilization of ADC services while ensuring the commitment and reasonable potential of applicants. The Center will therefore be a project entity, dependent on project funds and will cease to exist at the end of the project, having provided the initial thrust for NTAE development and instilled the capacities necessary for continuation through local public and private institutions. Substantial resources will be devoted to developing NTAE sector support capacities at Makerere University and demand-driven research capabilities through the National Agricultural Research Organization (NARO), as well as other private and international research organizations.

The ADC will be governed by a Board of Directors, which will be predominantly private sector but will include representatives of relevant GOU ministries. When the GOU reorganizes the Uganda Export Promotion Council (UEPC) and revitalizes it as the Uganda Export Development Agency (UEDA), the ADC will act as its NTAE promotion arm, thus maintaining its private sector imprint while establishing essential linkages with policy makers. ADC will be set up outside the UEDA and be controlled by a chief executive officer (CEO), who will manage the operations of the ADC as a "one-stop shop" for all necessary information, technical assistance, and training for current and potential NTAE producers and exporters. Initially, the ADC will provide most information and services directly to clients. Later, as capacity building develops and more services are institutionalized elsewhere, ADC may function as a clearinghouse, directing clients to other service centers.

By providing customized technical assistance to potential NTAE producers and exporters, IDEA will complement the policy-oriented initiatives of USAID's Agricultural Non-traditional Export Promotion Program (ANEPP), designed to strengthen the enabling environment for private sector development.

The ADC will have six divisions relating to functional areas of operation:

- Customized technical assistance
- Marketing
- Finance
- Association development
- Research, education, and training
- Policy coordination

The customized technical assistance division will provide one-on-one technical assistance to firms and producers on a case-by-case basis. In most instances the expertise will be highly specialized, for example, a rose production specialist assigned to a particular firm for up to six months. Customized technical assistance will be tailored to meet specific technical needs of the targeted firm or producer, which would not be handled through ADC's other divisions.

The marketing division will handle all matters related to marketing information, market contacts, and identification of joint-venture prospects. The division will work in close cooperation with the UIA for joint-venture prospects, and with other agencies and organizations in developing marketing information and contacts.

The finance division will work closely with APDF staff, especially if an in-country office is established as is currently under consideration. Since APDF targets NTAE projects valued at \$250,000 and above, ADC's finance division will focus on providing financial services to smaller NTAE projects under consideration that would not qualify for APDF assistance.

The association development division will liaise directly with producer, exporter, and industry associations. Over the life of the project, the division will be responsible for preparing these associations to take over ADC functions such as identifying new product markets and contacts for its members. The division will facilitate the growth of commodity-specific associations as individual NTAEs develop. In addition, associations will be directly linked to the public sector through the ADC's policy coordination division, as described below.

The research, education, and training division will establish and carry out a market-driven NTAE research program, assist with the development and implementation of a revised curriculum in selected Makerere University departments, and develop a training program that meets the needs of the emerging NTAE sector.

The policy coordination division will be closely linked with the association development division, to foster a more open and meaningful dialogue between the public and private sectors. This division will coordinate with associations, ANEPP, the private sector, and government officials, to facilitate dialogue and analysis leading to policy and regulatory reforms needed in the NTAE sector.

E. Delivery Mechanisms

The IDEA project, through the ADC, will initiate a multi-pronged set of activities carried out through eight separate but interconnected delivery mechanisms:

- *Financial/investment linkages* to match potential NTAE entrepreneurs with sources of financing and investment in cooperation with the APDF.

- **Market information** to refine and develop a "market-based" information system and provide information to NTAE users, utilizing resources such as PRONET.
- **Market contacts** to introduce local NTAE firms to potential buyers, service providers, and joint-venture partners through market visits, trade fairs, etc.
- **Participatory small grants** to "jump-start" selected businesses and explore opportunities by awarding small matching grants.
- **Strengthening associations** to institutionalize capacity for market information and contacts, technical assistance and training, research/consulting services and GOU information exchange and lobbying.
- **Research, education, and training** to develop a demand-drive contract research program responsive to NTAE needs; to develop Makerere University programs to support long term human resource development in the NTAE crop area; and to design and implement a training program to address production and postharvest constraints limiting NTAE development.
- **Customized technical assistance** to provide targeted short- and intermediate-term "one-on-one" technical assistance to NTAE firms and producers.
- **Administrative/regulatory policy coordination and reform** to facilitate dialogue between private and public sectors, encourage information sharing and feedback, and influence agribusiness-related policies, laws, and regulations.

F. Project Beneficiaries and Outputs

The most immediate project impact will be a better functioning NTAE sector, including private firms, associations, and service organizations, as well as public sector support agencies. Key beneficiary institutions will include:

- Private firms (exporters, marketing firms, and producers)
- Industry associations
- Exporter associations
- Producer associations
- Support sector institutions (financial, consulting, etc.)

High-value crops are the customary focus of NTAE development efforts. Because of their high commodity prices, these crops can earn substantial foreign exchange. They also contribute to the important security objective of diversifying the export product mixture. In the unique Ugandan situation, however, the number of beneficiaries impacted by high-value NTAE initiatives will be relatively small compared with those assisted through regional exports of low-value food crops. High-value crop exports can be expected to benefit approximately 200,000 Ugandans and earn in excess of \$20 to \$25 million over five years. Major beneficiaries will be:

- **Spice and essential oil producers:** 140,000 beneficiaries over five years impacted either directly or indirectly; 5,000 smallholders directly targeted.
- **Floriculture producers:** 40-50 cut-flower farms after five years managing 78 hectares, employing 1,400 workers, and generating \$15-\$18 million per year in revenue.
- **Fruit and vegetable producers:** 28,000 direct or indirect beneficiaries over five years: 1,000 direct, 4,000 in the service sector, and 23,000 dependents.

Exports of low-value food crops will have a potential impact on many more smallholders than high-value exports. Over two million Ugandans will benefit either directly or indirectly from project-assisted exports of low-value food crops during the first five years of the project. Many will receive multiple benefits from project initiatives with respect to cereals, beans, and oilseeds.

SECTION I

PROJECT RATIONALE AND DESCRIPTION

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A. Introduction

This section reviews the background of the Investment in Developing Export Agriculture (IDEA) project, summarizes its rationale and objectives, and describes the project in detail.

IDEA is a \$__ million, five-year project to assist Uganda in promoting and diversifying non-traditional agricultural exports (NTAEs), thereby improving incomes for NTAE producers and exporters. In the Ugandan context, where coffee exports account for over 95 percent of all foreign exchange earnings, non-traditional agricultural exports are defined broadly as "all non-coffee agricultural exports." This unique definition includes low-value food crops such as maize and beans, for which there is a large demand in the regional market. Thus, the IDEA project has two major components:

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- Vegetables: snow peas and asparagus

Low-value crops

- Cereals
- Beans
- Oilseeds

Future efforts will expand to include 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.

The IDEA project will be implemented through the Agribusiness Development Center (ADC), which will provide technical assistance and export promotion services to NTAE firms and producers. The Center will function like a demand-driven private sector entity, and will charge for its services. Its charges, however, will be calculated to permit relatively

wide utilization of ADC services while ensuring the commitment and reasonable potential of applicants. The ADC will therefore be a project entity dependent on project funds, and will cease to exist at the end of the project, having provided the initial thrust for NTAE development and instilled the capacities necessary for continuation through local public and private institutions. Substantial resources will be devoted to developing NTAE sector support capacities at Makerere University and demand-driven research capabilities through the National Agricultural Research Organization, as well as other private and international research organizations.

The ADC will be governed by a board of directors, which will be predominantly private sector but will include representatives of relevant GOU ministries. When the GOU reorganizes the Uganda Export Promotion Council (UEPC) as the Uganda Export Development Agency, the ADC will act as its NTAE promotion arm, thus maintaining its private sector impact while establishing essential linkages with policy makers.

By providing customized technical assistance to potential NTAE producers and exporters, IDEA will complement the policy-oriented initiatives of USAID's Agricultural Non-traditional Export Promotion Program (ANEPP), designed to strengthen the enabling environment for private sector development.

B. Background

B1. The Need for Non-traditional Agricultural Exports (NTAEs)

Historically, Great Britain sought to rule the source of the Nile in order to control Egypt, the passageway to India. This global political imperative drove the colonial forces that eventually left Uganda with the legacy of over 95 percent of its foreign exchange dependent on coffee exports. With the fall in world coffee prices from a high of \$3.10/kg in 1980 to under \$1.00 today, this situation became economically untenable.

In 1986 Uganda began increasing food production following an over 30 percent decline in per capita food output between 1975 and 1985. Since 1986 the country has experienced increasing political and economic stability. However, the value of exports in US dollars fell from 407 million to 166 million between 1986 and 1991. This loss was mainly due to falling world coffee prices and the weaker Uganda shilling.

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

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 traders export maize by truck, receive payment in Kenya shillings, and then purchase consumer goods for reexport to Uganda.

B2. Stabilization of the Macro Socio-economic Environment

B2a. Political Stability

Political stability is one of the key factors underlying Uganda's recent economic resurgence. From independence in 1962 until 1986, Uganda was racked by recurrent political violence. In 1972, Idi Amin waged an "economic war", expelling the Asian businessmen who controlled the economy. By the time Amin was defeated by Tanzanian soldiers in 1979, the country was left in economic shambles.

Since President Yoweri Museveni came to power in 1986, he has promoted a program of political inclusiveness and economic liberalization that has paved the way for peace and progress. The return of political stability has enabled current investment from abroad and revitalization of agricultural production (see Annex D). In 1986 President Museveni's National Resistance Movement (NRM) adopted a ten-point manifesto that emphasized among other points:

...movement away from dependence on export of primary raw materials toward diversification of exports and industrialization of the country. The goal is to bring about balanced development based on modern technology and skilled labor.

B2b. Economic Stability

International donors have rallied around President Museveni and his efforts to reverse the effects of previous mismanagement. Agreements with the IMF and World Bank to stabilize the economy were closely followed by a return of donor interest in supporting this solid and committed government. Rampant inflation was curbed, dropping from triple digits to under twenty percent, and state control over the agricultural sector, the backbone of the economy, has been dismantled.

The GOU has taken advantage of the large influx of external assistance to liberalize the trade and payments regime, removing the bulk of controls on the current account and allowing the exchange rate to float. Although Uganda's external debt service burden is very large, the GOU has taken responsible steps to negotiate with its creditors.

Finally, despite a disastrously low revenue/GDP ratio, fiscal reforms and prudent external and domestic non-bank financing of the government's deficit have been designed to contain potential inflationary pressures while moving the government toward greater solvency. As a result, GDP growth has exceeded population growth and the breadth and depth of economic activity has increased significantly.

Despite this laudable performance, Uganda remains very poor compared with other countries and with its own situation twenty years ago. Per capita income, primarily from agriculture, was \$220 in 1990 (World Bank Atlas), the ninth lowest in Sub-Saharan Africa. The external sector, with exports covering only about one-third of the import bill, is not viable without strong external assistance.

As other strong reformers in Africa have discovered, stabilization and adjustment policies are necessary, but insufficient for sustainable economic growth and solid improvements in living standards. Economic activity on a greatly expanded scale requires investment, which in turn requires an influx of external resources, given relatively low domestic savings rates (stemming from general poverty and poor fiscal positions).

Donor resources, by their very nature, are generally destined for the government or social sector. The true need is for external investment in productive economic activity to complement gradual increases in domestic saving and investment. Put simply, the challenge of development is finding ways to raise incomes and improve external economic viability.

Six private firms are actively exporting fresh vegetables to the 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, as well as the cut-flower industry.

The spice subsector is also attracting investment, with local businesspersons entering into farming agreements with smallholder vanilla growers, and others developing vanilla production and export joint ventures with foreign parities, such as the Peoples' Republic of China, to supply plant materials and technical assistance.

B3. Export Diversification Programs

GOU efforts over the past six years have focused on stabilizing and liberalizing the economy, which was previously state-controlled. The current administration has targeted expanded and diversified export earnings as a prerequisite to achieving its major objectives of five percent annual GDP growth, under 10 percent annual inflation, and significant reduction in debt burden and donor dependence. A key element of this development strategy is expansion of agriculture-based, non-coffee exports.

Recent donor support to Uganda has been steady and significant. Donors supporting non-traditional exports include the World Bank, UNDP, EEC, ODA, the African Development Bank, and United Nations Food and Agriculture Organization. But coordination has been difficult as the GOU has not yet developed a coherent strategy for the export sector. However, the past few months have witnessed the beginning of productive dialogue among the GOU and several donors.

This year, four important steps have been taken. First, a national Export Development Committee (EDC) was established to develop a coordinated national export program. Second, the GOU has recently (June 1993) given approval for a major broad-based World Bank Export Promotion and Development Project (EPDP) to build export capacities, including both institutional and infrastructure components. Third, under ANEPP, the GOU and USAID are jointly developing a framework that articulates the roles of the various export promotion institutions. Finally, the GOU has in principle agreed to restructure the Uganda Export Promotion Council (UEPC), to draw a majority of its board members from the private sector, and to give it greater autonomy (see Annex A).

Institutional analyses by EPADU, the World Bank, and USAID's ANEPP program have all recommended that the new export promotion institution be given a new name, to avoid the negative connotations of the past. In accordance with these recommendations, this paper will hereafter refer to the new export promotion office as the Ugandan Export Development Agency (UEDA), a name suggested in a workshop held as part of the IDEA design process.

For the past several months, the World Bank has been designing a non-traditional export project. The EEC has targeted sericulture (silk production) and the Bureau of Standards as export development foci. The UNDP is evaluating their horticulture research at Kawanda with a view to implementing a second phase. If a coherent strategy is formulated by the GOU and supported by the World Bank, interested donors are likely to cooperate. In such a case, a coordinated, complimentary approach to investment promotion, export development, and policy analysis will become a reality, and a platform will be established for dynamic growth of NTAE industries.

USAID's Agricultural Non-traditional Export Promotion Program (ANEPP), initiated in 1988, identified three types of constraints: (1) macro-economic policy, (2) legal and regulatory requirements, and (3) production and marketing limitations. ANEPP has focused on overcoming macro-economic policy constraints through support of the Export Policy Analysis and Development Unit (EPADU) in the Ministry of Finance and Economic Planning. In conjunction with World Bank efforts, ANEPP has been largely successful in policy reform. Recently the program has turned its attention to more sector-specific legal and regulatory constraints, and previously limited amounts of direct assistance to NTAE exporters (see Annex A).

B4. The Role of the IDEA project

The IDEA project will focus on overcoming basic NTAE production and marketing constraints, increasing the diversity and value of agricultural non-traditional exports, while ensuring that net returns associated with production for export increase correspondingly, especially for primary producers and exporters.

ANEPP identified five types of production and marketing constraints: (1) institutional/organizational support, (2) infrastructure, (3) availability of credit, (4) technology and information needs, and (5) asset ownership and tenure. IDEA will address

these while complementing continued efforts of the ANEPP program to alleviate legal and regulatory constraints. During the interim period until the IDEA project is up and running, ANEPP will continue to carry out a limited program of providing direct assistance to NTAE export enterprises.

C. Project Overview

C1. Project Objectives

Overall project objectives are broken down into more specific descriptions of the project goal, purpose, and end-of-project status.

C1a. Project Goal

The IDEA project goal is "to increase rural men's and women's incomes from non-traditional agricultural exports." This goal is identical to the Mission's Country Program Strategic Plan (CPSP) strategic objective related to the agriculture sector, an objective also supported by other Mission activities such as ANEPP.

C1b. Project Purpose

The purpose of the IDEA project is "to increase incomes, particularly rural men's and women's returns to labor, from selected agricultural non-traditional exports." In addition to supporting GOU goals, this formulation is congruent with USAID's mission goal of establishing sustainable improvements in the standard of living of Ugandans, and USAID's strategic objective in agriculture of increasing rural men's and women's incomes from agricultural exports. It implies concern with both augmenting non-traditional agricultural exports and ensuring that benefits accrue to rural smallholders, especially to women. Project interventions will assist Ugandans engaged in NTAE production and marketing to receive higher returns to labor, hence increasing their incomes.

Indicators of progress will include: (1) increase in real returns to household labor per person-day for selected export crops, (2) increase in total returns to household labor from selected export crops, (3) increase in the value of exported crops supported through the project, (4) increase in the percentage of agricultural labor force involved in production of supported export commodities, and (5) increase in the percentage of agricultural incomes attributable to production of supported exports.

C1c. End-of-project Status

By the end of the project, three main results shall have been accomplished:

- Uganda should have a fully functioning NTAE sector and support service sector facilitating new and existing agribusiness export activities on matters such as business plan development, market information and contacts, and financial linkages.

- Selected departments at Makerere University, such as the Department of Agricultural Economics, Food Technology, Agricultural Engineering, and Crop Science, shall be producing graduates prepared to provide intellectual leadership for expanding and developing the NTAE sector.
- Market-driven, contracted agricultural research, coordinated through the National Agricultural Research Organization (NARO), shall be effectively supporting development of the NTAE sector.

C2. Basic Approach

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

- Exporter emphasis
- Vertical integration
- Experiential learning
- Capacity building

C2a. Exporter Emphasis

The IDEA project will focus on providing direct technical assistance to firms that are either current or potential exporters of non-traditional agricultural products, both high- and low-value crops. It will also assist private sector associations and firms that provide services to these firms. Assistance will be aimed at helping individual traders and producers bring their export projects to the level of financial viability. IDEA will analyze constraints from the viewpoint of individual enterprises and assist in vertically integrating all components necessary for a successful export initiative. This approach is not only new to the USAID Mission, but also relatively new in Africa.

Projects in Swaziland, Guinea, and Ghana are currently adopting similar approaches. All remain young, but a few lessons can be drawn. 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 that face fledgling marketing firms competing with mature South African firms. There is a danger of overburdening 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* in Guinea 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 in the 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 be executed through a private sector NGO.

The Ghana Trade and Investment Program (TIP) has been in the field only 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.

In accordance with lessons learned elsewhere, IDEA project technical assistance delivery mechanisms will be concentrated within the project implementation unit, referred to as the Agribusiness Development Center (ADC). The Center will be located in the private sector, but linked through the project to GOU export promotion agencies. The ADC is not expected to become self-sustaining. It will charge nominal fees for its services in order to limit requests to serious potential exporters, but will rely on project funds for set-up, staffing, and operational costs.

The ADC will begin by concentrating on specific crops already identified as high-potential exports poised for take-off, and will target technical assistance efforts to specific exporters and producers showing promise within these sectors. This approach will permit practical "learning by doing" while simultaneously producing immediate economic impact.

The ADC will establish and publish clear criteria for selecting firms to be assisted, including the following:

- Potential financial viability
- Quantity and value of anticipated exports
- Potential ability of exporter to meet world market quality
- Potential number of smallholder producers benefitted
- Potential for both men and women to benefit
- Potential increases in income and returns to labor for smallholder producers
- Demonstrated capability and commitment of the entrepreneur

Beyond immediate exports, the ADC will strive to build capacity in assisted firms. IDEA is designed to build industries, not bureaucracies. Upon project completion, the ADC will cease to exist and long-term sustainability will rest primarily on capabilities instilled in participating firms. They should by that time be familiar with world market requirements, have established firm market contacts, and be following market information closely. These firms should also be familiar with alternative technological and business strategies and know where to learn about future innovations.

In addition to strengthening exporting firms, the ADC will assist various other actors in the production and marketing chain. These may include smallholder producers, women's groups, and wholesalers, as well as various private sector associations such as producer organizations, marketing cooperatives, and export councils. The ADC may also assist providers of support services such as transport, storage, refrigeration, and consulting. Even public sector entities like UEDA and UIA will be strengthened to develop necessary infrastructure and skills such as market information analysis and dissemination. In short, the

ADC will instill all the capabilities needed to leave Uganda with a fully functioning NTAE sector, prepared not only to continue initial exports but also to adapt to changing market conditions (see also C2d below).

C2b. Vertical Integration

The IDEA project will be designed on the basis of vertical integration, coordinating 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 needed inputs.

Project interventions will also encourage firms to create 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 project linkages to the UEDA, the ADC 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.

C2c. Experiential Learning

The IDEA project will adopt an action-oriented approach designed to increase NTAE exports immediately for a few crops already identified as having high export potential. This approach should result in concrete earnings while providing practical experience and identifying additional NTAE problems that will be added to the project agenda.

Through EPADU, USAID recently commissioned a series of opportunity studies on five potential export crop areas (see Sergeant et al.) which identified both high- and low-value crops with significant export potential. Crops identified are those cited earlier: spices and essential oils (vanilla, chillies, ginger, and geranium oil), floriculture (roses and field annuals), sericulture (silk production), vegetables (snow peas and asparagus), and low-value food crops (cereals, beans, and oilseeds).

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, which controls the world market. 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 such as tear gas production. 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.

Sericulture (silk production) also appears highly feasible. The world market is strong, conditions are favorable and production/transport costs are reasonable. Some silk production is already commencing and the European Economic Community is planning to support expansion of this effort.

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 demand further attention.

Surprisingly, low-value food exports within the region such as grains, beans and oilseed products promise significant returns. In the short run, political upheavals and famines in the neighboring countries of Sudan, Somalia, and Rwanda have led to a desperate demand for maize and beans brokered by international donors such as the World Food Program. Even in the longer run, Kenyan maize and bean production will continue to fall short of demand, 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.

Initial efforts will focus on exports of these high-potential crops poised for takeoff. This strategy should promote significant immediate returns 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 interesting exports such as pyrethrum, papain, berries, mangoes, and mushrooms.

In reviewing proposed crops, a number of design workshop participants also suggested traditional crops such as cotton or non-crop agricultural products including hides, fish, or honey. These possibilities can be explored for later inclusion, and such expansion is planned through experiential learning. The high-potential crops identified are intended to provide focus and target initial efforts. Traditional crops such as cotton and tea are currently being dealt with separately through privatization efforts. Over the course of the project, efforts will also be made to encourage value-added products, attempting to add to Uganda's comparative advantage through use of its relatively inexpensive labor supply.

C2d. Capacity Building

The Vice-President of the World Bank for Africa, Edward Jaycox, recently emphasized the importance of capacity building. Citing Elliot Berg's *Rethinking Technical*

Assistance and Capacity Building (New Vision June 21, 1993), he argued that dependence on expatriate technicians has undermined the development of local capacity. He proposed a policy which would discontinue:

- Project management units (thus requiring ministries to manage projects)
- Resident expatriate advisors

His critique of donors who overwhelm African nations with more funds than they can absorb is weakened by the fact that his own goal is to convince these countries to borrow \$17 billion. This has been wisely shunned. His prescriptions amount to an overall cutback in technical assistance and seem especially inappropriate for export projects, which require establishing external linkages. Initiation of 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 intensive efforts and daily supervision, which warrant long-term technical assistance. As Ugandan exporters become familiar with international markets, they will gradually take over the advisors' roles. By the end of the project, transference of these skills will be completed, capacity building will have been accomplished, and the ADC and its local technicians will be absorbed into the private sector.

While pursuing increased exports of specific crops, the project will simultaneously develop capacity within the private sector and UEDA to support the development of mechanisms that will remain sustainable after the ADC is closed at the end of the project. This will be accomplished by practical "learning by doing," sharing of experiences, and an extensive training component, in addition to appropriate programs at Makerere University and within the NARO research system.

This capacity-building approach toward NTAE growth and sustainability will be integrated into all facets of project implementation. By the end of the project, direct economic participants (e.g. producers, packers, exporters), indirect economic participants (e.g. input, suppliers, producers of raw materials, cold storage providers), non-economic participants (e.g. government ministries, research organizations, and educational institutions) will be able to identify, anticipate, and respond to needs of export participants. They will continuously monitor and adjust the macro-economic, regulatory, and business environment, and engage in activities to ensure the continued economic viability of the export sector in Uganda.

By the end of the project, participants must be able to: resolve technical constraints; access, adjust and expand into new markets; access investment and financial resources in the form of loans, equity finance, and joint venture partnerships; and improve the economic, regulatory, and infrastructural environment in the absence of direct IDEA project support.

C3. Rationale

Why develop an export promotion capability? Why not just let market forces work on their own? A recent analysis (AID/PPC 1991) concludes:

- Market forces do work, but not quickly enough. On their own, firms must invest considerable time and energy to learn about new opportunities. This inefficiency justifies a temporary subsidy to the export sector to improve access to information and speed responses to market forces.
- The initial investment in a profitable but under-exploited sector such as NTAEs makes it more likely that other firms will follow. This "band wagon" effect benefits subsequent firms, and thus justifies special assistance for path-breaking investments.
- Promotional institutions can make major contributions to achieving and maintaining export-oriented policies by serving as a voice for the export sector.

C3a. Lessons from Similar Efforts

USAID-assisted agricultural export promotion activities are currently underway in a number of countries around the world. African efforts in Ghana, Guinea, and Swaziland remain at early stages of development, but a number of studies (e.g. USAID/PPC 1991) have distilled lessons from Latin America and elsewhere. Five basic lessons can be drawn:

- 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 great, although charging for services is a good idea.
- Most promotional institutions reach only 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 to 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 providing 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 should 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 best provided by a membership organization. Efforts that provide 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.

According to USAID/PPC 1992, five factors contribute to the effectiveness of export promotion activities:

- Firm-level impact on exports and earnings
- National-level impact on exports and foreign investment
- Economic returns to firms and suppliers
- Provision of service with impact on export and production
- Institutionalization of service delivery mechanisms

C3b. Ugandan Constraints

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, macro-economic policy impediments, and legal and regulatory barriers (see Annex B).

Exhibit I-1 lists major constraints to non-traditional agricultural exports identified in Uganda, and the efforts currently underway to address them. Efforts to date have focused on macro-economic policy constraints which must be eliminated as the foundation for NTAE development. USAID's ANEPP program has cooperated with the IMF-led effort coordinated through the Bank of Uganda's Agriculture Secretariat. This effort has been largely successful in overcoming major policy restrictions. 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 reduce this to a unitary system eventually.

Major legal and regulatory constraints are imposed by residual GOU controls on and intervention in the private sector. Parastatals are still the principal GOU involvement in the private sector. The World Bank is assisting the GOU in a large privatization effort to overcome these constraints. The UIA, supported by USAID's ANEPP program, is also engaged in a major revision of the investment code aimed at increasing and clarifying concessions for foreign investors. USAID's ANEPP program will continue to focus on such legal and regulatory bottlenecks.

Exhibit I-1: NTAE Constraints in Uganda

Constraint Level	Efforts Underway
<p>I. Macro-economic Policy</p> <ul style="list-style-type: none"> - Fiscal and policy reform - Exchange rate reform - Monetary policy reform - Public investment policy - International trade policy 	<p>PEC, MFEP (ANEPP), BOU/WB (Agriculture Secretariat), MFEP (UIA), MTI (UEPC), & other GOU agencies.</p>
<p>II. Legal and Regulatory</p>	<p>MFEP (UIA), WB (SAC), MFEP (EPADU), WB (Privatization)</p>
<p>III. Infrastructure</p> <ul style="list-style-type: none"> - Roads - Transport - Communications - Utilities 	<p>GOU Ministries of Works, Telecommunications and Utilities Authorities, US & other Feeder Road Projects, WB (Privatization), Other donor efforts</p>
<p>IV. Know-how/Information Technology Transfer</p> <ul style="list-style-type: none"> - Research - Education - Training - Extension (private & public) - Business Management 	<p>NARO, MOES (Makerere), MAAIF (Extension, DFIs), Kawanda/UNDP, Regional and Ugandan Trade Institutes and Centers</p>
<p>V. Sector/Subsector</p> <ul style="list-style-type: none"> - Production - Postharvest handling - Packing, grading, standards, - Cooling and storage - Financing - Market information and contacts 	<p>MAAIF/WB: Unified Extension, Makerere Univ, NARO, CIAT, CIMMYT, IITA, Bureau of Standards/EC, BU, UCB, DFCU/GTZ, EADB, APDF, USAID (CAAS), UIA, MTI, UEPC, WB (Venture Capital)</p>
<p>VI. Firm/Enterprise Producer</p>	<p>EEC, ODA, NGOs, UNDP, WB, DANIDA, USAID, GTZ, others</p>

C3b(1). Transportation

Air freight is the vital link for high-value perishable cargos. Presently, Ugandan rates to Europe are competitive with Kenya's. 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 from Kenya, but how long this competitive edge can last is questionable. There is currently excess cargo capacity of about 10-20 tons per week for Brussels-bound passenger flights, and air cargo is dominated by Sabena and British Airways. To ensure the development of the NTAE industry, more carriers must compete for future business.

High-value perishable export products require an adequate and reliable temperature- and humidity-controlled transport system. Maintaining proper transit temperature and humidity ensure product quality. Presently, most produce trucks are open bed and those enclosed are not refrigerated. The road network in Uganda, while fairly extensive, is in disrepair in many places. Most major trunk highways have been recently widened and repaved, but farm-to-market roads are far less developed.

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

C3b(2). Infrastructure

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

Farmers report that there is little or no competition among farmgate buyers because the condition of rural feeder roads is so bad. The government has been working on improving the road network, and major corridors are now in relatively good shape. The GOU experimented with a novel "roads for food" barter swap with Yugoslavia, but this arrangement came to an end when Uganda was unable to deliver. USAID and other donors continue to support feeder road development. Most produce is currently shipped in open-bed trucks with no temperature or humidity controls. A reliable cold chain must be developed to assure the viability of Uganda's NTAE industry. This, in turn, will depend upon a reliable supply of electricity. Uganda is blessed with abundant water and electricity and rates are low (US\$.015/kwh compared to US\$.07-.09/kwh in the U.S.), although power service is erratic. According to Maxwell Stump, UIA identified utility supplies as a major concern of potential investors.

Even at the producer level, infrastructure is needed. Reliable year-round horticultural production depends on irrigation systems which are rarely available. Extensive irrigation infrastructure is needed in areas like the southwest, which are most suitable for horticultural export production.

C3b(3). Agronomic Constraints

Uganda's limited resource smallholders face major problems with respect to pest and disease management. Common yield-limiting pests include weeds, nematodes, insects, and diseases. Purple nutsedge weed infects many of the production areas. Various sucking and chewing insects cause severe foliar stress, and whiteflies and aphids are major vectors in the transmission of ubiquitous viral diseases. Other fungal diseases, leaf blights, and root rots also abound.

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 up to one year is anticipated before a phase II can be initiated.

Important production constraints in Uganda are limited availability of improved seeds, labor shortages that restrict weeding, and depletion of oxen in areas where animal traction was practiced. Many farmers plant Kawanda Composite maize seed, but improved Lunge 1 seed was distributed to only 3,000 farmers for the first time last year. Along the Kenyan border, well-off farmers try to obtain Kenyan hybrid seeds. So far, USAID attempts to interest Western seed manufacturers in Uganda have not borne fruit, but widespread distribution of high-quality seeds clearly represents a major opportunity for producing substantial increases in Ugandan maize and bean production.

Labor shortages are a major limitation on both land area cultivated and the intensity of improved cultural practices, such as extra weeding and pest or disease management. In areas such as the north and northeast where oxen were traditionally employed for animal traction, restocking of animals destroyed during the troubled years could have significant impact.

C3b(4). Agricultural Extension

The GOU agricultural extension system is weak due to a number of factors such as low salaries, insufficient transport, lack of training, and need for reorganization. Traditionally, major export crops such as coffee, cotton, and tea had their own extension services. The World Bank is currently assisting in the reorganization and revitalization of a "unified" extension service. Such an undertaking is needed and praiseworthy, but will require substantial resources and time to overcome the inertia from years of neglect.

Private sector-based agricultural extension services represent an attractive alternative or complementary approach for some specific 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, but also all produce maize and beans. BAT employees 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.

C3b(5). 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, 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, 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 that established the Bureau of Standards, and the EEC will be pick up the funding this year. In discussions with the UNDP and the EEC, it was clear that the exact nature of the work to be carried out under the Bureau has not been fully determined. It is clear, however, that the future development of the NTAE industry will need to go hand in hand with the development of the Bureau of Standards.

C3b(6). The Cold Chain

Perhaps the most serious constraint facing NTAEs in Uganda is the absence of 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 non-existent. Most products are harvested and set by the roadside for pickup. 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 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 air 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 the doors are too narrow for aircraft cargo pallets. USAID has commissioned a study of the airport's cold storage needs and is currently considering whether to fund such a project.

C3b(7). Capital and Investment

As 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 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. Currently, however, entrepreneurs are effectively shut out from 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.

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 government 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. USAID, the World Bank, and the European Community are all considering the possibility of establishing a venture capital fund to assist emergent entrepreneurs. Joint-venture arrangements 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. Incentives presently provided to qualified industries under the investment code include:

- Providing duty and tax-free facilities, duty drawback for export industries, and exemption from corporate tax.
- Withholding tax and a tax on dividends are given preferred treatment under the provisions of the investment code.

Realizing that more improvements are necessary, the GOU, FIAS, USAID, and others are currently undertaking a thorough review of the code.

C3b(8). Market Information

Commodity markets are complex and dynamic, and 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 current domestic market conditions. Its main purpose is to disseminate timely and useful information on the current market situation for basic agricultural commodities. Such information can assist them in their marketing decisions and help create a more efficient agricultural marketing system.

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

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

C3b(9). 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.

Initial efforts to alleviate Ugandan constraints to NTAE development have been made at the macro-economic policy level, and are working their way down through legal and regulatory restrictions. The IDEA project will complement such general efforts with detailed firm-level technical assistance to potential exporters and NTAE producers. The project will identify and evaluate promising markets and potential exporters, and provide the technical assistance and linkages necessary to help Ugandan entrepreneurs bring their NTAE export projects to fulfillment.

D. Institutional and Organizational Considerations

The institutional landscape of Uganda's efforts to promote exports and investments and to undertake policy analysis is checkered. Poorly defined, overlapping, and conflicting institutional roles and responsibilities, 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 units are currently engaged in export promotion (see Annex A):

- 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 currently 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 totally a government body, located within the ministry, staffed by civil servants, and 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 impelled to respond equally to all exporter's requests.

The Export Policy Analysis and Development Unit (EPADU) was created in 1988 as the executing agency for USAID's Agricultural Non-traditional Export Program (ANEPP). Its attachment to MFEP was in part a reaction to the perceived ineffectiveness of UEPC. 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 Uganda Investment Authority (UIA), established in 1991, has also received USAID ANEPP assistance. It 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. Future efforts will focus 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. Although it has been in existence for only 18 months, UIA has issued over 1500 investment application forms and received over 500 applications with a proposed value of over US\$ 900 million. As of April 1993, almost 400 applications had been approved with actual investment of approximately US\$ 200-300 million. These planned investments should create over 25,000 jobs. Much of this investment interest has come from Kenyan investors.

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. This manifestly successful organizational structure is proposed as the model for restructuring and revitalizing the UEPC. The reorganized UEPC is hereafter referred to as the Uganda Export Development Authority (UEDA) to distance it from the encumbrance of UEPC's reputation. The GOU has already reached preliminary ministerial agreement on this reorganization.

D1. Alternatives Considered

When determining which model is best to use for promoting the expansion of NTAE, careful thought and consideration must be given to:

- Past and present export promotion efforts currently underway or being 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 will provide concentrated, customized assistance to a few targeted firms or standardized assistance to a large number of firms
- Sustainability/capacity building requirements

The options that were considered for Uganda included:

- Membership organizations
- Government units
- Independent private entities
- Project implementations units

Strong membership organizations must be driven by strong members. Although there are many membership organizations currently operating in Uganda, none of them are presently in a position to take on full responsibility for handling NTAE promotion. As the NTAEs begin to expand, membership organizations are expected to grow stronger. The IDEA project should be in a position to facilitate this growth and increasing the capacities of membership groups to assume 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 have an important role to play in the future expansion of the NTAE industry but would not by themselves be in position to provide the range of specialized technical knowledge and expertise currently needed by local NTAE firms.

Careful consideration was also given to establishing an independent private entity (non-profit or for-profit), to carry out the NTAE program. Although there were many appealing aspects to this option, it was determined that certain issues could not be adequately addressed by a purely private entity, including: the need to insure smallholder participation, developmental considerations, the likelihood for sustainability or capacity building, providing customized services to a few firms versus standardized services to a much larger clientele, and low-value versus high-value product emphasis.

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 non-profit NGO could be structured to address these concerns, but would be isolated from the continuous high-level policy making needed to develop and maintain an enabling environment.

A project implementation agency based on the UIA model, functioning like a private sector institution but retaining linkages to policy makers, would seem to offer the best of both worlds, channelling important information and feedback back and forth between the private and public sectors. USAID and the IDEA design team therefore recommend establishing a semi-autonomous project implementation unit designed to provide the customized and targeted training, information, and services needed by Uganda's NTAE industry. This entity is not intended to continue after the project. Its objective is to provide the Ugandan NTAE sector with the initial thrust needed to penetrate markets and establish new industries. It will simultaneously develop the capabilities of Ugandan entrepreneurs, private sector associations, service firms, and public sector support agencies to promote NTAE production and marketing. This semi-autonomous project implementation agency will be referred to as the Agribusiness Development Center (ADC). The ADC approach is aimed at developing industries, not bureaucracies.

D2. Design Methodology

Before the IDEA design team arrived in May 1993, much thought, discussion, and debate had already gone into determining the optimal institutional and organizational models and relationships for export promotion in Uganda. 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 put in place to develop this "preferred option," which was both participatory and reiterative, resulted in an institutional and organizational arrangement that is workable in the Ugandan context.

The design team approached the institutional/organizational analysis by first conducting extensive interviews with over 100 individuals in Uganda. This was done to determine the constraints and the specific types of information and services most needed by existing and potential Ugandan producers and exporters. The interviews included discussions with representatives from producer groups, individual producers (smallholders and commercial farmers), exporter associations, and individual exporters, government organizations and parastatals involved with exports, other donors, various agencies and organizations working in the area of export promotion and support, and many others.

Second, a thorough review of the literature on export promotion was made to determine best approaches and models for promoting exports that 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 and 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 project's development.

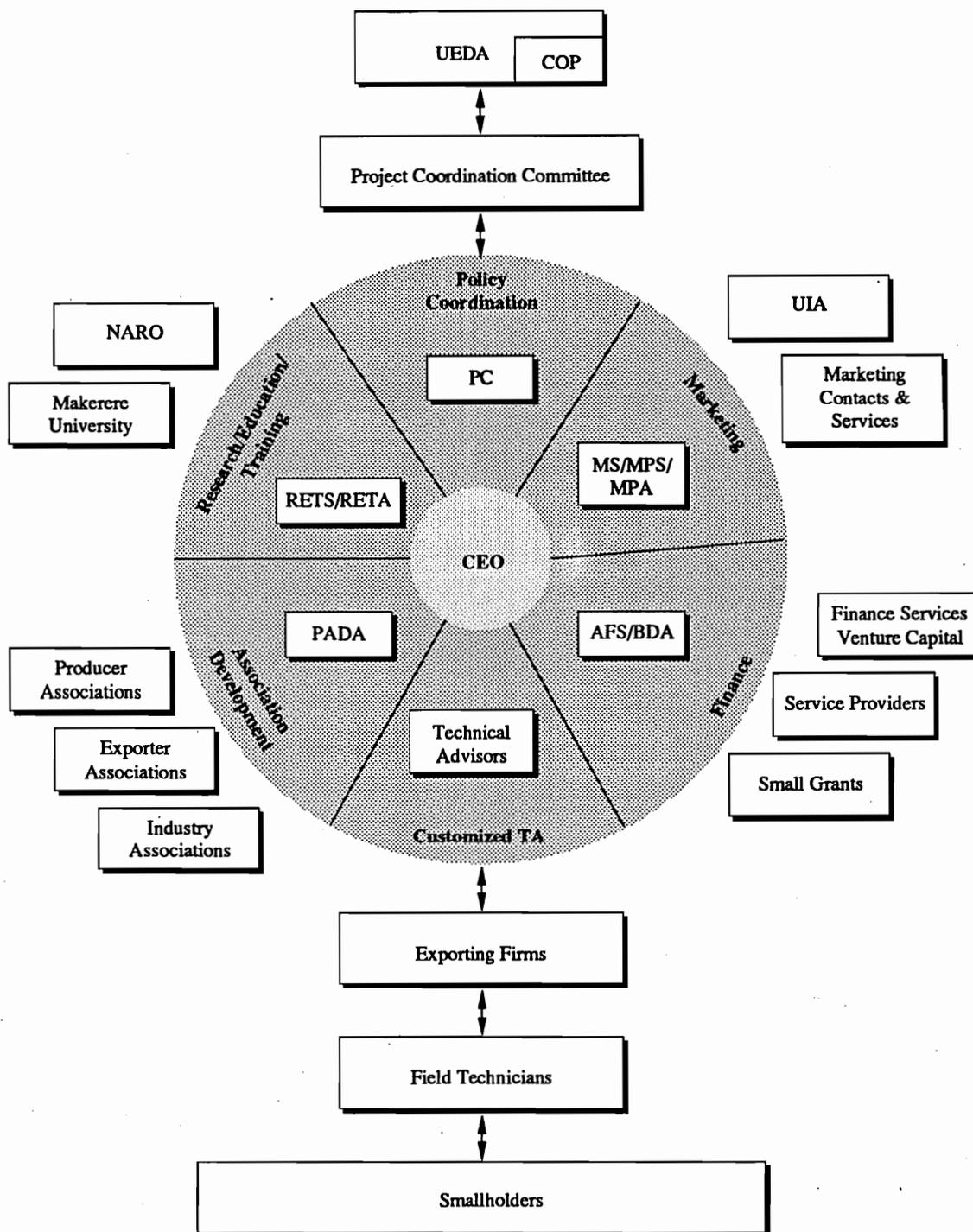
Fourth, an IDEA Design Workshop was held during the design team's stay in Uganda. The workshop was attended by 80 individuals and was entitled "Brainstorming for a Better IDEA." Group discussions took place on numerous issues including organizational structure, and recommendations from the workshop are incorporated throughout this project paper.

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.

D3. Proposed Agribusiness Development Center

The design team is proposing that an Agribusiness Development Center (ADC) be established and set up as outlined in Exhibit I-2. Further details related to the ADC's institutional and organizational structure and relationships can be found in Annex A.

Exhibit I-2: Agribusiness Development Center Organizational Structure



Proposed IDEA/ADC Team:

Long-term Expatriate Specialists

- COP - Chief of Party/Export Promotion Specialist
- CEO - Chief Executive Officer/NTAE Specialist
- AFS - NTAE Agribusiness Finance Specialist
- MS - NTAE Marketing Contact-J/V Specialist
- MPS - (Low Value) Cereals Marketing/Production Specialist
- RETS - NTAE Research/Education/Training Specialist

Long-term Local Advisors

- PC - Project Coordinator
- BDA - NTAE Business Development Advisor
- PADA - Private Association Development Advisor
- MPA - (Low Value) Marketing/Production Advisor
- RETA - Research/Education/Training

The Agribusiness Development Center will be established as a semiautonomous agribusiness arm of the Uganda Export Development Agency (UEDA), the restructured UEPC. The ADC will be set up outside the UEDA and controlled by a chief executive officer (CEO) who will manage the operations of the ADC as a "one stop shop" for all necessary information, technical assistance, and training for current and potential producers and exporters of NTAEs. Initially, the ADC will provide most information and services directly to clients. Later, as capacity building develops and more services are institutionalized elsewhere, ADC may function as a clearinghouse, directing clients to other service centers. (For operational details, see sections D4a and D4b below and Annex A.)

The IDEA chief of party will have an office located within UEDA to ensure public-private sector linkages. He will appoint a chief executive officer (CEO) to direct and execute ADC operations on a daily basis.

The ADC will be located outside UEDA, closer to its agribusiness clientele. Since ADC is not envisioned as a permanent institution, placing it outside UEDA is appropriate and will enhance capacity building within the private sector for exporting firms, associations, service providers, and producers.

Anticipated restructuring of the UEPC and converting it into the UEDA is expected to result in a semiautonomous full-service export promotion organization, governed by a board of directors with a majority of private sector representatives, perhaps four or five. The chairperson should be selected by the board from among those representing the private sector. Following reorganization, UEDA will remain part of MTI, but will function very independently, primarily according to private sector principles. The structural relationship should be similar to that between UIA and MFEP. It is also anticipated that there will be overlapping board membership between UIA and UEDA, to eliminate duplication of effort. To further ensure adequate input and coordination, the USAID project manager and the contractor's COP will serve as ex-officio members of the UEDA board when issues involving the IDEA project and the ADC are being considered.

The board of directors of the restructured UEDA will provide overall policy guidance and direction on essential issues involving the IDEA project. The UEDA board would meet twice a year, although perhaps more frequently during start-up.

An IDEA Project Coordination Committee (PCC) will be selected jointly by the director of the UEDA, a representative from USAID, and the contractor. The PCC will select its own chairperson and meet at least monthly, to monitor and provide overall technical advice to the project. The PCC will have 13 members representing: USAID's ANR office, the project contractor, Makerere University, NARO, UEDA, UIA, EPADU (until it is subsumed into the MFEP), two appropriate agribusiness representatives from a private sector associations, two agribusiness exporters, and two smallholders. One of the two representatives of associations, exporters, and smallholders will be a woman. Until contractor(s) are selected, the IDEA advisory group will continue to serve as the focal point for the project's design and development. If specific demands placed on the PCC warrant,

subcommittees can be appointed to deal with specific areas such as providing advice on types of research that are needed under the project.

The PCC concept was developed during the IDEA Design Workshop by representatives of the major ministries and agencies involved. Experience with inter-ministerial project coordinating committees around the world has not been encouraging. Unless a real spirit of teamwork is established, such committees tend to perpetuate the political posturing and rivalry that inevitably surface upon the arrival of new donor resources. Such committees are often established at too high a level, involving officials who are too busy to devote sufficient attention to making the project work. Three guidelines should be observed to mitigate these inherent dangers:

- PCC members must be line officers with an immediate stake in the success of the projects, not high-level officials appointed because of their positions.
- PCC activities should be initiated with a project implementation retreat designed to strengthen teamwork among members.
- The PCC should be constituted as an advisory body rather than a directorate; thus if it is unable to reach agreement, ADC staff can make required decisions.

D4. ADC Organization

D4a. Activities and Methodology of the ADC

The IDEA project will have three major thrusts implemented through the ADC:

- Providing technical assistance and training to agribusiness exporters, service providers, private sector associations, and others.
- Initiating a demand-driven contract agribusiness research program to overcome targeted constraints faced by agribusiness export firms and producers.
- Strengthening capacities at Makerere University by assisting in redesigning selected curriculum, establishing internships and outreach programs, and providing specialized training to prepare future agriculture graduates to better satisfy the demands of the developing agribusiness export sector.

Potential or existing exporters have a great need for information and questions abound: What are the most promising markets and which are the most profitable crops or products for these markets? Which crops or products can be competitively produced in this area in terms of quality, quantity, and cost? What is the required investment, who should I sell to, how much money could I make or lose? All these and many more issues require detailed investigation before an answer can be determined in a particular case. The ADC will help existing and potential exporters find answers to these questions.

In conjunction with exporters, the ADC will also provide technical assistance directly to smallholder producers. This delivery mechanism will be especially important for low-value crops such as maize and beans, where production constraints are a major limitation on exports. Strategies will include furnishing extension advice (primarily in conjunction with contract farming arrangements), providing improved seeds, expanding animal traction, and constructing or leasing on-farm/regional storage facilities.

D4b. Ruba Papain Exports: A Hypothetical Case Study

The following hypothetical case study is provided to give the reader a better feel for exactly what the ADC will do for producers and NTAE firms. The example develops conjectural relationships between an existing NTAE firm and the proposed ADC. Actual programs of assistance will naturally be tailored to each firm's actual needs.

Mr. Ruba (a pseudonym) is a young, energetic Ugandan entrepreneur. He is the founder and sole owner of his firm which is located in western Uganda. He used to work for a government ministry until ten years ago when he began producing foam mattresses and furniture. He has gradually moved into food production and processing and aims ultimately at concentrating all his efforts on NTAE production and marketing.

A few years ago Mr. Ruba learned about the market for papain (the processed latex extract of papaya) used among other things for meat tenderizer. He would like to get into the papain business. He has \$200,000 equity in his existing business and owes very little. Mr. Ruba heard about ADC from a close friend (an exporter who is already an ADC client) and also from an acquaintance who attended an ADC regional awareness meeting.

D4b(1). Preliminary Contacts

At the ADC office, the receptionist greets Mr. Ruba and makes an appointment for him to meet with Mr. Mbowe, the ADC business advisor. The receptionist records Mr. Ruba's interests and gives him some brochures on ADC services for NTAE exporters, and a copy of the ADC newsletter. Later in the afternoon, Mr. Ruba discusses his business goals and situation with Mr. Mbowe, and they examine how the ADC could help. Eventually they agree to meet again at Mr. Ruba's premises.

Following this meeting, Mr. Mbowe enters information on Mr. Ruba in the computerized ADC client database. He also discusses Mr. Ruba's interests with the ADC CEO, marketing specialist, and other team members. They brainstorm alternative approaches.

The next week, Mr. Mbowe visits Mr. Ruba's establishment and is very impressed with the cleanliness and efficiency of his operation. It becomes clear that Mr. Ruba is a progressive entrepreneur with a vision of the future based on non-traditional agricultural exports. Mr. Mbowe notes that Mr. Ruba has already established an impressive small business on his own, and shows strong motivation to expand. He identifies a few areas where Mr. Ruba could use immediate assistance and agrees to obtain data on world market

demand for papain, historical price trends, and current leaders in papain production and marketing. Before leaving town, Mr. Mbowe inquires at local business establishments to evaluate Mr. Ruba's position and reputation in the community.

D4b(2). Market Studies

After reviewing this field trip with his ADC colleagues, Mr. Mbowe decides to conduct a papain market study for Mr. Ruba. He contacts the IDEA project's horticulture subcontractor in London and ascertains that they could carry out the study. Mr. Mbowe prepares a scope of work (SOW) for the study with the assistance of the ADC expatriate technical specialists. The SOW is reviewed and approved by the CEO, and then faxed to London for action.

During the next three weeks Mr. Mbowe meets twice with Mr. Ruba to learn more about his needs and capabilities. He completes a detailed qualifications statement for presentation to the CEO. When approved, this statement will make Mr. Ruba a full-fledged ADC client, eligible for various kinds of assistance.

The papain market study comes back from London in two weeks and looks very promising. The ADC's NTAE horticulture advisor and Mr. Mbowe meet with Mr. Ruba at his plant to discuss the report and explore possibilities for future collaboration. After reviewing the report, Mr. Ruba is very excited about the prospects and expresses keen interest in pursuing the project. Together the group visits some surrounding smallholder operations. They confirm that papayas grow extremely well in the area and learn that many of these farmers, who have been displaced from Zaire, have brought with them a rudimentary knowledge of how to grow and score papayas for latex production. (Papayas are slit while still green on the tree to drain the latex into a small sack placed under the fruit.) They determine that production possibilities are good enough to move forward.

The group meets again at the ADC office to formalize collaboration. Mr. Ruba is asked to sign an agreement of mutual understanding outlining the terms and conditions under which they will work together. The agreement includes a moderate charge for future ADC services designed to ensure client commitment. They draw up an action plan which indicates that Mr. Ruba will need at least 2,000 out-growers to obtain the volume of latex required to justify the procurement of the necessary processing plant equipment. Following review and approval by the CEO, the plan is initiated.

A papaya latex specialist with experience in Zaire and India (the two largest exporters of papain) is contracted to study the best course of action. At the same time, market contacts are sought in North America through the IDEA project's U.S. horticulture subcontractor. Specific information such as potential buyers, prices, and terms and conditions of sale are obtained.

D4b(3). U.S. Visit

At about this time the UIA announces plans to send an agribusiness investment mission to North America to seek potential joint-venture partners for Ugandan entrepreneurs. With his market contact information in hand, Mr. Ruba and the ADC high-value marketing specialist join UIA's investment mission. While in the U.S. Mr. Ruba is able to make direct contact with buyers in Chicago and New York who distribute much of the papain imported into North America. He also spends some time after the investment mission actually working in a food-processing facility that processes imported papain. Before leaving the United States, he makes a technical cooperation/marketing agreement with the U.S. firms he visited in Chicago. He also obtains price quotes for the machinery and equipment needed. When Mr. Ruba returns to Uganda he is even more enthusiastic about the papain business.

D4b(4). Financing

During the next year Mr. Ruba's relationship with ADC develops rapidly. His first requirement is for financing. Although he does not have much equity, he is almost free of debt and has a good track record with local finance institutions. During initial visits to Kampala banks, he was told he needed a detailed feasibility study and comprehensive business plan before they would even consider discussing his proposition to get into what they saw as a high-risk business. With ADC assistance, a business plan is developed with a local consulting firm and the technical feasibility study is prepared by the renowned papaya specialist contacted earlier.

Mr. Ruba visits the banks again, this time accompanied by the ADC agribusiness finance specialist and advisor. They present the business plan, feasibility study, and market information report, as well as a letter of intent from Mr. Ruba's contact in Chicago. The letter not only states that he is willing to buy Mr. Ruba's product, but also that he might be interested in considering a joint-venture partnership at a later time.

During the second year financing for the project is approved. Mr. Ruba finds the Development Finance Company of Uganda Ltd. (DFCU) willing to take a 29 percent equity position in his operation and prepared to sell this back to him when the business is running profitably.

D4b(5). Operation

The challenges of the second year are to get the processing plant up and running and to establish an out-grower system including seed production and distribution, along with training of farmers in papaya cultivation, scoring techniques, latex collection, and preliminary latex processing. The ADC helps in several ways. First, ADC staff arrange for two Peace Corps volunteers to be trained in papaya latex production and to work with Mr. Ruba's two extension technicians and GOU agricultural extension personnel to develop his out-grower system.

The ADC also arranges for VOCA to send a food processing specialist to work with Mr. Ruba during the set-up and start-up phases. The VOCA volunteer trains a local technician to run Mr. Ruba's rather sophisticated laboratory. Papain processing is an elaborate process of removing moisture, filtering, and heating to meet different specifications for each order. ADC arranges for this technician to travel to the U.S. for three months practical training, working in a similar lab in Chicago. The VOCA volunteer turns out to be very capable and enjoys the work, so she volunteers to return at least twice a year if necessary. Mr. Ruba, who provides transport, food, and housing for the VOCA and Peace Corps volunteers, readily agrees.

In year three when he begins to ship, Mr. Ruba experiences a problem with the high cost, low quality, and scarcity of proper packaging and labeling materials. He found it was cheaper to buy boxes in Kenya because of the tax levied on boxes produced at a Ugandan box factory in Jinja. Mr. Ruba asks the ADC to present his case to the appropriate GOU authorities. The ADC contacts the Uganda Horticultural Exporters Association (UHEA) and the IDEA project chief of party (who works out of UEDA). Together they meet with the executive director of UEDA and explain the problem. Following this meeting, EPADU officials are also informed. Within three months, legislation is passed which effectively eliminates the tax on locally made boxes. Once the tax is removed, local boxes become affordable. During this period, ADC staff also meet with the box manufacturer, analyze quality problems, and arrange for a regional manufacturing consultant to work with the company on solutions.

Also during year three, Mr. Ruba determines a need to develop better varieties of papaya for producing latex. Through ADC he contracts with NARO to jointly fund trials conducted on his farm and those of neighboring smallholders. That work is still in progress. Mr. Ruba also sends his lab technician to Makerere University to finish his degree in the newly improved food technology program which was recently strengthened through the establishment of linkages with a U.S. university. The new curriculum requires that students be placed as interns in the private sector each year, and two are assigned to be trained at Mr. Ruba's papain processing plant. He has already decided to hire one of the students upon his graduation. Mr. Ruba is also currently investigating the possibility of establishing an employee-sharing arrangement to provide economic incentive for building the papain export business.

D4c. ADC Organizational Structure and Staffing

The ADC will serve as a semi-autonomous agribusiness arm of the restructured UEDA. The Center will be staffed by both professional and support staff in a "stand-alone" facility. Each professional staff member will be responsible for the activities of particular ADC delivery mechanisms designed to meet identified needs (see Exhibit I.2 and Annex A).

The ADC will have six divisions relating to functional areas of operation as depicted in Exhibit A.2:

- Customized technical assistance
- Marketing
- Finance
- Association development
- Research, education, and training
- Policy coordination

The customized technical assistance division will provide one-on-one technical assistance to firms and producers on a case-by-case basis. In most instances the expertise will be highly specialized, for example, a rose production specialist assigned to a particular firm for up to six months. Customized technical assistance will be tailored to meet specific technical needs of the targeted firm or producer, which would not be handled through ADC's other divisions.

The marketing division will handle all matters related to marketing information, market contacts, and identification of joint-venture prospects. The division will work in close cooperation with the UIA for joint-venture prospects, and with other agencies and organizations in developing marketing information and contacts.

The finance division will work closely with APDF staff, especially if an in-country office is established as is currently under consideration. Since APDF targets NTAE projects valued at \$250,000 and above, ADC's finance division will focus on providing financial services to smaller NTAE projects under consideration that would not qualify for APDF assistance.

The association development division will liaise directly with producer, exporter, and industry associations. Over the life of the project, the division will be responsible for preparing these associations to take over ADC functions such as identifying new product markets and contacts for its members. The division will facilitate the growth of commodity-specific associations as individual NTAEs develop. In addition, associations will be directly linked to the public sector through the ADC's policy coordination division, as described below.

The research, education, and training division will establish and carry out a market-driven NTAE research program, assist with the development and implementation of a revised curriculum in selected Makerere University departments, and develop a training program that meets the needs of the emerging NTAE sector.

The policy coordination division will be closely linked with the association development division, to foster a more open and meaningful dialogue between the public and private sectors. This division will coordinate with associations, ANEPP, the private sector, and government officials, to facilitate dialogue and analysis leading to policy and regulatory reforms needed in the NTAE sector.

Several alternative staffing patterns could fulfill ADC functions; the staffing arrangement proposed in Annex A is illustrative. Final ADC staffing patterns will be

determined when budgetary and LOE decisions have been completed. A considerable degree of freedom exists to substitute short-term, local and expatriate, LOE in place of long-term staff. Other considerations will also affect staffing patterns. For example, if the APDF sets up an office in Uganda and works in close cooperation with the project, ADC provision for financial linkage delivery will be substantially reduced.

The design team looked at many alternative staffing arrangements, and in view of the perceived needs of the export sector, recommends the following staff positions, subject to concurrence from USAID and the GOU.

Export promotion specialist: overall director and manager of the IDEA project; divides time between developing institutional linkages within the UEDA and ADC.

NTAE specialist: manages the staff and oversees the operations of the ADC and technical assistance programs; ensures that the ADC works effectively with target beneficiaries.

Finance specialist: manages the financial/investment linkage and participatory small grants program for the ADC; works to ensure that viable NTAE projects gain access to timely combinations of finance and participatory small grants where appropriate.

NTAE marketing/joint-venture specialist: manages the NTAE market information and market contact delivery mechanisms of the ADC; also maintains close links with and helps develop agribusiness efforts of UIA; ensures that local exporters have access to the latest relevant market information as well as networks of buyers and potential joint-venture partners.

Production/marketing specialist for low-value crops: manages the overall program to promote improved marketing and production of low-value NTAEs; ensures that low-value crops such as maize and beans receive project resources that result in increased yields and improved marketing systems for regional exports.

Research/education/training specialist: manages the overall research, education, and training program; ensures that IDEA project resources are effectively allocated to initiate targeted, market-driven research, and to train future entrepreneurs and NTAE specialists.

The expatriate specialist team will be supported by long-term local professionals who will serve as key project implementation personnel and also targets for capacity building. As the project progresses, they will absorb many of the skills brought by the expatriate advisors, and eventually constitute extremely valuable resources for the Ugandan NTAE sector. Early consideration should be given to identifying post-project career moves for these personnel that will maximize both personal and NTAE development (for details, see Annex A).

In addition to the local and expatriate long-term staff, there will be a cadre of six to eight long-term field technicians responsible to the ADC/CEO and the appropriate advisor for carrying out field activities (i.e. trials and demonstrations) under the project.

E. Detailed Project Description

E1. Overview

The IDEA project, through ADC, will initiate a multi-pronged set of activities carried out through eight separate but interconnected delivery mechanisms. Each will have an objective, as well as designated resources for attacking constraints and building capacities to deal with future developments.

E2. Delivery Mechanisms

E2a. Financial/Investment Linkages

Objective: The objective of the financial/investment linkage delivery mechanism is to match potential NTAE entrepreneurs with sources of finance and investment, in order to bring to fruition viable NTAE projects.

Implementation: ADC personnel responsible for this delivery mechanism will work in close cooperation with the African Project Development Facility (APDF), local and international financial institutions, joint-venture partners and/or venture capital sources. ADC will ensure that NTAE firms' business plans are properly prepared and presented to appropriate funding sources.

APDF's model for facilitating financial linkages will be followed closely. A working relationship will be established early on between ADC and APDF, so that the two programs can be closely integrated and work together in a mutually supportive fashion. The two units could share offices, and APDF will have the right of first refusal on establishing financial linkages for large projects. ADC personnel would directly arrange financial linkages for smaller projects and for any large client projects rejected by APDF that they consider worthy. It is envisioned that APDF's role would be limited to financial and investment linkages including project appraisal, arranging project financing, and seeking out project sponsors. ADC would take responsibility for providing technical assistance and market information, which APDF sometimes arranges elsewhere. Both the APDF and ADC will identify potential projects.

Most ADC participant NTAE firms that need finance will be routinely referred to APDF. This will be especially important if the APDF is able to establish a full-time satellite office in Uganda, as currently proposed (similar to what they have already done in Ghana).

APDF generally considers only projects with a value higher than \$500,000, but on occasion will take into consideration projects with values between \$250,000 and \$500,000. It has been determined that in Uganda there are still 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, participatory grants, to assist these smaller NTAE firms to get a start in business.

Another important part of this delivery mechanism will be investment linkages. ADC staff will be in continuous contact with potential sources of capital such as the DFCU, BOU, venture capital funds, and other donors. Potential joint-venture opportunities will be explored in cooperation with existing efforts underway at UIA. This close working relationship with UIA will result in building UIA's agribusiness capacity to the point that they will be able to seek and arrange agribusiness opportunities on their own.

It is also anticipated that USAID and/or the World Bank in conjunction with the Commonwealth Development Corporation (CDC), will 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.

Example: Sourcing capital for business expansion and start-up can be 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. One such firm currently operates in the town of Maganjo, 10 kilometers outside of Kampala.

The firm has been in business since 1981, milling maize flour, soya flour, livestock and poultry feeds. They are pursuing a capital expansion and marketing plan that will allow them to sell into both the domestic and regional raw and milled grain product market (see Exhibit I-3).

Exhibit I.3	
Grain Miller's Proposed Expansion Through Venture Capital	
Current Assets:	

Fixed Assets	\$235,000
Working Capital	\$40,000
Proposed Expansion:	

Fixed Assets	\$225,000
Working Capital	\$35,000

Venture Capital Fusion	\$260,000
Business Value	\$535,000

The company has a profitable history, but as milling is a low-margin business demanding large economies of scale, their retained earnings history may not be adequate to allow the firm to receive a competitive rate under commercial financing.

This is where the ADC finance linkage can assist, by helping the company to prepare a business expansion plan and calculate projected profits and post-expansion economies of scale. With such assistance, the milling company might be able to qualify for more favorable loans or apply for venture capital.

In interviews with the company chairwoman, a great desire for financial and technical assistance was expressed. The technical assistance would reduce investor risk and improve the bottom line of the company.

The ADC could assist the company in preparing the business plan for the financing institution. It could also help identify the best financing method and provide ongoing technical assistance to the miller to reduce risk and increase profits.

Exhibit I.3 displays in summary the unsolicited proposed venture capital/joint-venture business expansion plan, prepared by the miller and submitted to the project paper design team. The proposal projected a five-year payback, (20 percent ROI), on 5,500 tons of milled product sold in the domestic and regional markets.

E2b. Market Information

Objective: The market information delivery mechanism will refine and develop a "market-based" information systems to provide timely, useful, and reliable market information to NTAE users on a sustainable basis.

Implementation: Before initiating any activities under the marketing information system, a thorough analysis will be carried out to determine what currently exists and what would be most beneficial to IDEA project beneficiaries. Existing systems would be reviewed with the objective of improving information services currently in place which are unsatisfactory in terms of timeliness, credibility, and relevance to the private sector. The project will also address institutional capacities to sustain these systems.

Market news on daily prices for fruits in various European cities is available from PRONET, a subsidiary of Vance Publishing Company. The ADC will subscribe to PRONET, which provides daily fax reports. Daily flower prices at the Dutch Flower Auction in Aalsmeer, Netherlands (the principal flower market in Europe) are also available via fax.

The level of transparency that exists in the various market information systems will also need to be looked at carefully and addressed where appropriate. 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. USAID is currently undertaking a regional marketing study which should provide some insight into these market information needs. The possibility of better utilization of systems established by various ministries, FAO, and ITC, should also be investigated by ADC.

Example: The Ministry of Commerce currently operates a basic agricultural market price information service. The Ministry 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 Kampala newspaper. This service helps traders looking to source these commodities and maximize their profits on a domestic or export transaction.

REDSO/EA is currently preparing a regional marketing project. ADC will act in concert with this project to track wholesale prices of a set of low-value commodities and

semi-finished products in key East African trading centers. An example of where the price information may best be sourced is exhibited in Exhibit I-4.

Exhibit I-4	
Example Regional Trading Centers For Sourcing Price Information on Low-value High-volume Crops	
Kenya:	Kisumu Nakuru Nairobi
Tanzania:	Mwanza Dar Es Salaam
Zaire:	Kisangani
Rwanda:	Kigali
Burundi:	Bujumbura

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.

Whole grain traders, grain millers and oilseed processors all cited reliable regional price information, market contacts and foreign exchange transfer as leading constraints. All the firms interviewed

expressed an interest in entering the regional export markets or expanding their volume in these markets.

E2c. Market Contacts

Objective: The market contacts delivery mechanism will facilitate introduction of local NTAE firms to potential buyers, service providers, and joint-venture partners.

Implementation: ADC personnel will work closely with NTAE firms, the UIA and other 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.

ADC will organize two market tours to the United States and three to Europe each year. Each tour group will include two to five Ugandan entrepreneurs and will be carefully tailored to individual needs. 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 working in appropriate overseas firms.

An excellent source of information on food buyers in Europe is the Industry Library at Leatherhead, England. 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.

E2d. Participatory Small Grants

Objective: The participatory small grants delivery mechanism will be used to jump-start selected new NTAE businesses by sharing initial market risks, and to explore marketing and production opportunities.

Implementation: Small grants will be in the form of matching grants to ensure commitment on the part of applicants. Grants will range from \$10,000 to \$20,000, and will be awarded on the basis of a short proposal (two-three pages) outlining how the grant will be used, anticipated value of exports generated, impact on rural incomes and potential returns on investment. The recommended size of the small grants fund is \$250 to \$500 thousand.

A subcommittee of the PCC that includes knowledgeable entrepreneurs will be established to review grant applications. This subcommittee will establish and circulate clear guidelines for small grant approval to ensure a transparent decision-making process.

The participatory small grants delivery mechanism will be integrated with and supportive of various other ADC delivery mechanisms. The fund could be used to develop market contacts, obtain seed or planting materials, or even ship initial trials to European markets. The fund might also be used to set up low-value model demonstrations of grain storage or animal traction.

Limiting grants to one or more groups of beneficiaries would restrict the opportunities to develop NTAE. Grants could also be made available to growers to plant new varieties such as berries (in high elevations), or to increase the production of smallholder mushroom growers. Exporters could use a grant to source new crops from growers and ship these crops into existing or new markets. Both local exporters and EC importers could apply for these grants. The primary stipulation attested to by the PCC's subcommittee will be that approved grants must show significant potential to increase the incomes of rural men and women in Uganda and/or contribute to reaching the target of stimulating a cumulative \$200 million in additional NTAEs.

E2e. Strengthening Associations

Objective: Exporter, trader, and producer associations provide key channels for supporting individual firms. A major delivery mechanism of the IDEA project will be assistance to and through these associations. 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 ADC. This could include such basic functions as market information and contacts, customized technical assistance and training courses, some research/consulting services such as feasibility studies, information exchanges, and government lobbying efforts.

Implementation: The underlying principle of this delivery mechanism is that strong individual farms and firms make strong associations, not vice versa. Therefore, it is of

fundamental importance that the project seek to enhance the capacities of the associations in a graduated responsive fashion.

There is currently a plethora of private associations in Uganda, including industry, exporter, and producer associations such as the UMA, UNCCI, UHEA, UGEA, UNFA, UCFA, and UPFA. In the IDEA project design workshop, association representatives suggested a loose consultative council to permit coordination and information exchange among these various organizations without adding to bureaucracy. The IDEA project will encourage such rationalization of the association structure as it develops from the bottom up.

Through the provision of direct technical assistance and training to associations and their members, they will be better able to assist the membership in resolving technical problems, improve market access for members, enhance access to financial and technical resources, improve the economic and regulatory environment, and generally assist members in increasing their profitability.

E2f. Research, Education, and Training

Objective: The research, education, and training delivery mechanism will be threefold. First, to develop a research program that will be demand-driven and directly responsible to the needs of NTAE industry. Second, to initiate a program with Makerere University (MU), which will result in long-term human resource capacity building of MU faculty in the NTAE crop area. Third, to design and implement a training program to overcome the production and postharvest constraints currently facing the NTAE industry.

Implementation: Demand-driven, private sector oriented applied research will be coupled with intensive in-the-field technical assistance. Long-term sustainability of the NTAE industry will be supported by MU faculty strengthening.

A systematic research program will be conducted to overcome the existing constraints in the NTAE industry. This research will 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 will utilize both the capabilities of various NARO affiliates and the private sector. Research contracts will be put out for competitive bidding, with all research institutions and private sector enterprises eligible. The merit of each research proposal will be determined by the research advisory subcommittee of the PCC. Funding will be for applied research with a likelihood of having an immediate impact on overcoming constraints to the NTAE crop industry. Multidisciplinary research focused on a specific crop and/or problem area will be encouraged.

NTAE crop research will 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.

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 will be addressed. MU currently does not have faculty trained in these areas. Eleven scholarships should be awarded to train faculty at the M.S. level in each of these areas:

- Postharvest handling of grains, spices, and oilseeds
- Postharvest handling of horticultural products (fruits, vegetables, flowers)
- Plant pathology
- Entomology
- General horticulture production/cultural practices
- Floriculture
- Grain/oilseed food technology
- Horticultural product food technology
- Agriculture engineering/irrigation technology
- Food engineering
- Horticulture product marketing

Over the short term, the U.S. university participating in the IDEA project should send faculty to teach and provide technical training in these areas. A new crop science curriculum will 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 with lectures, short courses, and training materials for university students.

Intensive in-the-field technical assistance, training, and applied research will be provided to tackle the technological constraints. This will include in-field demonstrations at government institutions (MU, NARO research institutes and stations, DFIs) and on private farms, supervised production activities, and topical training sessions. These will include planning and product selection, land selection and soil preparation, fertilization, pest control, correct utilization of pesticide and other chemical products, phytosanitary control, irrigation management, harvest and postharvest management and quality control, equipment calibration, farm machinery repair, and value-added food processing technologies whenever appropriate. Explicit advice and technical assistance will also be given in the field where the farmers and producers can more easily assimilate the technology being advocated.

Training activities will be tied directly to the needs of the private sector. Representatives of NTAE firms and producers will participate in workshops, seminars, observation tours, trade shows and associations meetings, (UFFVA, PMA, ANUGA), as well as on-farm demonstrations. Internships will be established for NTAE personnel to work at firms in Kenya, Europe, or the U.S. and in Uganda (see Annex C). Farm management training will be conducted at regional training centers or business management schools such as ESAMI.

E2g. Customized Technical Assistance for NTAE Firms and Producers

Objective: The customized technical assistance delivery mechanism provides targeted short and intermediate-term one-on-one technical assistance to firms and producers to reduce or eliminate NTAE constraints.

Implementation: Individually tailored short-term technical assistance will be an integral part of the overall assistance package provided through ADC. Customized technical assistance is an important delivery mechanism. The TA delivery mechanism will focus on specific needs of NTAE firms and producers who require highly specialized information such as rose production techniques, papain processing, animal traction, etc.

Much of this technical assistance will be utilized in direct response to identified needs or producer/firm requests. The types of expertise needed and the LOE required will be determined on a case-by-case basis. If the constraints are related to all firms in a particular subsector, an attempt will be made to integrate technical assistance with other ADC efforts.

Long-term, in-country specialists may be required for customized technical assistance to overcome certain constraints that require constant attention. Peace Corps and VOCA volunteers cooperating with the IDEA project could supply much of this technical assistance, especially for widely scattered NTAE producers. The new Peace Corps director has expressed interest in exploring potential areas of cooperation. An example of a potential volunteer assignment might be to attach one or two volunteers to the Kabale snow pea demonstration project for two years. There are numerous other areas which could be explored.

E2h. Administrative and Regulatory Policy Coordination and Reform

Objective: The institutional and policy coordination delivery mechanism is designed to facilitate dialogue between the private sector and the GOU. The direct relationship between UEDA and ADC is intended to bridge the gap in information sharing and feedback between private and public sectors with regard to important agribusiness-related legal and regulatory policy issues.

It is envisaged that the restructured UEDA will play an active role in coordinating donor efforts to promote expansion of exports. This coordination should foster effective cooperation and complementarily among projects.

Implementation: The IDEA COP will be in charge of this delivery mechanism. The restructured UEDA, although semi-autonomous, will provide ready access to the various ministries that play an important role in assisting the development of the NTAE industry.

It is anticipated that through the IDEA project's close relationship with UEDA and links with the EPADU project, more effective means can be developed to deal with current legal and regulatory issues. Practical experiences of IDEA project staff working in the field directly with NTAE problems and constraints can be communicated directly to EPADU.

EPADU can then undertake the necessary analysis and make appropriate recommendations to the GOU on how to better overcome the problem.

E3. Project Operation

E3a. Project Start-up

After completion of the Project Agreement between USAID and the GOU, the restructured UEDA can begin to finalize operation policies and guidelines. At the same time the IDEA Project Coordination Committee (PCC) can be appointed and begin to address technical as well as organizational issues related to setting up the ADC.

As soon as preliminary conditions are met, USAID will begin the procurement process for the institutional contract to provide long-term technical assistance. The contract will most likely include a collaborative team composed of a prime contractor, an 8A or Gray amendment firm, a U.S. University, and local Ugandan contractor(s).

Because of the size and complexity of the project, it is anticipated that institutional contracting may take up to six months before technical assistance begins under the IDEA project. After contractor arrival, necessary start-up activities in the first six months will include IDEA awareness workshops, a baseline study for monitoring and evaluation purposes, and initial identification of potential beneficiaries and areas of NTAE opportunity.

During this period, close exchange between IDEA project staff and ongoing activities of the amended ANEPP program will be critical to coordinate efforts for developing NTAEs in Uganda (see implementation schedule).

Once ADC is set up and the PCC is established, a life-of-project (LOP) Plan of Work (POW) will be developed. A three-day POW retreat will be developed, using a professional facilitator, to gather meaningful input into the POW before major activities are underway. The final POW will be presented within 90 days after the IDEA contract team arrives in country. The life-of-project POW will cover the LOP and a detailed implementation and activities plan of action for the first year of the project.

E3b. Project Implementation

Following finalization of the POW, early activities will include:

- Initiating a series of interventions with targeted existing NTAE firms and producers to assist them with the further development of their program.
- Putting in place a process for identifying, screening, handling and developing projects for prospective exporters.
- Establishing and maintaining an effective monitoring and evaluations system.

- Working with Makerere University to put in place an internship program which is directly tied to NTAE firms; assisting the University in revising and reorganizing selected curriculum.
- Carrying out a linkage program with a U.S. university.
- Developing a comprehensive long-term and short-term training plan based on a training needs assessment of NTAE firms and producers.
- Initiating a technical assistance program which can effectively deal with constraints currently facing the development of NTAEs.
- Contracting through public as well as private process to establish a system for awarding market-driven NTAE research contracts.
- Working with the UEDA in establishing the ADC as an effective agribusiness arm in the context of its overall mission.

E3c. Promotional Activities

The ADC professional staff will be active in promoting the project and in field-based events with NTAE firms and producers. The ADC will also maintain contact with private associations which are developing NTAE assistance programs.

It is expected that numerous NTAE constraints identified by the ADC's professional field staff will need to be addressed by public sector institutions, e.g. legal, regulatory, grades, and standards. The project will promote and develop an effective communication/feedback system which will allow corrective action to take place through the appropriate GOU institutions. These representations to the GOU will be encouraged through private sector associations so that they can begin to understand the importance of undertaking collective action to improve the exporting environment.

The ADC will also have a regular newsletter, which will be used to publicize seminars, workshops, research results, joint-venture leads, market information, potential buyers, and to create an awareness of sources of technical information and available technical assistance. The newsletter will sell advertising space to agribusiness input supply dealers, finance institutions, and others, with a view to creating a self-sustaining profitable publication by the end of the project.

F. Project Inputs

The major input to the project will be up to \$__ million in AID funds. A large proportion of this (\$__ million) will be allocated for the provision of technical assistance and training through the ADC. In addition, (\$__ million) will be allocated for training, establishing linkages with a U.S. university, carrying out demand-driven NTAE research and procuring commodities to fulfill project supported curriculum revisions.

Project technical assistance will help Ugandan NTAE firms, smallholders, private trade associations, and local service providers enter and expand NTAE production and marketing.

Short- and long-term training programs will be implemented to build capacities within the private sector and at Makerere University to enable continued expansion and development of Uganda's NTAE sector after project completion.

A competitively awarded, demand-driven research program will be carried out to meet the needs of NTAE firms as well as smallholders. The program will accept competitive bids for applied research from NARO as well as other private and public institutions. This research program will be administered by the research advisory subcommittee of the PCC.

Linkages will be established between Makerere University and one or more U.S. Universities in order to redesign, develop and implement curriculum changes needed to support NTAE development. The linked university will jointly sponsor NTAE internships in Uganda, the U.S. and third countries.

Regular monitoring, evaluation and auditing will be conducted, funded through the project.

G. Project Beneficiaries and Outputs

G1. Marketing and Exporting Firms

The most immediate project impact will result in a better functioning NTAE sector, including private firms, associations, and service organizations, along with public sector support agencies. Key beneficiaries will include:

- Private firms:
 - Exporting firms
 - Marketing firms servicing exporters
 - Producers
- 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

- **Support sector institutions:**
 - Financial institutions
 - Local consulting firms
 - Other service providers

- **Research, Education and Training Institutions:**
 - NARO and related research institutes
 - Makerere University
 - Other training institutions
 - Agriculture extension

- **Public Sector Support Agencies:**
 - UEDA
 - UIA
 - EPADU
 - Economic Policy Research Center (EPRC)

As the institutional capacities of the various organizations are enhanced throughout the life of the project, they will take on greater responsibilities for providing services previously been provided through the ADC. The ADC will gradually relinquish its role in providing export services, as the institutions listed above are able to take on greater responsibility for the interests of their constituents.

Project outputs can be estimated on the basis of potential hectares planted and yields for the various target crops. From these estimates, the potential number of beneficiaries and overall project impact can be approximated. In the following estimates, indirect beneficiaries are calculated based on three to five (average four) service sector jobs per producer and 4.6 additional household members benefitting per producer or service sector worker.

G2. High-value Crop Producers

High-value crops are the customary focus of NTAE development efforts. Because of their high commodity prices, these crops can earn substantial foreign exchange. They also contribute materially to the objective of diversifying the export product mixture. In the unique Ugandan situation, however, the number of beneficiaries impacted by high-value NTAE initiatives will be relatively small compared with those assisted through regional exports of low-value food crops. High-value crop exports can be expected to benefit approximately 200,000 Ugandans and earn in excess of \$20 to \$25 million dollars over five years (see Annex B).

G2a. Spices and Essential Oils

Spices and essential oils are the most promising crops in the high-value export sub-sector. Overall, about 140,000 beneficiaries can be expected to gain over five years, either directly or indirectly. About 5,000 smallholders would be directly targeted. This estimate seems reasonable since vanilla exporters already involve over 5,000 outgrowers.

In 1991, the total value of spices shipped from Uganda was only \$497,000. In 1992, the first five tons of vanilla extract were exported, valued at \$300,000. One vanilla exporter currently deals with over 5,000 outgrowers who have not yet come into production, so vanilla exports can be expected to grow very rapidly. Bird's Eye Chilli exports are also expanding and are expected to reach 100 tons during 1993.

G2b. Floriculture

Initially, flower exports will be synonymous with rose production. This is a high-tech venture which will serve relatively fewer beneficiaries. Given the high cost of entry into this sub-sector and the high level of management required, only a limited number of firms will become directly involved in the cut-flower business. For the future development of this industry, a reasonable target would be 40 to 50 cut-flower farms at the end of project year five, growing 78 ha and directly employing over 1,400 workers. (According to one rose grower, a reasonable economy of scale for a cut flower farm would be 1.5 to 2.0 ha. They are currently producing 2.5 ha of roses and plan to double production in the next two to three years.)

According to these projections, floriculture would impact a total of 39,200 beneficiaries either directly or indirectly: 1,400 direct employees, an additional 5,600 workers in the service sector, and 32,200 dependents of these employees.

Depending on the flower mix, this would generate a gross sales revenue of \$15 to \$18 million per year (H.V.H) which, less 22.5 percent in sales fees, would remit to Uganda \$11.6-14.9 million in foreign exchange.

G2c. Fruits and Vegetables

Although fruits and vegetables are potentially smallholder crops, exports to world markets will impact relatively few beneficiaries because so few crops are valued highly enough to merit air-freight. Production targets for project-assisted fruit and vegetable growers can be projected at 200 ha or 1,000 persons employed on their own farms or directly employed by farmers over five years. This would result in an estimated total of 28,000 direct or indirect beneficiaries: 1,000 direct, 4,000 in the service sector, and 23,000 dependents.

If Uganda is to expand into the mainstream EC vegetable market and target, for example, a four percent market share in the off-season asparagus market, then Ugandan growers and exporters will have to look to developing relations with major EC supermarket

chains in order to effectively move the 250 tons of asparagus that would be shipped. This 250 tons could be produced on 100 ha, assuming reasonable yields were achieved.

G3. Low-value Crop Producers

Exports of low-value food crops will potentially impact many more smallholders than high-value exports. Based on the following assumptions, over two million Ugandans would benefit either directly or indirectly from project-assisted exports of low-value food crops during the first five years of the project. Many of these would receive multiple benefits from project initiatives with respect to cereals, beans, and oilseeds. Cumulative farmgate value of projected increases in low-value crops would reach about \$29 million over ten years.

A realistic five-year plan would be to target an area of 100,000 ha in eastern and northern Uganda for technical assistance in commodity crops (cereal, beans and oilseeds). The project could focus on 20,000 ha (14,800 households) per year, working with the farmers to introduce improved seed varieties, improved cultural practices, storage systems and animal traction. The goal would be to increase cereal (mostly maize), bean and oilseed output by 33 percent. Each year a new 20,000 ha (14,800 households) would be targeted. At the end of the project, 74,000 rural households would have received direct technical assistance.

G3a. Cereals

Based on design projections (see Annex B), over two million beneficiaries will gain either directly or indirectly from project-assisted efforts to increase cereal exports over five years: 74,000 smallholders, 296,000 employees in the support sector, and 1,702,000 dependents. The target is to increase cereal output by 33 percent for each smallholder household assisted.

Western Kenyan import demand is estimated at 250,000 tons per year and WFP demand at 100,000 tons per 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. Unless Uganda's cereals production sector improves dramatically, it is unlikely that it will be able to supply all of the 350,000 ton demand forecasted. A reasonable approach would be to target increases of 33 percent on 6,666 ha/yr. This would achieve aggregate increases of 11,000 tons over five years.

Many factors will influence how much of this product enters the export market: world market price, exchange variations, domestic demand, trade policies of importing countries (duties, taxes, etc.), and WFP demand, as well as weather and rainfall patterns in the region. Based on production potential and transportation costs, efforts should be focused in eastern, central and northern Uganda. If all project-assisted increases were exported, the cumulative border value of new exports would be about \$1.6 million over five years and \$17.1 over ten years.

G3b. Beans

Beans are grown by the same smallholders who produce cereals. An efficient project strategy would be to target increasing export bean production for the same 74,000 smallholders targeted for cereals. Thus, the same two million beneficiaries would gain from two separate project thrusts. As with maize, the project could target increasing yields by 33 percent on 6,666 ha/yr. At the end of project year five, 33,330 ha. will have been upgraded with improved seed, cultural practices, post harvest storage and a limited amount of animal traction. This level of effort would yield an aggregate increase in bean production of 7,665 tons with a border value of \$1.4 million over five years or about \$15 million over ten years.

G3c. Oilseeds

Oilseed production is another promising smallholder crop with returns roughly equivalent to bean cultivation. It could also be pursued with some of the same farmers involved in the cereals export subsector. Because of the current scarcity of cooking oils in Uganda, initial impact will result from import substitution rather than oil exports. Oilseed cake, however, could be exported immediately to Kenya as animal feed.

Targets of increasing farmgate oilseed yields by 33 percent for project-assisted smallholders would be realistic. This could be achieved by introducing improved seeds, cultural practices, animal traction, on-farm/regional storage, and improved market information systems. In addition, specific mills should be targeted for management assistance in restructuring production turn-a-round to reach at least 75 percent operating efficiency. Crops improved should include sunflower, soya bean and sesame. Field trials and on-farm demonstrations should be initiated for safflower.

Using sunflower as the basis for calculations, the target of upgrading production by 33 percent for assisted smallholders farming 6,666 ha. per year would be realistic and would generate an aggregate marginal return to smallholders of \$175,982 at \$80 per ton. Cumulative increases in smallholder incomes would reach about \$879,900 after five years and \$9,503,000 after ten years.

SECTION II

MONITORING AND EVALUATION PLAN

SECTION II MONITORING AND EVALUATION PLAN

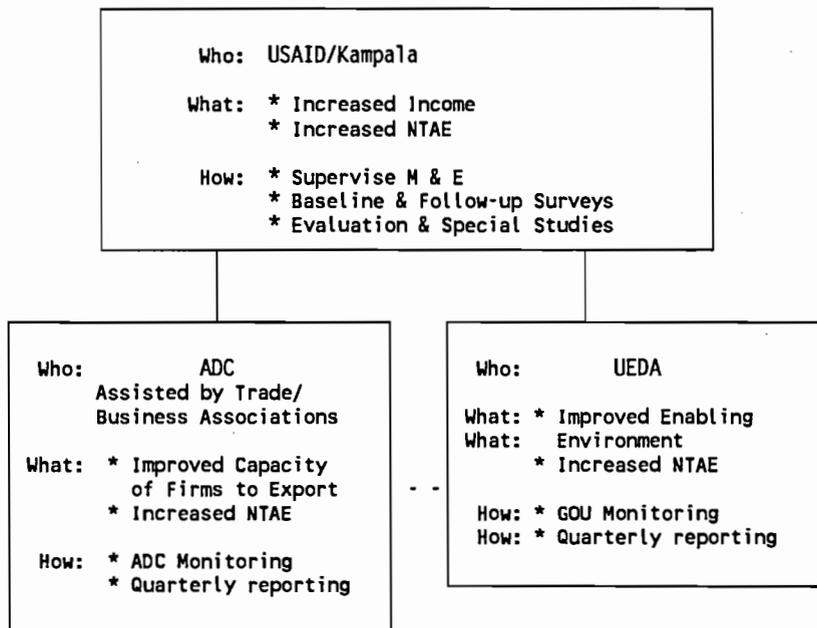
A. Introduction

The IDEA Project Monitoring and Evaluation (M&E) Plan will track and assess project performance and impact. It will also provide periodic feedback on progress towards the attainment of the project outputs and purpose. This information will be used by USAID, 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 UEDA, ADC, and USAID. USAID has exclusive responsibility for tracking people-level impact through increases in income. The Uganda Export Development Agency (UEDA), under the Ministry of Trade and Industry (MTI), will be in charge of public sector monitoring and evaluation. 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 responsibilities is shown in Exhibit II-1 below.

Exhibit II-1

Monitoring and Evaluation Responsibilities



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 project outputs and 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.

B1. ADC Monitoring

Private sector performance will be measured by application of selected indicators that correspond to the project purpose: "to increase incomes, particularly rural men's and women's returns to labor, from selected agricultural non-traditional exports." Achievement of these purpose-level indicators will be tracked both through ADC records and through USAID surveys. The Logical Framework indicators to be applied are summarized in Exhibit II-2.

Exhibit II-2: Purpose-Level Indicators
<ul style="list-style-type: none">* Returns to family labor for selected export crops* Value of export crops supported through the project* Percent of agricultural labor force involved in production of supported NTAE commodities* Percent of agricultural incomes attributable to production of supported exports

Indicators of performance and outputs will be applied to private sector efforts and reported by ADC with the cooperation of the various, relevant business and trade associations and the assistance of long-term technical assistance personnel. Output indicators to be incorporated into the monitoring and reporting process are shown in Exhibit II-3.

Monitoring will be led by USAID with the assistance and guidance of long-term personnel contracted to provide technical assistance and training to the private sector. The cooperation and participation of key private sector organizations such as the Ugandan Manufacturer's Association (UMA), the Uganda National Chamber of Commerce and Industry (UNCCI), the North Uganda Manufacturer's Association (NUMA), and the Uganda Horticultural Exporters' Association (UHEA) will be very important to the overall private sector monitoring effort. As organizations such as these develop and strengthen in capacity

and leadership, they should assume even greater responsibility for monitoring and evaluation activities.

Exhibit II-3: Output Indicators

- * Number of entrepreneurs assisted by ADC
- * Number of new NTAEs exported
- * Change in volume of regional exports of maize, beans, etc.
- * MIS established
- NTAE policy issues resolved
- ADC continuing to recruit new exporters
- * Number of exporter and producer associations assisted
- * Associations participating in policy dialogue with GOU
- * Increased membership in exporter associations
- * Number of short-term training courses supported
- * Number of Makerere graduates employed in the private sector
- * Demand-driven research activities contracted.

B2. GOU Reporting System and Database

The UEDA Monitoring and Evaluation Office will develop a GOU reporting system and computerized database to record statistics for monitoring the NTAE development. This system will be initiated in project year one. The system will specify responsibilities for monthly reports to UEDA from various ministries. Reports will be designed to include data necessary for measuring project output and impact indicators as well as data required by UEDA and the various ministries.

The data from these reports will be entered into the database monthly on a gender-disaggregated basis and reported to USAID quarterly. The database will also serve as a repository for data from surveys and special studies.

USAID will contract for a short term Management Information System specialist to assist UEDA in setting up the reporting system and database. The consultant will establish the basic database design, organize and initiate data entry, and provide training for UEDA personnel in database maintenance and modification.

B3. USAID

B3a. Monitoring Performance, Outputs, and Impact

In addition to providing overall supervision of monitoring activities, USAID/Kampala will contract and supervise baseline and follow-up surveys. These surveys will provide a foundation of information which will be necessary to fully measure changes in incomes, returns to labor and non-traditional exports for men and women engaged directly and indirectly in NTAE production and marketing throughout the life of the project.

USAID will supervise monitoring of overall project performance and level of achievement of prescribed outputs. Activities and outputs will be monitored and reported to ADC, UEDA, USAID and the business community by key public and private sector entities with the guidance and assistance of the various contractors and grantees.

B3b. Income Surveys

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.

Surveys have two objectives:

- Determining income and employment distributions of men and women in priority NTAE sectors
- Evaluating impact on the income of men and women in these sectors

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.

B3b(1). Survey Design

IDEA plans three surveys: a *Baseline Survey*, initiated within six months of initiation of fieldwork, 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 will refine the final design based on information from the field. The following design is provided as a guide.

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 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.

Four crop sectors will be studied:

High-value Crops

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

Low-value Food Crops

- Cereals, beans, and oilseeds

B3b(2). Sampling

For high-value NTAE crops and oilseeds, 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 Baseline Survey sample could then be drawn from this listing using a systematic random sampling method.

For the Baseline Survey, a sub-sample of 20 exporters—two each for floriculture, vegetables, oilseeds, 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 sector 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 II-4).

Exhibit II-4				
Samples Sizes for Baseline, Mid-term and Final Surveys				
SURVEY	EXPORTERS	PROCESSORS/ DISTRIBUTORS	PRODUCERS	TOTAL
Baseline	20	40	80	140
Mid-Term	40	80	120	240
Final	60	120	180	360

B3b(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.

B3b(4). Implementation

USAID will be responsible for contracting these surveys directly with a research firm, which could be either U.S. or Ugandan. Baseline, Mid-term and Final Surveys, as well as the evaluations based on analyses of the surveys, should be contracted to the same firm, if the performance remains satisfactory.

Fieldwork for the baseline survey should be completed within six months of IDEA Project start up, and the initial report within nine months. Significant participation of GOU and private organizations should be expected, particularly from UEDA. 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 November. Similarly, fieldwork for the Final Survey should be carried out in the early part of the fifth year of the project.

B3c. Environmental Monitoring

Preliminary Environmental Considerations indicated that the IDEA Project is not expected to have significant negative environmental effects on threatened or endangered species or critical habitats. USAID is currently conducting a more formal environmental assessment. Environmental effects should also be reconsidered annually as new interventions are specified. USAID's Monitoring and Evaluation Office will be responsible for checking on any potential environmental impacts.

C. Evaluation

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 in year five.

C1. Mid-term Evaluation

USAID will contract for the Mid-term Evaluation directly with a U.S. consulting firm. 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

The evaluation team should consist of two expatriate consultants and one local hire consultant, contracted for one month each, as follows:

- Economic policy specialist
- Trade and investment specialist
- Ugandan economist

Data for the Mid-term Evaluation will be drawn from the monitoring database, the surveys, and contextual reports. The Mid-term Survey will provide the most concrete data on attainment of the project purpose, increasing income in the NTAE sector.

The evaluation will look first and foremost at the effects on income of men and women generated by the IDEA Project, comparing these with program targets.

Evaluators will study the distribution of these effects for 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?

Analysts will focus on the effects of specific policy changes introduced such as easing of exporting restrictions, streamlining processing, easing foreign exchange requirements, easing credit, and encouraging investment. Their impact on increased exports and resulting improvements in household income and employment will be studied, and whether the changes have resulted in the anticipated benefits. Similarly, projectized components such as technical assistance and training for private sector firms and support for trade and professional associations will be evaluated.

C2. Final Evaluation

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, but should be contracted for six weeks each instead of one month. It will draw conclusions about the impact of this project and develop lessons learned for others undertaking similar NTAE projects.

D. Special Studies

The Monitoring and Evaluation Plan includes two special studies: Sector Studies and Border Traders.

D1. Sector Studies

Project activities will focus on four priority sectors:

High-value Crops

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

Low-value Food Crops

- Cereals, beans, and oilseeds

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. Impact can be expected to vary greatly from sectors dominated by a few vertically integrated firms to those involving a plethora of small operators.

USAID will contract for a study team of two consultants, led by a trade and development specialist, to conduct studies of these four priority sectors in project years one, three and five. Consultants should hold a master's degree in business management, with experience in the relevant industry sectors. Consultants should have gender analysis expertise, knowledge of sampling and research methodology, and data analysis. They will work with a team of interviewers to conduct the fieldwork for the survey.

Information from the initial sector studies will provide a baseline description of each sector and assist in finalizing the sampling design for the baseline survey. The surveys in years three and five will permit evaluating the impact of the IDEA Project.

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 II-5: Quotas for Sector Studies		
Size of Enterprise	Men	Women
Large	20	20
Small	20	20

Interviewers will obtain descriptions 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.

D2. Border Traders

The second special study focuses on men and women traders marketing goods over land with 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.

D2a. Rationale

Most NTAE policy reforms have been designed with a centralized conception focusing 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, 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.

D2b. Study Design

The Border Trader study will be conducted three times, in project years one, three and five. The interviews will be conducted following the Baseline, Mid-term and Final Income Surveys. 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.

The study will concentrate on the Kenya, Sudan and Rwanda borders and will focus on cereals and beans. As in the sector 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.

E. Work Plan

The Monitoring and Evaluation Work Plan, which details tasks, responsibilities and scheduling is shown in Exhibit II-6. USAID has overall supervisory responsibility. UEDA will coordinate monitoring of GOU activities, receiving monthly reports from various government agencies and reporting to USAID quarterly. ADC will lead private sector monitoring and evaluation activities, with assistance from Ugandan professional and trade associations.

SECTION III

SUMMARY OF ANALYSES

SECTION III SUMMARY OF ANALYSES

A. Institutional Analysis

A1. Institutional Review

A1a. 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 focussed 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 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, complimentary approach to investment promotion, export development and policy analysis can be initiated. More dynamic growth of NTAE industries should result.

A1b. 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
- 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

The UIA 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 UIA is currently funded primarily by USAID. Future funding sources are still quite uncertain at this time, although discussions have been taking place with the World Bank.

A1c. Uganda Export Promotions Council (UEPC)

The UEPC is a statutory body established by the Export Promotion Council Act of 1983. 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.

At present, the Minister of MCIC has relatively broad discretionary power over the organization. The full-time Executive Secretary is appointed by the Minister, who also has the final say on all senior appointments and 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 as well as in how to penetrate markets
- Disseminate market information

The UEPC's current strategic plan was 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 is widely viewed as ineffective and unresponsive. This perception results from its lack of a clear mandate, a history of being inadequately funded, and the fact that its board has been inactive since 1988. So 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 to transfer EPADU's (see section A1d.) export development functions to the UEPC will bring about substantial changes to the Council. MCIC is currently considering further legislative action 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 recommended renaming the overhauled UEPC in order to avoid the negative connotations from UEPC's past. Accordingly, we hereafter refer to this new export

promotion office as the Ugandan Export Development Agency (UEDA), a name suggested by design workshop participants.

A1d. Export Policy Analysis and Development Unit

The Export Policy Analysis and Development Unit (EPADU) was created in 1988 under the Agricultural Non-traditional Export Program (ANEPP) to act as the project's executing agency. The creation of EPADU, 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 was designed to increase the value of Uganda's non-traditional exports and diversify the country's export base by identifying policy constraints and providing 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.

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 to merely transfer the export development functions, or to also transfer the EPADU staff to UEDA.

A1e. Other Private and Public Institutions/Associations

In addition to the primary institutions discussed above, the following private/public-sector groups and their roles in future NTAE development need to be considered:

- 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 resource center (EPRC)

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.

A2. Lessons Learned

USAID 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 new, but a few lessons can be drawn from their experiences.

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.

A3. Models Considered

The IDEA design team considered the following export promotion models for Uganda:

- 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, none of them are presently in a position to take on full responsibility for handling NTAE promotion. As NTAEs begin to expand, membership organizations should get stronger. The IDEA project

is anticipated to facilitate this growth and increase membership groups' capacities to shoulder 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. By themselves, however, they would not be able 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. While there are many appealing aspects to this option, it was determined that a purely private entity could not adequately address issues like the following: 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; and low-value vs. high-value product.

USAID and the IDEA design team's "preferred option" recommendation is to establish a semi-autonomous project implementation unit to provide the targeted and specialized training needed by Uganda's NTAE industry to expand exports.

The proposed structure would have direct ties to exporters and producers as well as to the GOU's export organizational structure, yet remain semi-autonomous. This degree of autonomy would enable the unit to provide NTAE firms with specialized assistance that would build their basic capabilities and make them profitable in the long-run.

A4. Design Methodology

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 the public 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.

A5. Institutional/Organizational Structure

The IDEA project will establish an Agribusiness Development Center (ADC) as the agribusiness arm of the restructured UEDA. The ADC will be established as a semi-autonomous organization and located outside of the UEDA premises. ADC will be operated by the contract team, with the COP directing and managing the organization. Technical

guidance will be provide to the ADC by the IDEA Project Coordination Committee (see Annex A for details).

The ADC will have six divisions relating to functional areas of operation.

- Customized technical assistance
- Marketing
- Finance
- Association development
- Research, education, and training
- Policy coordination

The customized technical assistance division will provide one-on-one TA to firms and producers on a case-by-case basis. In most instances the expertise will be highly specialized, for example, a rose production specialist assigned to a particular firm for an extended period of up to six months. Customized technical assistance will be tailored to meet specific technical needs of the targeted firm or producer which would not be handled through ADC's other divisions.

The marketing and joint-venture contacts division will handle all matters related to marketing information (low- and high-value), market contacts and identification of joint-venture prospects. The division will work in close cooperation with the UIA for joint-venture prospects, and other agencies and organizations in developing marketing information and contacts.

The finance division will work very closely with APDF staff, especially if an in-country office is established as is currently proposed. The finance division will also work in close cooperation with smaller NTAEs that would not qualify for APDF assistance (projects under \$250,000).

The association development division will liaise directly with various producer, exporter, and industry associations. Over the life of the project the division will be responsible for preparing these associations to take over ADC activities such as identifying new product markets and contacts for its membership. The division will facilitate the growth of associations as individual NTAEs develop. In addition, associations will be directly linked to the public sector through the ADC's policy coordination division as described below.

The research, education, and training division will establish and carry out a market-driven research program, assist with the development and implementation of a revised curriculum in selected Makerere University departments, and develop a training program which meets the needs of the emerging NTAE sector.

The policy coordination unit will be closely linked with the association development division, to foster a more open and meaningful dialogue between the public and private sectors. The UMA's current efforts to lobby the GOU for policy and regulatory changes is a good example of such coordination that needs to be enhanced and expanded.

B. Technical Analysis

The 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.

B1. Constraints

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

In terms of financial/investment linkages entrepreneurs are effectively shut out from the financial system. Agro-entrepreneurs face cumbersome loan procedures that only add to their costs. The Uganda Development Bank (UDB) has funds available for small-scale projects, but the UDB has not channelled any assistance toward fresh produce growers. The UDB believes that there are too many risks attached to the vagaries of the horticulture market.

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."

Market information is another constraint faced by the NTAE sectors. Traders and exporters of maize, beans, and oil seeds, are not receiving adequate amounts of timely information about market conditions. Smallholder producers lack basic market information that could enable them to adapt more appropriately to market demands, and NTAE firms that are exporting high-value product are also in constant need of timely market information.

Many useful market databases now exist but to date there is no one entity in Uganda is 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).

Electric utilities are a constraint that will need to be addressed. Uganda is blessed with abundant water and electricity. However, power service is erratic, a clear detriment to reliable cold storage and efficient packing and processing plant operations.

A system of reliable transport for export products is essential. The road network in Uganda, while fairly extensive, is often in disrepair. 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.

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.

Uganda faces serious limitations in transportation of NTAE crops. High-value perishable export products require an adequate and reliable temperature and humidity controlled transport system. Presently, most produce trucks are open ben and those enclosed are not refrigerated. Rail service is cumbersome and unreliable. 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.

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.

Presently, limited agribusiness management skills limit the growth and development of NTAE's. NTAE business leaders need management training in such areas as long-range planning, financial management, marketing strategies and operations. Planning includes establishing goals and objectives. Management information systems are also lacking.

Except for research and extension activities on maize and beans, 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. In terms of floriculture, Uganda may have a better climate for top quality flowers compared to Kenya and Zimbabwe. One of the main competitive disadvantages for Uganda is that it has no recent tradition of production and marketing of high-value export crops.

Unlike 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.

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. As was observed in vegetable fields in Kabale, 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.

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, and plant nutrition.

Seed selection is another area for improvement. By combining proper site selection with improved varieties from the research stations, maize and bean yields of 1.5 tons/ha are reasonable. Even though yellow maize is the predominate variety grown, white maize is gradually becoming a very important cereal in Uganda, occupying 10% of the total area under cultivation in annual crops. Adequate incentives for seed distribution should be set in place, and further consideration should be given to privatizing Uganda's seed industry.

Uganda's ability to overcome postharvest constraints is critical for NTAE development. Serious problems with NTAE crops reflect deficiencies in improper harvesting, lack of cooling facilities, improper packaging for export markets, inadequate infrastructure at Entebbe airport for perishable goods, little understanding of international market standards, and other areas. Perhaps the most serious of these is the lack of cooling facilities and the need for a modern cold chain.

Finally, the design team identified extension information as a major constraint. The government's agriculture extension system is weak and relatively ineffective. Low salaries, lack of adequate transport, inappropriate training and other factors are all to blame. There are also a number of private extension systems operating in the country. The BAT is one such system, and should be investigated as a prospective model which might apply to NTAEs.

B2. Subsector Analyses

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 B. 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.

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. Chillies, 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.

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 to design a project reaching large numbers of producers and traders distributed over a wide geographic area.

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 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.

Uganda is a net importer of vegetable oil. The production potential for oilseeds in Uganda, however, 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. And 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 expected to grow. To complement and strengthen the oilseed and grain milling industries, improvements in both on-farm and off-farm commodity storage is necessary.

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 B.

B3. NTAE Business Case Studies

Section D of Annex B outlines case studies of businesses in the four different NTAE subsectors: cut flowers, spices, vegetables, and low-value commodity crops. Detailed analyses of these case studies are discussed in the annex. In brief, however, 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.

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 B—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.

Low-value commodity exporters are also described in Annex B, 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.

C. Research, Education, and Training Analysis

The constraints to NTAE development in Uganda impact 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. These constraints include:

- Plant protection (pest management)
- Production (seed quality, cultural practices)
- Postharvest (cooling, packing, storage, processing)
- 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.

A systematic research program should be conducted to overcome the existing constraints in the NTAE industry. This research may be conducted by both public sector

institutions and contracted private sector firms. Private sector demands will determine the type of research to be conducted. The research program should utilize the capabilities of the various NARO affiliates along with the private sector, perhaps using a competitive grant system. The merit of each research proposal should be determined by a research advisory board. 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.

The IDEA project should encourage NTAE crop research to develop more active linkages with the private sector. One 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. Special attention will be given to identifying NTAE innovations that have been successfully used in similar agro-ecological zones in other countries and 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 grower needs and closely coordinated with growers. IDEA's technology transfer component will disseminate the applied research results to the private sector. A significant portion of the research effort should be participatory, using the grower's field and involving the district, parish, or village extension person.

Strengthening MU's human resource capacity will support the long-term educational and training needs of the NTAE industry. This institutional 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. The prime contractor for IDEA would likely provide the majority of the long- and short-term staff, but subcontract the graduate training activities to a U.S. university or consortium of universities.

IDEA should address MU's long-term human resource needs in the areas of postharvest handling, plant protection, horticulture crop production, floriculture, food processing, engineering, and horticulture marketing. MU currently does not have faculty trained in these areas. Scholarships should be awarded to train faculty at the M.S. level in each of these seven areas. 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 marketing, and horticulture. Long-term university expatriates and relevant short-

term specialists should be available to assist with lectures, short courses, and training materials for university students.

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. These activities will include planning and product selection, land selection and soil preparation, fertilization, pest control (including correct utilization of pesticides and other chemical products), phytosanitary control, irrigation management, harvest and postharvest management, quality control, equipment calibration, farm machinery repair, and value-added food processing technologies. 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
- Grain crops
- Plant nutrition
- Specialty crops
- Irrigation
- International marketing
- Food processing
- General horticulture crop production
- Equipment
- 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 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.

Due to Uganda's remote geographic location, transportation is an important factor to consider in developing fresh export sectors. Ugandan exports to world markets must focus on products not available from coastal areas to avoid a competitive disadvantage in transport costs. Since fresh exports to European markets must be carried by air, only high-value Ugandan products have the potential to earn export profits. Low-value products can only be exported to regional markets in Africa.

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.

European colonial forces left their mark on Uganda's socio-economic atmosphere. 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 left the legacy of concentration on a few cash crops, resulting in the today's dependence on coffee. Religious tensions imported by European Protestants and Catholics also continue to be important factors in the private and public sectors alike.

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 re-achieving 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. Nonetheless, demand for food crops remains strong in surrounding countries, including an export market for all the maize and beans Ugandan smallholders can produce.

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 would 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.

Snow peas have attracted considerable attention in Kabale, where they were test grown last season. Flowers have also attracted interest, but will probably not pay off for smallholders in the short term. Vanilla seems to have a proven market and is catching on very quickly among small farmers, but it requires a very different cropping system from standard crops smallholders are used to. Chillies are more attractive in this respect, as they do not require a new cropping system, but small farms adopting this crop will need to look beyond immediate family labor to do the harvesting.

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. Museveni's reform agenda emphasizes economic independence. It is hoped that this will be achieved through decreasing Uganda's reliance on export of primary raw materials and increasing diversification of exports. NTAE initiatives are important steps toward this goal.

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, in contrast to imposed cooperatives, 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 E 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 statutes 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 high potential 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 women are traders; 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 another 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. The Rural Farmer's Credit Scheme is one of the Government's initiatives to extend credit to women. However, while one-third of women surveyed knew of this program, only 1 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.

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.

SECTION IV

CONDITIONS AND COVENANTS

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The project shall be subject to the following essential conditions and covenants, together with other such terms as USAID may deem appropriate.

A. Source and Origin of Commodities; Nationality of Services

Commodities financed by USAID with grant funds shall have their source and origin in the United States or in Uganda, except as USAID may otherwise agree in writing. The suppliers of commodities or services financed by grant funds shall have Uganda or the United States as their place of nationality, except for suppliers of ocean transport, which are covered below, and except as USAID may otherwise agree in writing.

Ocean shipping financed by USAID under the project shall, except as AID may otherwise agree in writing, be financed on flag vessels of the United States. The requirement of the Cargo Preference Act will be met with respect to all commodities financed by USAID that are transported on ocean vessels.

B. Governance

Prior to the first disbursement under the Grant (or prior to the issuance by USAID of documentation pursuant to which disbursement will be made), the Government of Uganda, except as the Parties may otherwise agree in writing, will furnish proof to USAID that it has passed the proposed parliamentary act to restructure the UEPC, making it a semi-autonomous body attached to the Ministry of Commerce, Industry and Cooperatives (MCIC). The Act restructuring the UEPC will include the following provisions:

- Governance by a nine-member independent board of directors, a majority of whose members are from the private sector and whose chairman is chosen by the board from the private sector.
- *Ex officio* representation by USAID and the IDEA projects contractor on the board of directors, with rights to attend all board meetings at which matters related to policy guidance and direction of the IDEA project are discussed.
- Inclusion of the IDEA project and its COP to operate from the UEPC premises as an "agribusiness arm" of the UEPC.
- Establishment of an IDEA Project Coordination Committee (PCC) that will serve as the primary body for providing the IDEA project with day-to-day technical guidance and direction in carrying out its mandate to assist in the development of

NTAE's in Uganda (see earlier sections of this document for a fuller description of the PCC's duties).

- Allowing for the ADC to be established as a semi-autonomous body outside of the UEPC but under the guidance and directions of the UEPC as directed by the UEPC board.
- The Executive Director of the restructured UEPC to serve as primary counterpart of the IDEA project contractor appointed COP, the COP being the IDEA contractor's primary representative in Uganda who will manage and direct all aspects of the IDEA project, including the operations of an Agribusiness Development Center.

ANNEX A

INSTITUTIONAL ANALYSIS

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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
- 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 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 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
- 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 to 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 to 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 their 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 with 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 C.

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 new, 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.

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 unsustainable 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 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.

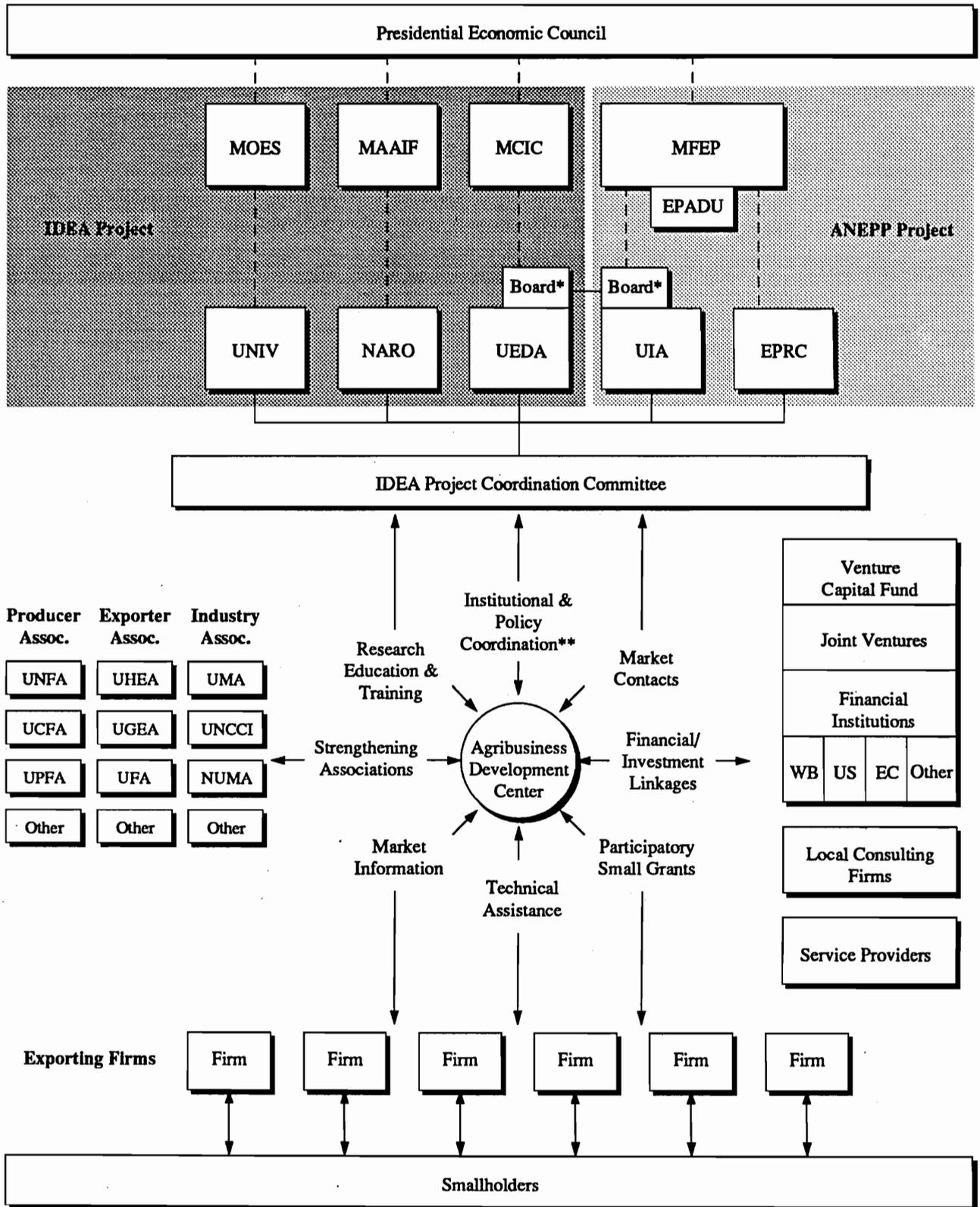
Fourth, an IDEA design Workshop was held during the middle of the design teams stay in Uganda. The Workshop, which was attended by 80 individuals, had as its objective "Brainstorming for a Better IDEA". Included in the workshop were group discussions which dealt with numerous issues including organizational 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.

F. Institutional Structure

The institutional structures and organizations proposed to relate to the IDEA project are depicted in Exhibit A.1 on the following page. These institutional and organizational relationships are illustrative, conditioned on changes being made within the UEPC and final USAID approval. The key institution which will be involved in the formulation and implementation of the IDEA project is the UEDA (restructured UEPC). The board of directors of the UEDA, as newly constituted, will provide overall guidance and direction to the project. The board will have as ex officio members one representative from USAID as well as the IDEA project's Chief of Party. The board is not expected to meet more than semi-annually regarding IDEA issues.

Exhibit A.1: Proposed IDEA Project Organizational/Institutional Relationships



*The UEDA and UIA boards share some common members.

**The eight spokes surrounding ADC are proposed project delivery mechanisms.

The day-to-day guidance and direction for the project will come from IDEA Project Coordination Committee (PCC) will be selected jointly by the Executive Director of the UEDA and a representative from USAID and the prime contractor's COP. The PCC will select their own chairperson and meet at least monthly to monitor and provide overall technical advice and direction to the project. The PCC will have thirteen members representing: USAID's ANR office; the project contractor. One representative from each of the following: Makerere University; NARO; UEDA; UIA; EPADU (until it is subsumed into the MFEP). And two representative from: appropriate NTAE agribusinesses; appropriate private sector associations; and smallholder currently involved in the production of NTAE crops. One of the two representatives of Association, Exporters and smallholder will be a woman. Until contractor(s) are selected the IDEA Advisory Group will continue to serve as the focal point for the IDEA project's design and development.

G. Organizational Structure

The IDEA project will establish an Agribusiness Development Center (ADC) as the agribusiness arm of the restructured UEDA. The COP will direct and manage the ADC, which will be established as a semi-autonomous organization operated by the contract team outside the premises of the UEDA. Technical guidance and direction will be provided to the ADC by the IDEA Project Coordination Committee.

The ADC will have six divisions relating to functional areas of operation as depicted in Exhibit A.2 on page A-15:

- Customized technical assistance
- Marketing
- Finance
- Association development
- Research, education, and training
- Policy coordination

The customized technical assistance division will provide one-on-one TA to firms and producers on a case-by-case basis. In most instances the expertise will be highly specialized, for example, a rose production specialist assigned to a particular firm for an extended period of up to six months. Customized technical assistance will be tailored to meet specific technical needs of the targeted firm or producer which would not be handled through ADC's other divisions.

The marketing and joint-venture contacts division will handle all matters related to marketing information (low- and high-value), market contacts and identification of joint-venture prospects. The division will work in close cooperation with the UIA for joint-venture prospects, and other agencies and organizations in developing marketing information and contacts.

The finance division will work very closely with APDF staff, especially if an in-country office is established as is currently proposed. The finance division will also work in

close cooperation with smaller NTAEs that would not qualify for APDF assistance (projects under \$250,000).

The association development division will liaise directly with various producer, exporter, and industry associations. Over the life of the project the division will be responsible for preparing these associations to take over ADC activities such as identifying new product markets and contacts for its membership. The division will facilitate the growth of associations as individual NTAEs develop. In addition, associations will be directly linked to the public sector through the ADC's policy coordination division as described below.

The research, education, and training division will establish and carry out a market-driven research program, assist with the development and implementation of a revised curriculum in selected Makerere University departments, and develop a training program which meets the needs of the emerging NTAE sector.

The policy coordination unit will be closely linked with the association development division, to foster a more open and meaningful dialogue between the public and private sectors. The UMA's current efforts to lobby the GOU for policy and regulatory changes is a good example of such coordination that needs to be enhanced and expanded.

H. Staffing, Working Relationships, and Functions

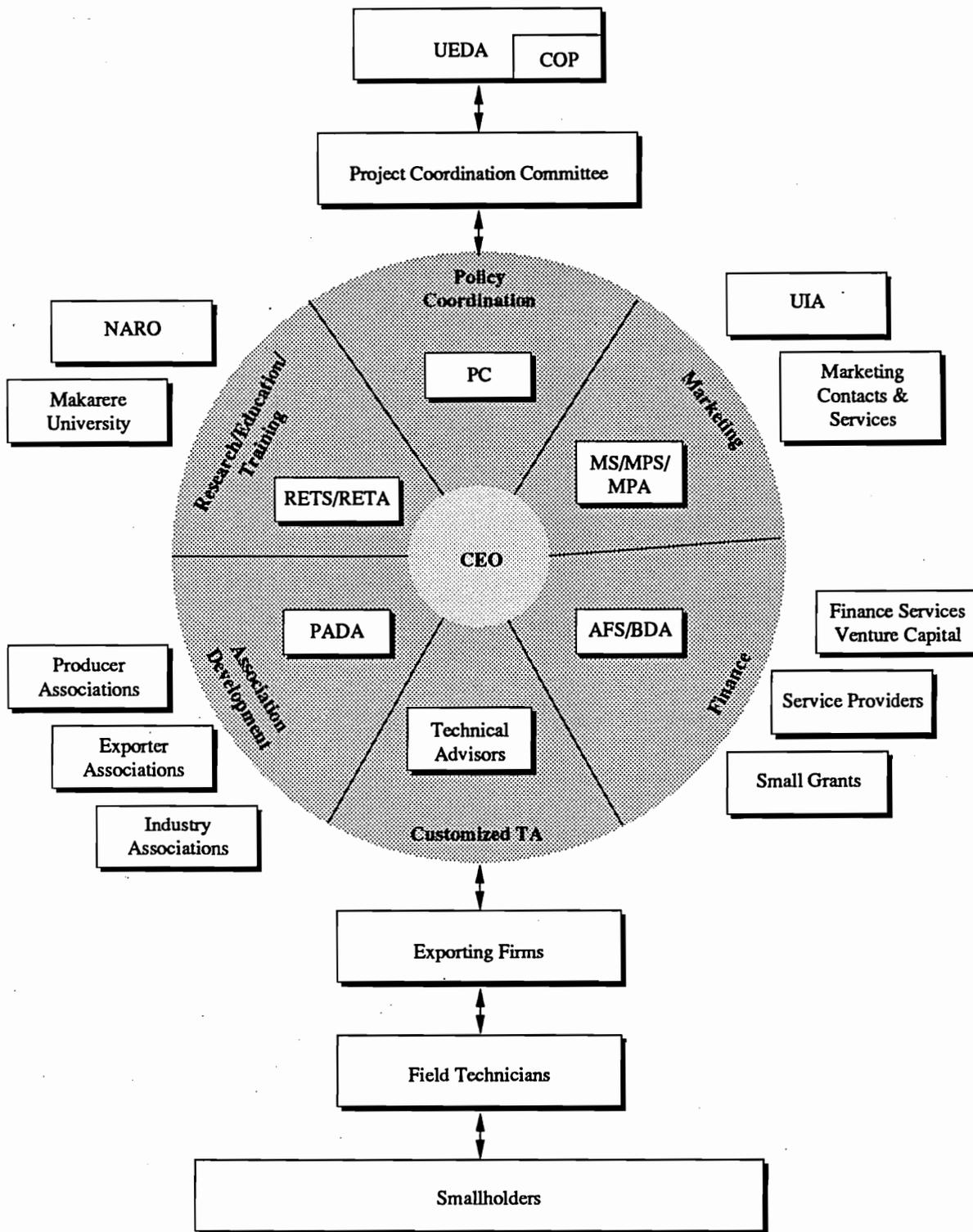
The following proposed staffing arrangement is presented as an illustration of one possible team plan. Eventual determination of staffing patterns will depend on USAID decisions regarding level of effort and budgets for long-term and short-term technical assistance and training activities. The suggested long-term staffing patterns which are recommended for the ADC, both local and expatriate, will actually be determined when final budgetary and LOE have been fully considered. It should also be noted that a considerable degree of freedom exists to substitute ST, local and expatriate, LOE in place of long-term staff. In addition, if for example, the APDF sets up an office in Uganda and works in close cooperation with the ADC, the overall LOE which the ADC will need to expend on the financial linkage delivery mechanism will be substantially reduced.

Under this illustrative arrangement, the IDEA project will be staffed for the LOP by long-term expatriate and local professional and support staff who will, with the exception of the COP, operate within the ADC. The COP will establish an office in the UEDA, but supervise and direct the ADC through the CEO of the ADC (Exhibit A.2).

H1. Expatriate Staffing

The Chief of Party (COP) will work directly in a counterpart relationship with the Executive Director of the UEDA on all matters related to the IDEA project. The COP will supervise and direct all activities within the ADC through the CEO of the ADC. The COP would also serve as the technical conduit for all NTAE policy and other matters which would require GOU interventions, e.g., changes in NTAE regulations. In effect the COP would

Exhibit A.2: Agribusiness Development Center Organization Chart



Proposed IDEA/ADC Team:

Long-term Expatriate Specialists

- COP - Chief of Party/Export Promotion Specialist
- CEO - Chief Executive Officer/NTAE Specialist
- AFS - NTAE Agribusiness Finance Specialist
- MS - NTAE Marketing Contact-J/V Specialist
- MPS - (Low Value) Cereals Marketing/Production Specialist
- RETS - NTAE Research/Education/Training Specialist

Long-term Local Advisors

- PC - Project Coordinator
- BDA - NTAE Business Development Advisor
- PADA - Private Association Development Advisor
- MPA - (Low Value) Marketing/Production Advisor
- RETA - Research/Education/Training

run the ADC as a semi-autonomous agribusiness arm of the UEDA. He or she would also serve as an ex officio member of the UEDA's board regarding IDEA/NTAE matters.

The Chief Executive Officer (CEO) will be responsible to the COP. He or she will be responsible guiding and directing the operations and staff of the ADC. The CEO will see to it that the projects objectives are being carried out and met at the firm/field level. He or she will ensure that the technical work is undertaken in a timely professional manner. The CEO will supervise the general course of action for all ADC staff.

The Agribusiness Finance Specialist (AFS) will be responsible to the CEO as all other ADC professional and support staff. S/he will work closely with firms and the financial community to effectively link NTAE projects with appropriate financing. S/he will work in tandem with the locally-hired NTAE Business Development Advisor. The AFS will provide a wide range of services from assistance in the initial conceptualization of a project to managing the financial aspects of the operation once it is up and running.

The Marketing Contact/J/V Specialist will be responsible to the CEO of the ADC. S/he will work closely with NTAE firms, UIA staff and others, in developing a comprehensive program for establishing contacts with foreign market agents for local NTAE firms as well as locating potential J/V partners.

Under the direction of the CEO the Marketing/Production Specialist (MPS) for NTAE (low-value products) will develop production and marketing programs which will have the greatest possible impact on a wide range of beneficiaries who are primarily producing cereal crops for export to regional markets. S/he will work in close cooperation with the local Marketing/Production Advisor in seeing that the program is effectively implemented at the field level, benefitting firms and producers.

The Research/Education/Training Specialist (RETS) will be responsible to the CEO. S/he will develop a coordinated program of research, education and training which will maximize benefits accruing to the project's beneficiaries. S/he will work in close collaboration with NARO, Makerere University and others in carrying out this joint program. The specialist will also work in close cooperation with the Research/Education/Training Advisor (RETA) in implementing their joint program of work.

H2. Local Staff (Professional)

There will be six local professionals hired under the IDEA contract. They will all work within the ADC in support of their respective SOW.

The Project Coordinator (PC) will work under the guidance and direction of the CEO. S/he will be responsible for coordinating the overall efforts of the ADC. S/he will take into consideration cultural and women's issues in seeing that the project benefits rural men and women.

The Business Development Advisor (BDA) will work under the CEO and in close collaboration with the AFS. Together they will carry out a SOW which will result in NTAE firms' being able to obtain financing and effectively implement their project.

The Private Association Advisor (PAA) will work in collaboration with various industry, export, and producer associations under the direction of the CEO. A SOW will be jointly developed with an advisory body which is to be established, and represents the major associations with members having specific NTAE interests.

The Marketing Productions Advisor (MPA) will work in close collaboration with the MPS in carrying out a SOW to increase low-value cereal crop exports regionally. The MPA will be responsible to the CEO.

The Research Education and Training Advisor (RETA) will work jointly with the RETS, NARO and Makerere University in developing their SOW. The focus of these efforts will be in developing effective market-led, private-sector directed research, education and training program which will contribute to the development of NTAE's in Uganda. The (RETA) will work under the directions of the CEO.

The project IDEA team will include six to eight local field technicians who will be responsible to an assigned Specialist or Advisor. The field personnel will function in a role similar to that of the BAT field extension workers. The field staff will supervise trials, model demonstrations and provide the direct interface between the firms and small holders.

A strong linkage between export firms and smallholders is vital to the success of the project. Therefore consideration should be given to using local or international NGO's to assist in carrying out field extension work. The use of Peace Corps Volunteers for field extension work should also be explored with the new Peace Corps director.

H3. Short-term Staffing

The ADC will rely heavily on short-term (local and expatriate) technical assistance and training to supplement the core long-term staff. The areas of expertise which will be required and the particular SOWs are yet to be identified but it is anticipated that the overall effort would include consultancies to: investigate specific technical solutions to problems, e.g., fungus problems in vanilla plantations; utilize intermediate-term technical assistance to provide start-up crop know-how, e.g., Nile Roses use of expatriates for rose production; make specific market contacts or identify markets in the U.S. or Europe; identify the needs of local private associations (this could include assisting the Chamber of Commerce develop a program); set-up and measure results of field trials; develop business plans for local NTAE's through local consulting firms; use VOCA or IESC volunteers to work with selected firms or associations; and conduct baseline studies and design specific plans of action. When ST LOE is expended the underlying principle will be that the short-term LOE will be practical and hands-on, while focusing on assistance which will allow the ADC to better meet its overall objectives.

I. Implementation Capabilities (UEDA/ADC)

The ADC will be a stand-alone operation, with the necessary degree of autonomy to ensure that benefits are going directly to the intended beneficiaries. It is not anticipated that the current weakness in the UEDA will adversely affect the outcome of the project if the conditions precedent, as set out in Section IV., are followed. The UEDA should be in a much better position to not only provide support and direction to the project, through the COP, but to make available additional resources which are intended to be put into the UEDA by other donors. The day-to-day responsibility for implementing the IDEA project will remain with the prime contractor. The Project Coordinating Committee (PCC) will provide immediate technical advice and direction to the project so as to insure a smooth start-up.

The COP's location within the UEDA will benefit the project by providing the IDEA project with direct access to key policy makers, other donors, agencies and institutions also involved in the development of NTAE.

J. Staffing and Administrative Requirements in USAID

USAID/Uganda will contract with a full-time PSC to manage the technical assistance and training contract under the IDEA project. The PSC will report directly to the ANR office within the mission.

K. GOU Involvement

There will be no direct involvement of GOU Ministries in the implementation of the project except as occurs through the UEDA board which will be majority private-sector and the GOU involvement as members of the PCC. It is anticipated that project personnel will need to develop very close working relationships with the MCIC and MFEP which will play an increasingly important role in the overall development of NTAE's and the likely success of the project.

ANNEX B

TECHNICAL ANALYSIS

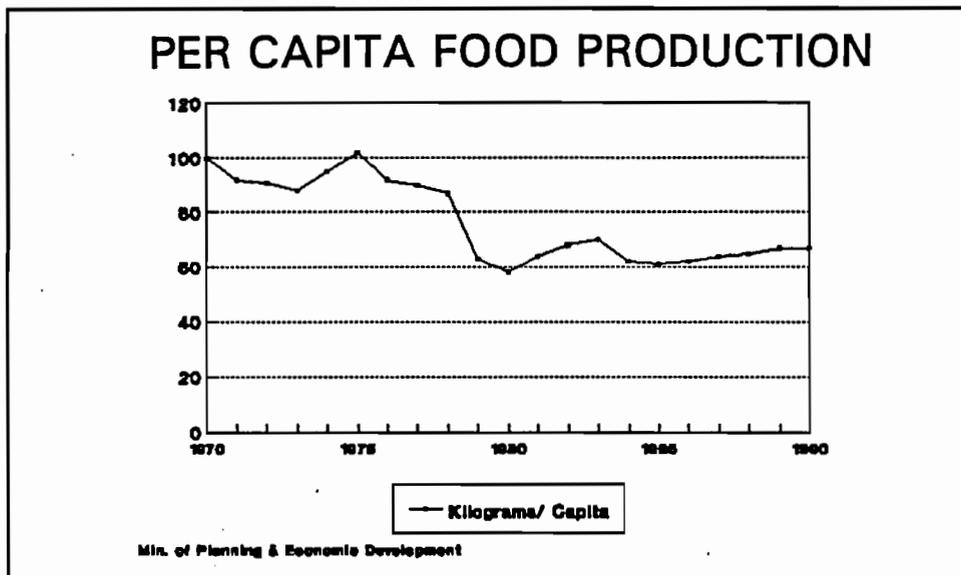
ANNEX B TECHNICAL ANALYSIS

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 B.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 B.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.

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 B.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

Exhibit B.2 NTAE Constraints in Uganda

Constraint Level	Efforts Underway
<p>I. Macro-economic Policy</p> <ul style="list-style-type: none"> - Fiscal and policy reform - Exchange rate reform - Monetary policy reform - Public investment policy - International trade policy 	<p>PEC, MFEP(ANEPP), BOU/WB (Agriculture Secretariat), MFEP(UIA), MCIC(UEPC), & other GOU agencies.</p>
<p>II. Legal and Regulatory</p>	<p>MFEP(UIA), WB(SAC), MFEP(EPADU), WB(Privatization)</p>
<p>III. Infrastructure</p> <ul style="list-style-type: none"> - Roads - Transport - Communications - Utilities 	<p>GOU Ministries of Works, Telecommunications and Utilities Authorities, US & other Feeder Road Projects, WB(Privatization), other donor efforts</p>
<p>IV. Know How/Information Technology Transfer</p> <ul style="list-style-type: none"> - Research - Education - Training - Extension (Private & Public) - Business Management 	<p>NARO, MOES(Makerere), MAAIF(Extension, DFIs), Kawanda/UNDP, Regional and Ugandan Trade Institutes and Centers</p>
<p>V. Sector/Subsector</p> <ul style="list-style-type: none"> - Production - Post Harvest Handling - Packing, grading, standards, - Cooling and storage - Financing - Market Information and Contacts 	<p>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)</p>
<p>VI. Firm/Enterprise Producer</p>	<p>EEC, ODA, NGOs, UNDP, WB, DANIDA, USAID, GTZ, Others</p>

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. 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 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 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).

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 in 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 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.

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 than 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 than 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 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 employs 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 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:

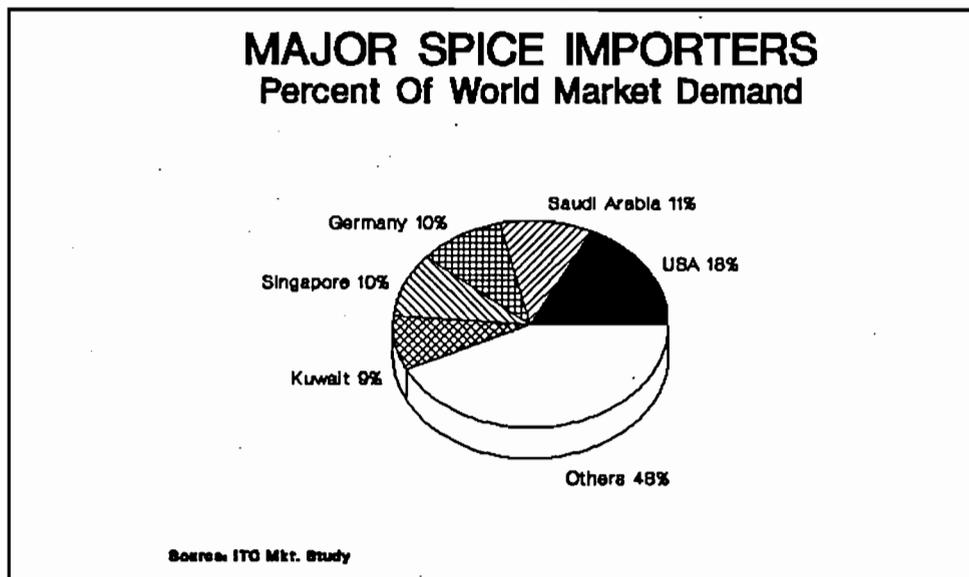
- Technical information
- Financing
- Market information
- Market contacts
- Private associations support
- Applied research, education, and training
- Access to policy makers and related institutions

C. Subsector Analyses

C1. Spices and Essential Oils

Exhibit B.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 B.3



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 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.

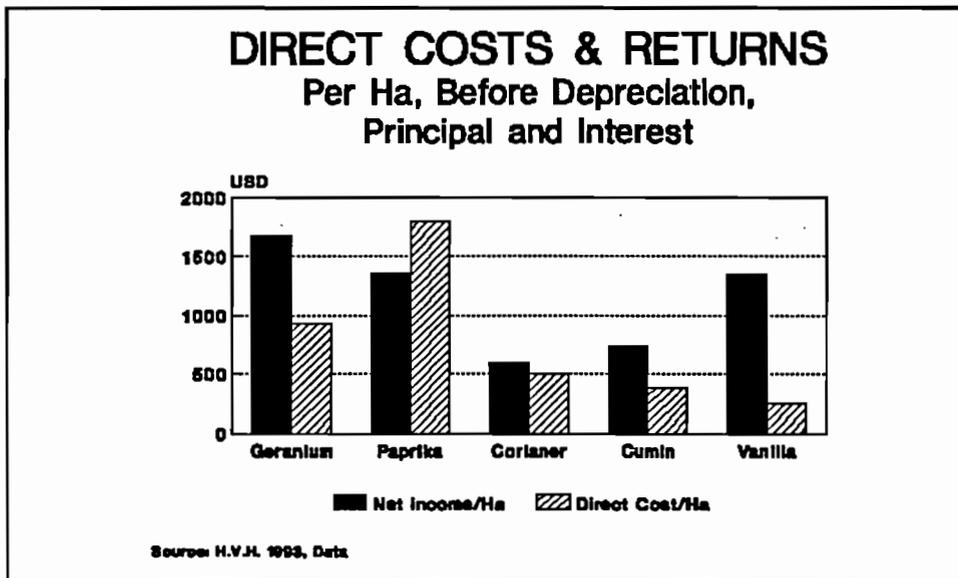
C1c. Other Spices and Essential Oils

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

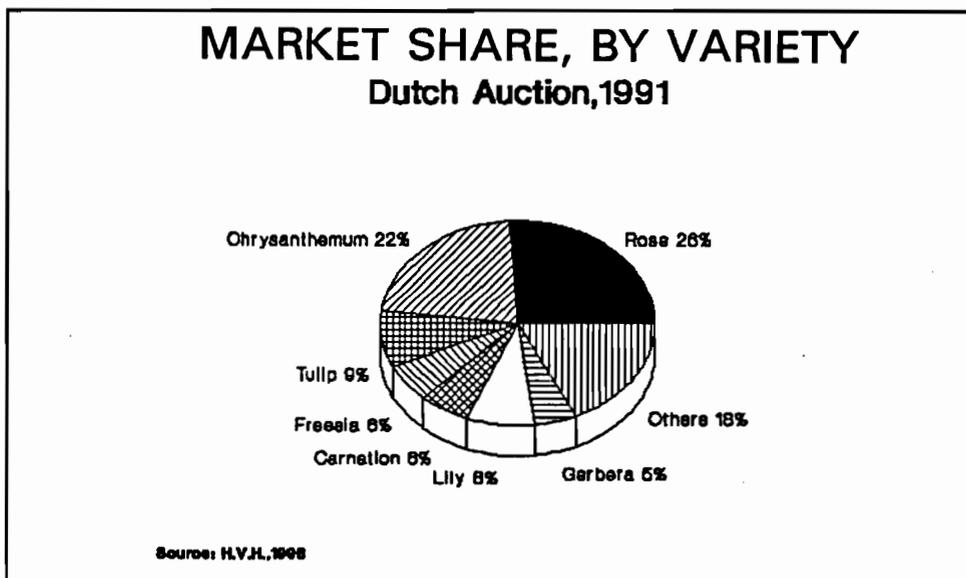


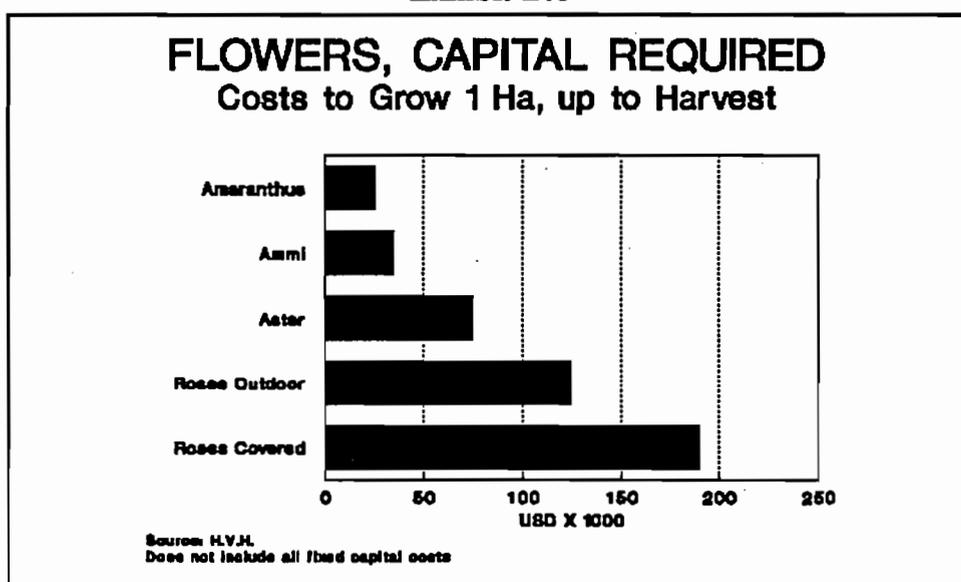
Exhibit B.5 shows world market share by flower types at Dutch auctions. Roses make up the largest market and will most likely be the target flower produced by investors. Risks and returns on investment in rose and other flower production is high. This is particularly apparent when compared with other 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, Gypsoghila, 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 require a highly focused technical assistance effort to reduce risk on capital. Exhibit B.6 shows the capital requirements for a number of different types of flowers.

Exhibit B.6



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.

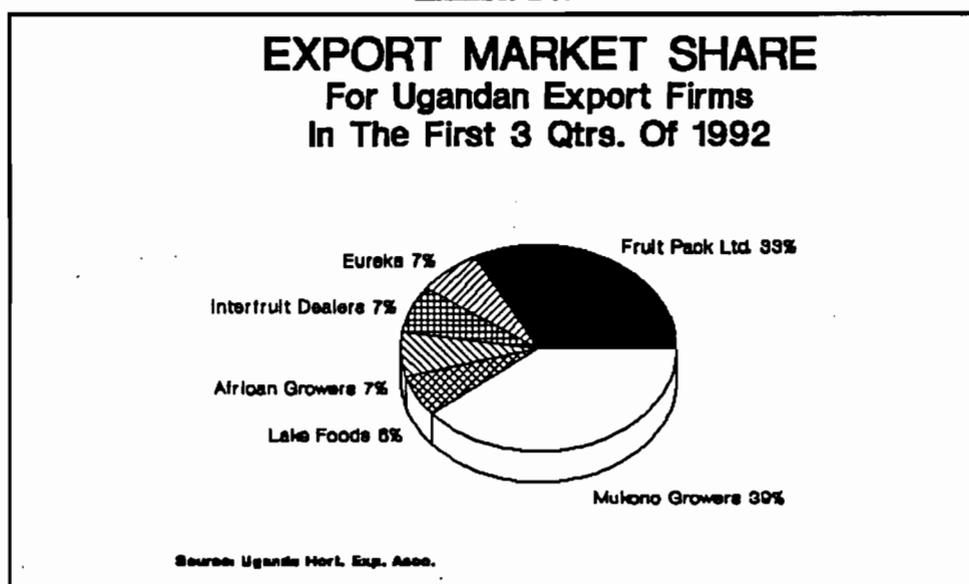
Exhibit B.7 on the following page depicts market share for major Ugandan exporters. Taken together, the largest two firms exported 39 percent of all officially recorded horticultural exports in the first three quarters of 1992, making them equal to Mukono Growers as the largest horticultural exporters 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 B.7



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 B.8

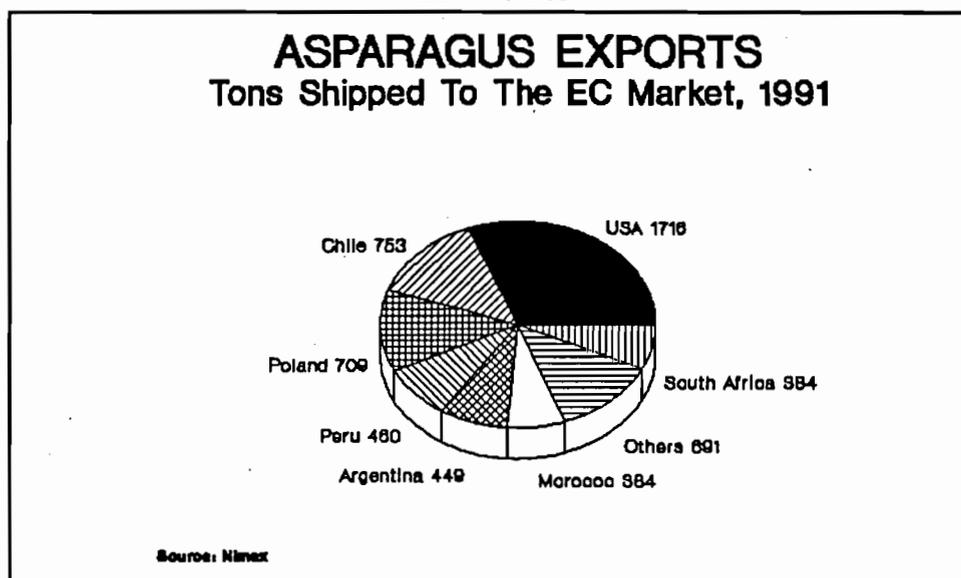


Exhibit B.8 shows the amounts of asparagus shipped into the EC market from major exporting countries. Countries with long shipping distances usually target very specific seasonal windows when prices are high. This is the only way countries such as Chile and Argentina can justify air freight costs.

Uganda will also have to target specific windows for snowpeas and asparagus as well as its other export crops. Uganda's air 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 Spitalfields 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 Spitalfields 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.

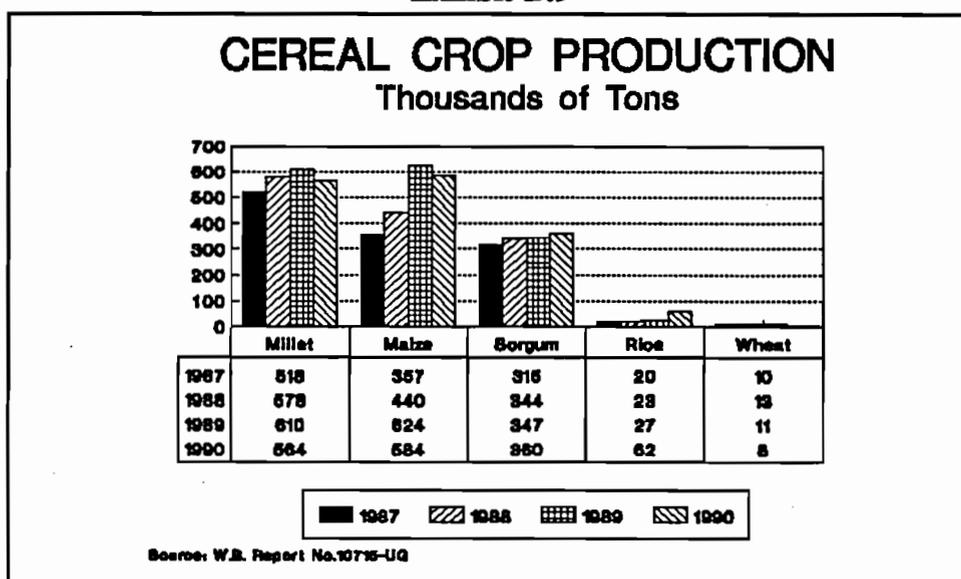
C4. Cereal Grains

Exhibit B.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 B.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 B.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).

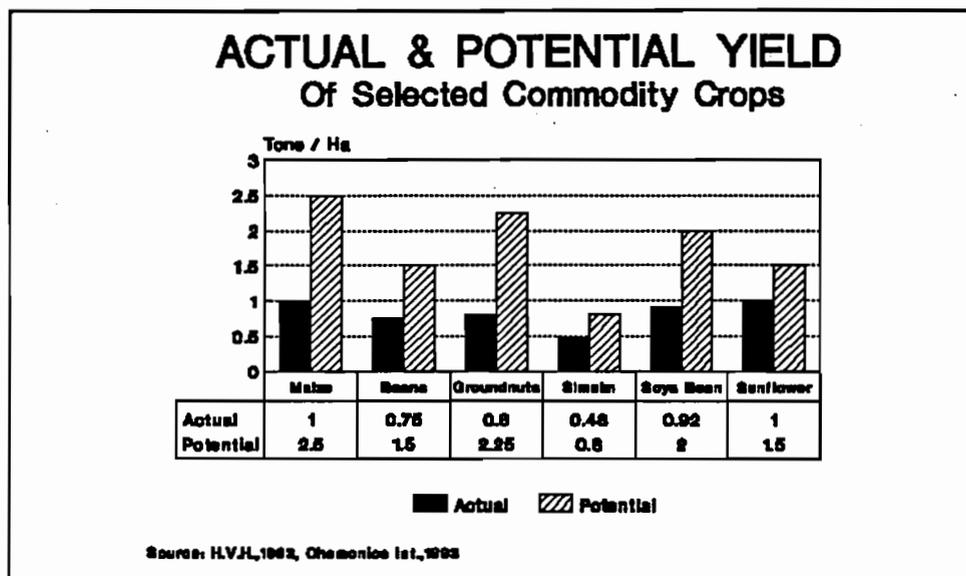
Millet was traditionally the dominant cereal crop in Uganda. However, since the early 1990s maize production has equaled or exceeded millet output levels. Uganda produced about 6.4 million tons of maize in 1992. Millet output for the same year was about 6.25 million tons.

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 B.10 shows estimated low-value crop yields, compared with potential yields achievable with improved cultural practices and improved production inputs.

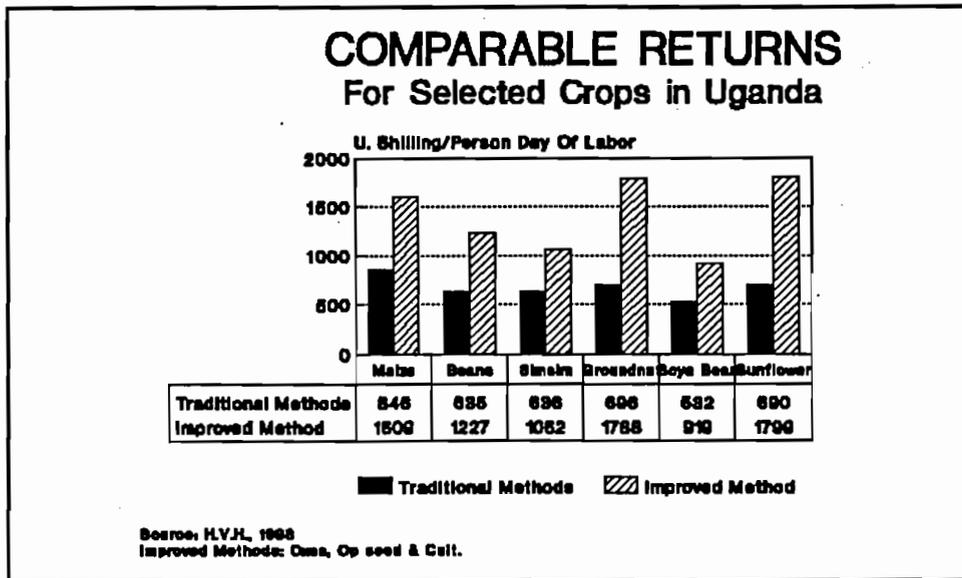
Exhibit B.10



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 B.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 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 B.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 B.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 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.

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-haul to Uganda. Typically, the importing of consumer goods into Uganda is more profitable to the trader than exporting cereals.

Exhibit B.12

Maize Market Value Chain For Eastern Uganda Pre-harvest Prices (June)

<u>Item</u>	<u>U.Shillings</u>
Production Cost, Farmgate	60
Farmgate Sales Price	130
Profit to Grower	70
Village Agent, Purchase Price	130
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

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 B.13

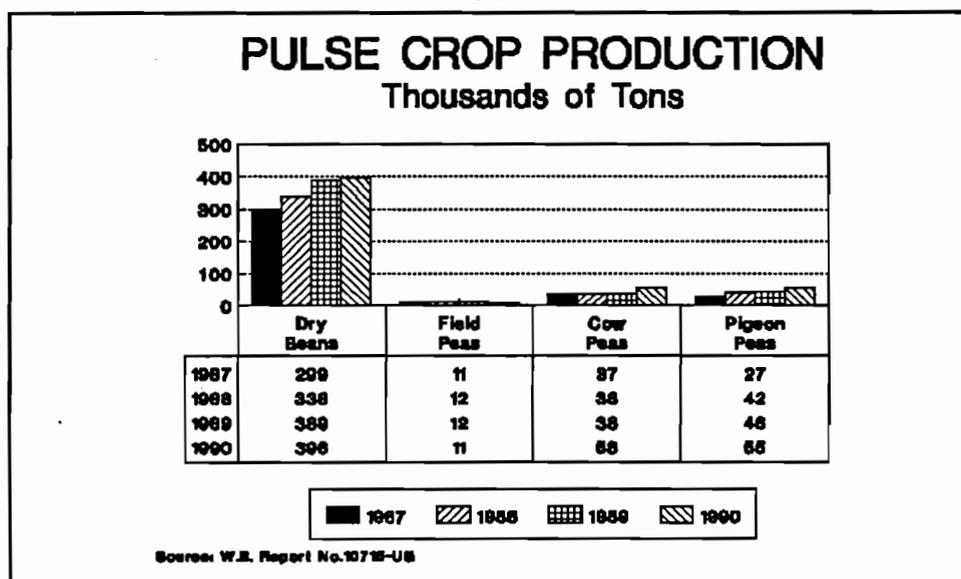


Exhibit B.13 displays pulse production in Uganda for the period 1987-1990. During this period production increased 39 percent. Since 1990 production has risen each year, but at a slower rate. It is estimated that at current prices, bean production will increase four percent annually.

Uganda is the largest producer of beans in Africa (FAO statistics). As seen in Exhibit B.13, beans and groundnuts (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.

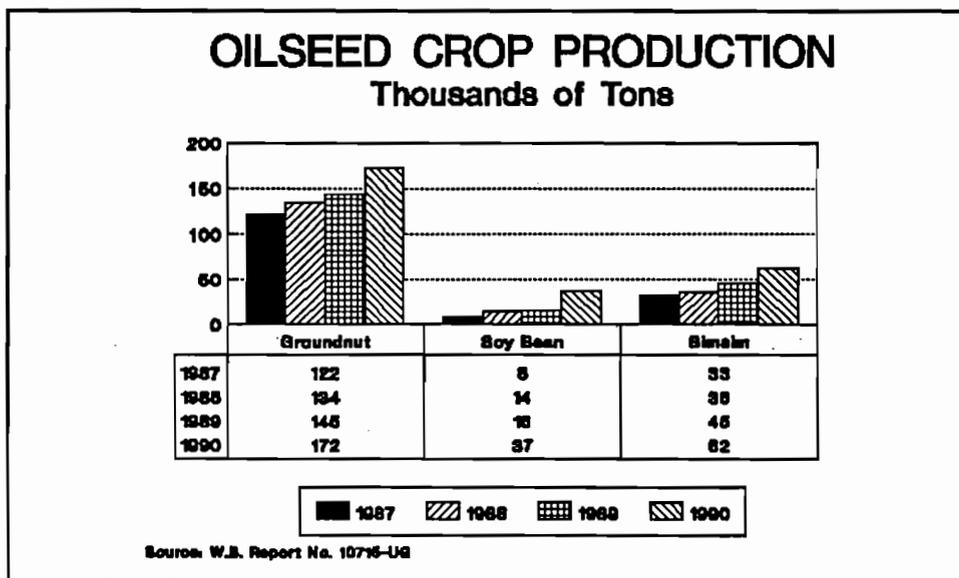
C6. Oilseeds

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 B.14 shows oilseed production in Uganda for the period 1987 through 1990.

Exhibit B.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 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.

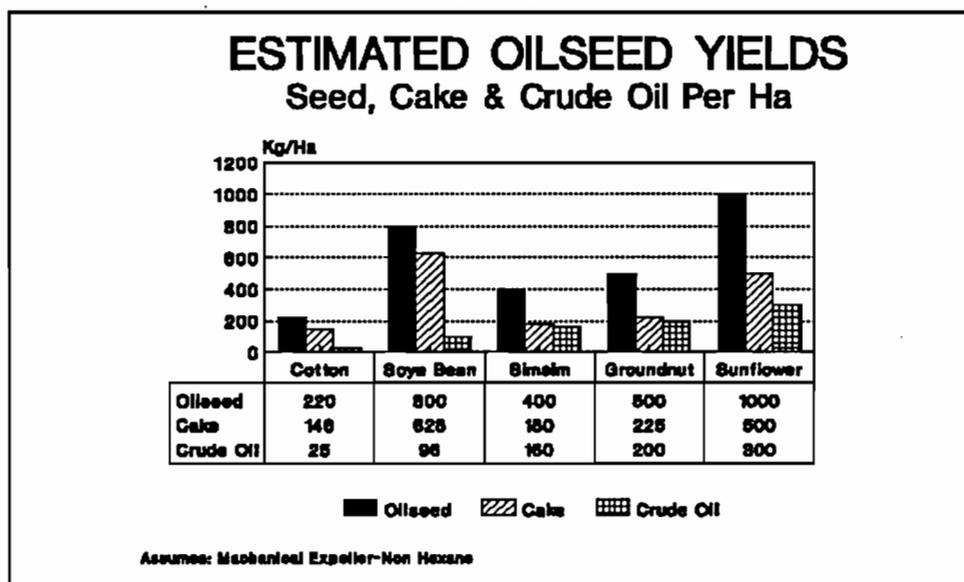
Exhibit B.15 shows potential output from different oilseed crops at farmgate and at the backdoor of the processing plant.

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 through 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 B.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 B.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.

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

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
<u>Marketing</u>	<u>34.38</u>
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.

credit with an international banking group. 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
<u>Labor, Harvest</u>	<u>125</u>
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
<u>Ship (Rotterdam)</u>	<u>440</u>
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 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 B.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 throughput. 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 B.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 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 B.19, the grower receives about \$45.83 per ton

Exhibit B.18

Value Chain for Exporting Dried Chillies From Uganda, 1993 Crop

<u>Item</u>	<u>USD/ton</u>
Land Preparation	18.75
Labor, Growing	58.33
<u>Labor, Harvest</u>	<u>18.75</u>
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 (Mombasa)	185.71
Fumigation	12.50
Expedite @ 3%	75.00
<u>Letter of Credit</u>	<u>41.66</u>
Total Exporter Costs	525.67
Sale Price to Importer	2500.00
Profit to Exporter	1974.33
Profits before taxes, debt service, G&A, R&M, and depreciation.	

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 B.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

Exhibit B.19

Percent of Profits From FOB Sales Value to Grower and Exporter

<u>Crop</u>	<u>Grower</u>	<u>Exporter</u>
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.

reported in the maize market. Ugandan traders are creative and they bring their products to market via a wide variety of avenues.

It is important to note that the profits calculated in Exhibit B.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 successfulness 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 C

RESEARCH/EDUCATION/TRAINING ANALYSIS

ANNEX C
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, 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.

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 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 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.

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 than 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 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 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.

ANNEX D

SOCIAL SOUNDNESS ANALYSIS

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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 portage, few items could be traded at a profit. Delivery to Mombasa cost 70-130 British 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
- 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.

¹Based 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 (IBEAC), 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 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 monetized 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 D.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 commercially 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.

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 elect 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.

ANNEX E

GENDER CONSIDERATIONS

ANNEX E

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.).

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—most 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 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 statutes 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 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 through 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 Grameen 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 their 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 F

SUMMARY OF WORKSHOP PROCEEDINGS

ANNEX F
SUMMARY OF WORKSHOP PROCEEDINGS

A. Introduction

The IDEA Project Design Workshop was held on Monday June 14, 1993 in the Rwenzori Ballroom of the Kampala Sheraton, from 8:30 am to 4:30 pm. It was opened by the Honorable Gerald M. Ssendaula, Deputy Minister of the Ministry of Commerce, Industry and Cooperatives. The Permanent Secretary of the Ministry of Finance and Economic Planning, Mr. Emmanuel Tumusiime-Mutebile, had planned to close the workshop, but was unable to attend, so the Director of the Export Policy Analysis and Development Unit of the Ministry of Finance and Economic Planning (EPADU), Professor Erisa Ochieng, made the closing remarks. The Workshop was also addressed by the Honorable Mrs. Elizabeth Bigombe, Minister of State in the Prime Minister's Office resident in Gulu. The Permanent Secretary of the Ministry of Agriculture, Professor G.S.Z. Ssenyonga was also among the dignitaries in attendance. USAID Director Keith Sherper welcomed the participants and described the purpose of the IDEA Project. Mr. Nimrod Waniala, Deputy Director of EPADU acted as Master of Ceremonies.

The workshop proved extremely popular. It was attended by eighty participants representing a cross-section of the Government of Uganda, the Private Sector, and various international donors (see Annex H).

The theme of the conference was "Brainstorming for a Better Idea." Participants were requested to make recommendations as to exactly what the project should do and how it should carry out activities with respect to eight proposed delivery mechanisms. As shown in the agenda, participants spent much of the afternoon in discussion groups addressing these questions. Major recommendations were:

- Establish an IDEA Project Coordination Committee (PCC).
- Provide training/extension for private sector association members in quality control, management/planning, marketing, production and post-harvest handling, as well as training for association staff.
- Assist in developing quality control and standardization (Certification, labelling, inspection, packaging and postharvest handling).
- Conduct demand-driven research.
- Buy technology and adapt it to local conditions.
- Institute loan/credit guarantees based on viability, not size.
- Encourage contract farming with revolving credit and crop pre-financing.
- Provide technical assistance to ensure bankable projects
- Encourage government policy reform to ensure incentives for exporters (e.g. ease 2% tax, dual exchange rate, and paying interest on dollar accounts)
- Create a centralized public/private marketing data base

B. Workshop Agenda

8:30 REGISTRATION

9:00 WELCOME AND OVERVIEW **Nimrod Waniala, Deputy Director,
Export Policy Analysis and Development
Unit Ministry of Finance and Economic
Planning**

9:30 WORKSHOP OPENING
The IDEA Project **Keith Sherper, USAID Mission Director**
Opening Address **The Honorable Gerald M. Ssendaula,
Deputy Minister, Ministry of Commerce,
Industry, and Cooperatives**
Introduction of **James Dunn, USAID Agricultural IDEA
Design Team Development Officer**

10:00 < < COFFEE BREAK > >

10:30 PROPOSED IDEA CONCEPTS

10:30	MAKING IDEA WORK	Kimball Kennedy
10:40	A FRAMEWORK FOR IDEA	Barton Sensenig
10:50	RESEARCH, EDUCATION AND TRAINING	David Picha
11:00	FINANCIAL LINKAGES	David Neubert
11:10	MARKETING SYSTEMS	Perry Walker

11:20 MINISTER OF STATE'S REMARKS **The Honorable Elizabeth Bigombe,**
REMARKS **Prime Minister's Office**

11:30 QUESTIONS AND DISCUSSION

12:30 < < LUNCH > >

1:30 DISCUSSION GROUPS

Red	- Institutional & Policy Coordination
Orange	- Private Sector Associations
Purple	- Research, Education & Training
Green	- Financial Linkages
Blue	- Marketing Systems

2:30 REPORT BACK

3:30 < < COFFEE BREAK > >

3:45 DISCUSSION

4:30 CLOSING ADDRESS **Emmanuel Tumusiime-Mutebile,
Permanent Secretary, Ministry of
Finance and Economic Planning**

C. Welcome And Overview By Nimrod Waniale

Our Guest of Honor, the Honorable Gerald Ssendaula, Deputy Minister, Minister of Commerce, Industry and Co-operatives; Director of USAID, Mr. Keith Sherper; honorable members of the National resistance council (NRC); distinguished resource persons, ladies and gentlemen:

I wish to welcome you all to this important Workshop. This workshop is designed essentially to provide a forum for brainstorming on how the "Investing in the Development of Export Agriculture" (IDEA) project (now under design) can best support the development of non-coffee agricultural exports.

You have all been carefully selected from sectors which will in one way or the other benefit from the services and facilities that will evolve out of the IDEA project. Because of the intimate relationship your various firms are expected to have with IDEA, it was found necessary that you associate yourselves with the project at this initial design stage. You are therefore here as part of the design group and your views, comments and recommendations will be taken seriously.

It is important to note that while we are very fortunate that our friends from USAID are assisting us to kick start the process of developing our agricultural sector, we must be mindful of the fact that this will not be in perpetuity. Thus we must seize this opportunity given to us today to design a project which will:

- Stand the test of time and sustain itself over time
- Have transparent delivery mechanisms of commodities and products that markets out there will accept.
- Be well integrated horizontally and vertically, one which will translate the wishes of producers, exporters through appropriate channels to the highest policy levels.
- Realize the Government's strategy of investing the value of exports on a sustainable basis through the diversification of the export base.

The challenge is yours to make this happen during today's indulgence. But what is IDEA?

[Very briefly let me say something about the project.]

The IDEA project has been conceived to provide solutions to the teething problems which impede the development of non-coffee agricultural commodities for which Uganda has comparative and above all competitive advantage in the international market place. The elements of IDEA, if you like, constitute major problem areas for which you are here to propose the best ways of delivering solutions to overcome these obstacles. The philosophy or basis behind this focused project stems from the strategic importance agriculture plays in

the economy of Uganda (major employer, chief foreign exchange earner, and contributor to Government revenue and GDP). This sector is therefore viewed as a sure engine of increasing rural women and men's incomes on a sustained basis.

We are privileged to have with us a five-man design team with worldwide experience in designing projects of this nature to spearhead our discussion today. [They will be introduced to you shortly.]

Permit me, Ladies and Gentlemen, to pay special tribute to the Director of USAID and through him, to his agency and the Government of United States of America for the untiring efforts they have made in spearheading the process of export development and promotion in Uganda. The ANEPP project in which USAID has been deeply involved since about 1988 is a clear testimony of this effort. Suffice to say here that it is largely through ANEPP that:

- Uganda has achieved substantial improvement in its economic environment within which exporting takes place and favorable policy measures for exporters put in place.
- Through a parallel but discrete program, Operational Constraints Analysis (OCA) program that some five private enterprises which hold out promise of being successful in terms of rapid increases in net foreign exchange earnings have been assisted and problems that confront exporters/potential exporters better understood.
- There has been a better understanding of the kind of commodities in which Uganda has both comparative and a competitive edge on the international market.
- A once highly regarded commodity vanilla is being re-introduced and that soon a produce inspection service based in London and a major Northern European market will be introduced.

The IDEA project is a further step in the development effort of our mainstay, agriculture.

Without further delay, do permit me to invite the Director of USAID, to address you, Mr. Sherper.

D. Opening Address By the Honorable Gerald M. Ssendaula

The following are highlights from the Deputy Minister's speech:

- The biggest challenge facing Uganda today is to close the balance of payments gap, which is in the region of 700 million US dollars.

- In order to do this, the Government of Uganda has embarked on a National Export Diversification Program as it is aware that the traditional products will not deliver the necessary exports over the coming years.
- The Government of Uganda is currently in the process of ensuring that the various donors who have indicated interest in the program will develop complimentary projects, without the problems of wastage through overlap.
- The World Bank, USAID, EC, and UNDP are all now beginning to program Export Development projects and we are now seeing detailed consultations between all donors and the GOU on these various projects. This augers well for the future growth of our non traditional exports.
- The USAID IDEA Project has been conceived in consultation with GOU and other donors, and we believe that it will add significantly to the capacity of high value added agricultural products for export.
- We welcome this project, *trust it will be appropriately linked into the National Program*, and trust that this workshop will further assist in the design process.
- The Ministry of Trade and Industry as the Ministry responsible for Export Promotion is grateful to USAID for the support of this project.

E. Proposed Idea Concepts

E1. Making IDEA Work (Kimball Kennedy)

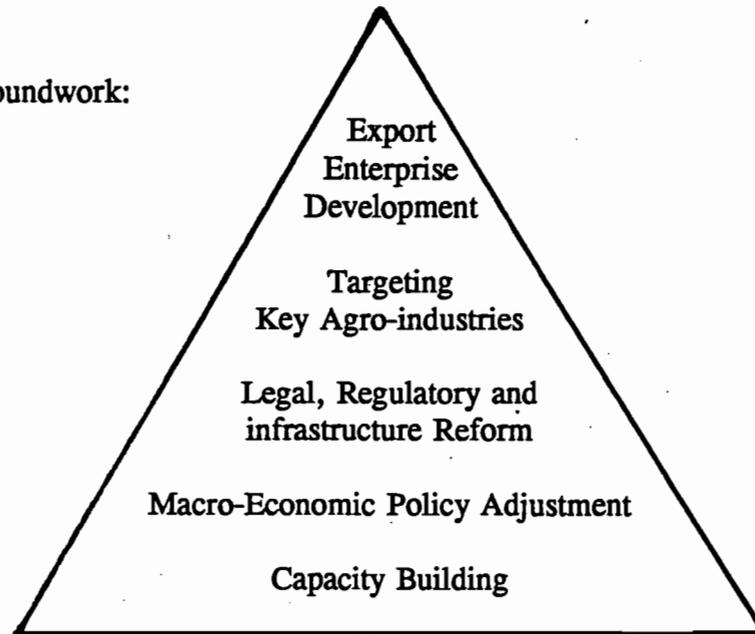
Scope of Work

...To prepare sections of a project paper for the Investment in Developing Export Agriculture (IDEA) Project.

Export Promotion 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 NTAE's, 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 reached a small proportion of total export firms.
- An underlying concept for IDEA is "sustainability through capacity building."

Laying groundwork:



Capacity building

- Direct actors
 - Producers
 - Assemblers
 - Packers
 - Processors
 - Exporters
 - Receivers
- Indirect actors
 - Providers of:
 - Finance
 - Raw materials
 - Technology
 - Equipment
 - Inputs
 - Transport
 - Forwarders
 - Brokers
 - Cold storage/providers
- Non-economic actors
 - Government ministries
 - Research organizations
 - Educational organizations
 - Regulatory organizations
 - International donors
 - Interested observers

- Individual exporters must have:
 - Technical, managerial, and financial viability
 - Capacity to withstand losses during start-up
 - Ability to generate acceptable returns
 - Capacity to identify, penetrate, maintain or expand markets in a competitive environment.
- Private Associations must be able to Identify and respond to the felt needs of membership by:
 - Resolving technical problems
 - Improving market access
 - Enhancing access to financial and technical resources
 - Improving economic and regulatory environment/profitability
- Export Support Organizations must be able to:
 - Identify, anticipate and respond to the needs of export participants
 - Continuously monitor macro-economic, regulatory, and business environments to improve the exporting environment
 - Engage in activities that would enhance the economic viability of exports

E2. A Framework for IDEA (Barton Sensenig)

Framework

- Purpose
- Approach
- Organization
- Delivery Mechanisms

Purpose

To increase:

- Incomes
- Non-traditional Agricultural Exports (NTAEs)
- Returns to labor
 - Rural
 - Smallholders
 - Women

Constraints

- Research and development
- Financing
- Production
- Market information and contacts
- Technology/know-how
- Postharvest handling
 - Packing, grading, standards
 - Cooling and storage

- Infrastructure
 - Electricity
 - Roads/transport
 - Telecommunications
- Investment/business environment
- Management

Opportunities

- Cereals, beans and oilseeds
- Vegetables
 - Snow peas
 - Asparagus
- Floriculture
 - Roses
 - Field annuals
- Spices and Essential Oils
 - Vanilla
 - Ginger
 - Chillies
 - Geranium oil
- Sericulture (Silk Production)
- Other
 - Pyrethrum, papain, berries, mangoes, mushrooms
 - Value-added products

Approach

- Private sector
- Market driven
- Coordinating
- Crop focused
- Capability building

Delivery Mechanisms

- Institutional and policy coordination
- Market contacts
- Financial/Investment linkages
- Participatory small grants
- Technical assistance
- Market information

- Associations
- Research, education and training

For each, please recommend what IDEA should do and how it should proceed.

Exhibit F.1 on the following page shows the organizational and institutional relationships of the proposed IDEA project.

E3. Research, Education and Training (David Picha)

Constraints

- Technical information
- Human resources

Objective

- Conduct practical, applied research and training

Constraints in the Ugandan NTAE Industry

- Crop production
- Plant protection
- Post harvest
 - Transportation
 - Value-added

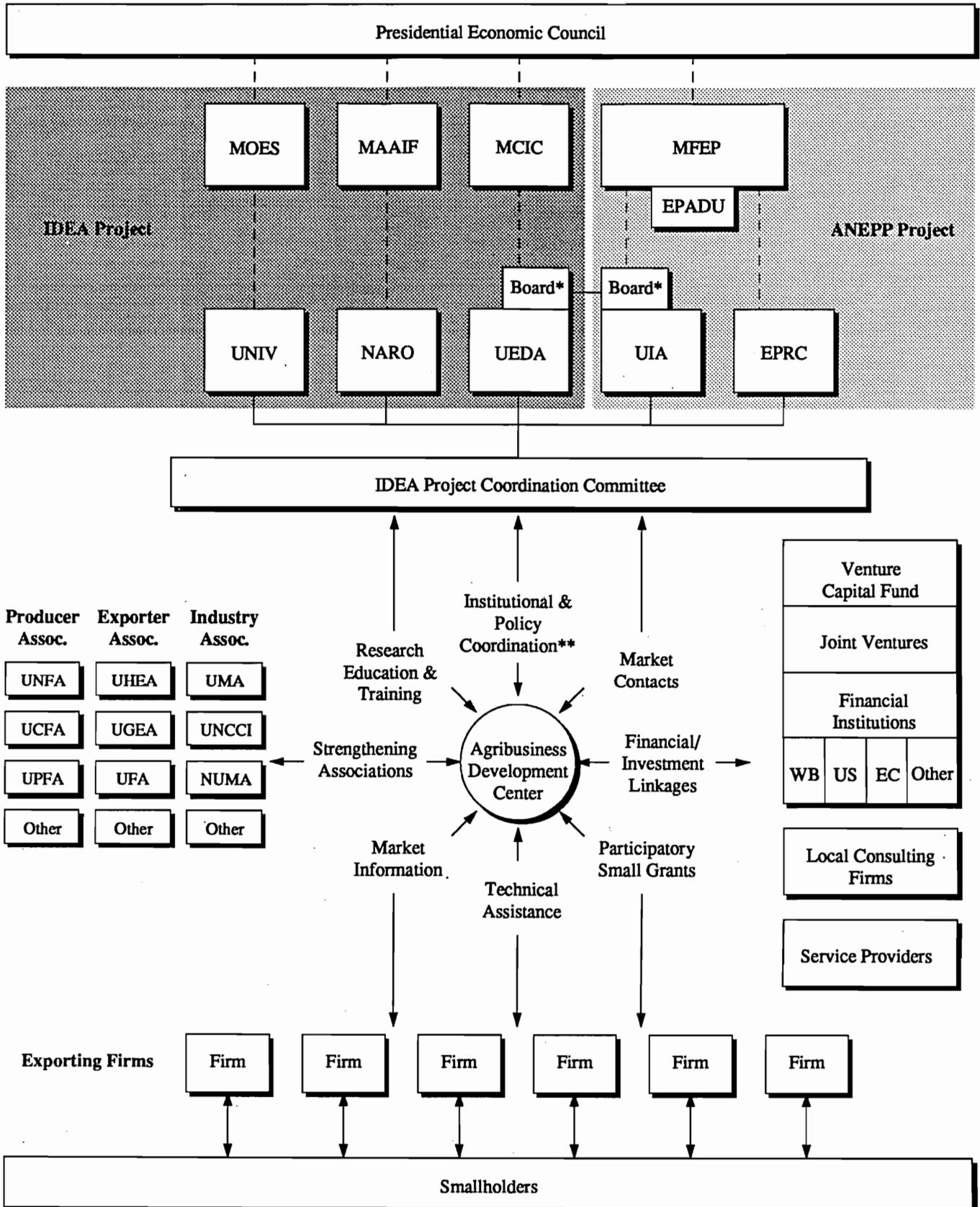
Research

- NARO
- Makerere University
- MAAIF
- Private Firms
- International Agricultural Research Institutes
 - IITA
 - CIAT
 - CIMMYT

Education

- Makerere University
 - Agribusiness
 - Food Science
 - Agricultural Engineering
 - Crop Science
- MAAIF
 - Technical Institutes
 - Research Institutes

Exhibit F.1: Proposed IDEA Project Organizational/Institutional Relationships



*The UEDA and UIA boards share some common members.

**The eight spokes surrounding ADC are proposed project delivery mechanisms.

- District Farm Institutes
- Private Firms
- International Agricultural Research Institutes
- U.S. University linkage (graduate degrees)

Training

- Long-term
- Short-term
- Seminars
- Short courses
- Industry tours
- Private sector internships
- On farm training

E4. Financial Linkages (David Neubert)

Examples of financial links

- Business plans
 - Identifying joint ventures
 - Seed production
 - Spice Industry
- Identifying capital sources

Identifying financial sources

- Debt capital
- Venture capital
- Lease Programs
- Matching grants
- Technical assistance

Technical assistance

- Financial Planning
- Product Research and Development
- Operations Planning
- Production Management
- Quality Control
- Marketing

E5. Marketing Systems (Perry Walker)

Market structures

- Low-value crops
 - Maize

- Beans
- Millet
- Etc.
- High-value crops
 - Spices
 - Essential oils
 - Flowers
 - Vegetables

Low-value Market

- Producers: Smallholders
- Primary Buyers: Village level (.5 Tons)
- Secondary Buyers: 7 - 10 Tons
- End Buyers: Domestic Markets
Domestic Millers
Donor Programs
Official Exports
Unofficial Exports
- Demand Geo-political forces
Assume strong for 10-15 years

High-value Market

- Producers, commercial and outgrowers
- Primary markets
 - Spices/wholesale agents, traders, and manufacturers
Essential oils in Europe, Asia and the U.S.A.
 - Flowers and auction, wholesale agents, and supermarkets, vegetables in Europe
- Value
 - Price
 - Quality
- Service
 - Packaging
 - Volume
 - Promotional Programs

Sustainability

Identify, adapt, and exploit crops that:

- Meet market quality
- Can be transported
- Retain shelf-life

- Can supply consistently acceptable quality
- Meet regulatory standards
- Do not cause environmental damage
- Generate attractive returns

F. Summary of Remarks By the Honorable Elizabeth Bigombe

- The real problem is for the peasant farmers in the rural areas. In the Northern Uganda Reconstruction program we provided implements and inputs. They said they needed tractors, but we found they were not practical. There were many around in disrepair because the drivers were not trained to check the oil or repair them. In any case, they couldn't afford the tires or spare parts.
- Extension workers need help. Their salaries are very low. We sold them bicycles over two years. As soon as the agents owned their bikes they sold them. We tried to keep them from selling the bikes by requiring that they ride their bikes to collect their pay check, but they just borrowed the bikes back for the day. Women extension agents were more sincere about their work than the men.
- Rural credit facilities have management problems. Often disbursement comes too late. Also, because this is a polygamous culture, some smallholders use the money to buy another wife. Publicity is not adequate. Most farmers have no radios, and those who do often lack batteries.
- Marketing is a problem. Think about the domestic market first. Farmers don't get enough for their crops. They need help costing their produce. Farmers think the seed and family labor are free. Poverty is rampant. They need money to pay school fees.
- Farmers need training to meet international standards. They have been emphasizing quantity, not quality.
- The potential for oil seeds is great.

G. Afternoon Questions and Discussion

- Q: How will IDEA blend the public and private sectors?
A: We want it to be a partnership. We want your ideas.
- The major constraint is production. That is why the barter trade arrangements failed. Production constraints are because nobody is facilitating non-traditional exports. We need joint-ventures and contract farming. There are also marketing constraints that small grants could aid in overcoming.
- Seeds are a major constraint. We need seed development and distribution.

- The problem with contract farming is that farmers sometimes sell to the highest price offered after harvest even though I give them inputs. Production is the major constraint for chillies.
- The production constraint is due to marketing. The farmer should be free to sell on both the spot market and the futures market.
- Extension is critical. Careful targeting (focus) is necessary.
- Policy is a problem. The public has no say in government policy. Farmers don't know world prices. We don't have any control.
- We should work as partners. The government also responds to market forces. We are currently undertaking liberalization. We are seeking good projects. The people are not used to taxes.
- Cotton can bring immediate results within six months. Also simsim (sesame). The government should protect exporters. Processing of traditional crops is a good opportunity. We need improved transport, especially for procurement from farmers.
- Q: Farmers are important. How can IDEA help them?
A: Both through supporting the government extension service and through supplementary private extension from exporting firms.
- IDEA needs specific recommendations regarding seeds, extension, etc.
- I think we need to add a discussion group on production. (NOTE: a table was prepared for such a group, but no-one shifted to it.)
- Q: Sometimes the farmer gets only 20/= so it is not attractive to produce more. How can IDEA address this?
A: Competition among buyers at the farm gate could raise the price.
- The extension service is essentially non-existent. We need to be organized in our production.
- There are other projects (World Bank) addressing improvement of the extension service. We should keep in mind the extension model which has proved successful for vanilla.
- The government should subsidize farmers. European countries subsidize their farmers. The payment to the farmer is too small. What we need is participation by all, not a subsidy.

- Q: Can you tell us what you know about other planned projects?
- A: There are projects by the World Bank, USAID, EEC, UNDP and others. The GOU wants each to focus where it has some strengths. The overall integrated program is very broad, including infrastructure etc. The government is concerned that there not be any wasteful overlaps in the projects of different donors.
- We need to build a reputation for high quality produce. We could add a logo like a map of Uganda on the packaging to indicate high quality. Our chillies, for example, are recognized for their high quality.
- We are interested in export agriculture. Why don't we include some traditional crops like cotton? These traditional crops have institutions to support them. What institutions do we have to support maize and beans and organize them to produce? Associations? Cooperatives?
- We envision IDEA working with firms first. As the firms get stronger they will form associations that will be the institutions to organize production and marketing.
- There are already efforts underway elsewhere to improve other traditional crops such as cotton. For example privatization efforts.
- What is the form of the Agribusiness Development Centre (ADC)? The scope of IDEA is wide. What kind of financing is envisioned?
- As to how broad the scope of IDEA should be, that is one of the items on which we are seeking feedback today.
- We lack information. We need a big center to coordinate information on marketing such as changing exchange rates.
- Most NTAEs are targeted toward European markets which have protection. We should consider also regional markets.
- Caution: factors like inflation and interest rates are unpredictable. We shouldn't over organize. Lets stay fee and stick with liberalization etc. Let expansion be driven by market factors.
- Children should be encouraged toward farming as an occupation in the schools.
- Q: You seem to be missing farm input suppliers on the organization chart.
- A: They are included under "service providers."

H. Recommendations

H1. Red Team: Institutional and Policy Coordination

Assumptions

- The set-up of government institutions in the Chart of Proposed IDEA Project Organizational and Institutional Relationships (shaded area) is not going to change drastically.
- The Agribusiness Development Center (ADC) is an arm of UEPC which is temporary and will be phased out as and when capacity building is accomplished.

Recommendation

- That an IDEA Project Coordination Committee (PCC) be established with representatives from Makerere University, NARO, UEPC, UIA EPRC and USAID to coordinate the technical and operational activities of the project.

H2. Orange Team: Private Sector Associations

- Training/extension for association members in quality control, management and planning, marketing, production and postharvest handling.
- Training for association staff in
 - Association management (finance, planning, fund raising, and personnel management).
 - Information dissemination.
 - Membership services (credit and savings, procurement, discount services, bulk buying, and consultancy).
- Financial assistance
 - Assistance to individual producers and exporters channelled through associations.
 - Assistance to associations to strengthen their capacity to serve members.
 - Funds to provide common facilities (e.g. cold storage, grain processing and storage, seed production).
- Research and Technical Assistance
 - Associations help determine research priorities
 - Demonstration projects
 - Technical consultants
- Marketing Information and Marketing
 - Trade information (prices, trends, buyers, sources, directories, catalogues, etc.)
 - Trade shows and promotion (local and international).

- Quality control and standardization (Certification, labelling, inspection, packaging and postharvest handling).
- Assistance to start and develop new associations (e.g. mushroom growers).
- For coordination, associations should establish a consultative council especially for policy issues. This should not be the channel for support to associations.

H3. Purple Team: Research, Education and Training

Research

- Direct Research
 - Conduct demand-driven research
 - Buy technology and adapt it to local conditions
- Do this through Makerere University, the National Research Institutions, and participatory research at the farm level with the researcher working with the farmer.

Research Activities

- Production inputs (infrastructure)
- Agronomic research
 - Cultural practices
 - Planting techniques
 - Harvesting methods and postharvest
- Variety screening
- Plant protection
- Postharvest handling
 - Transportation
 - Value added
- Where?
 - The National Agricultural Research System (NARS)
 - Makerere University
 - Farm Level Research
 - NARO
 - District Farm Institutes (DFI)
 - NGOs/Private Firms
- Roles for research institutions:
 - Makerere University does long term research
 - NARO does both short term and long term research
 - MAAIF does dissemination of information (technology transfer)

- Dissemination through:
 - Open days
 - Fact sheets/publications
- Adaptive research
 - Demonstration farms
- Extension worker support (Demand driven)

Education/Training

- Short term courses (in-country and abroad, but emphasis is in-country) for:
 - Farmers
 - Extension workers
 - Researchers
- Long-term training through:
 - Makerere University
 - Agricultural colleges
 - Private sector
 - NARO
- Areas of training
 - Postharvest handling
 - Management
 - Value-added
 - Plant protection
 - Agribusiness
 - Marketing
 - Soil and water management
 - Crop production, etc.

Roles of Research Organizations

- International Agriculture Centers
 - Low value products
 - Research management
- Makerere University
 - Training of trainers/researchers
 - Farmers
 - Extension workers
- Ministry of Agriculture (MAAIF)
 - Farmers
- Agricultural Colleges

- Extension workers
- Farmers
- District Farm Institutes
 - Demonstrations to farmers
- Long-term technical assistance specialists
 - Agribusiness, marketing, soil and water, engineering, postharvest handling, integrated pest management, agronomist (horticulture), and seed technology

H4. Green Team: Financing Linkages

- The project should have mechanisms for guaranteeing loans/credit from lending institutions. Develop a guarantee fund component based on viability and not size of projects; societies also to provide guarantees.
- Contractual obligations between the farmer and the exporter to assist small scale producers to get credit:
 - Revolving credit: as inputs come in, farmers are assured of further funding
 - Crop finance: pre-financing through forward contracts
- Technical assistance in accessing financing to be made a component of a financing scheme: local and international consultants should be involved to ensure that farmers come out with bankable projects.
- Additional sources of equity financing for exporters and large farmers such as
 - Banks
 - Insurance/private placement (approach those with financing)
 - Venture capital fund
 - Public companies (e.g. take advantage of the stock exchange)

H5. Blue Team: Marketing Systems

Problems

- The financial environment
 - Taxation
 - Dual exchange rate
 - Crop and export financing
- Lack of reliable data
 - Quantities
 - Prices
 - Quality

- Postharvest facilities
 - Warehouses
 - Cold facilities
- Marketing overhead
 - Communications
 - Transportation (particular railways)
- Lack of code of conduct for exporters
- Lack of technological know-how
 - Planting materials
 - Farm storage

Solutions

- Better implementation of present policy (e.g. Uganda Revenue Authority)
 - Let government review tax policy to make our prices competitive (e.g. 2 percent withholding tax).
 - GOU should ensure competitive exchange rates for exporters.
 - Should pay interest on dollar accounts. (They don't currently.)
- Short-term export finance to exporters
 - Expedited short term financing.
- Central data bank
 - Should disseminate information
 - Should include government/private bodies
 - Should provide pay-for-service data
- Warehouse storage
 - Airport cold storage
- Improve on general infrastructure
- Strong export association
- Technical assistance at all levels

I. Discussion

- Something needs to be done about the dual exchange rate. The exporters are the ones contributing to balancing foreign exchange flows. The government ought to consider incentives for them.
- Livestock ought to be considered also. Projects like restocking are being considered. Goats and fish could be good exports. I second that. Honey and bee's wax would make good exports.

- We just decided to stick to crops to keep the project focused.
- Q: Shouldn't the ADC be related to the Ministry of Agriculture (MAAIF) which represents producers rather than the Minister of Commerce (MCIC) who are not producers.
A: The institutional structure has been a problem for a long time. That is why we wanted to solicit your ideas. This organizational diagram has evolved through dialogue. Remember that the ADC is temporary. As constraints are overcome, it will pass on its delivery mechanisms to UEPC or other entities. We can't change the ministries and donors, so we will just look at your recommendations for delivery mechanisms. I wouldn't like to see the project delayed for months while institutional arrangements are discussed.
- I expected more specifics in the financial linkages recommendations. I thought they would give specific institutions and services for the exporter and producer levels.
- That is true, we just gave sectors, not specifics.
- Q: ADC should be an arm of UEPC. What are the relationships between EPADU and UEPC?
A: EPADU is temporary. Eventually it will become a department within the Ministry of Finance (MFEP) focused on policy.
- Q: How will UEPC and UIA work together?
A: Both want to attract investment. We are working on how they will coordinate and not duplicate efforts. It is proposed that they will share some board members to ensure coordination.

J. Summary of Closing by Professor Erisa Ochieng

- IDEA is very timely because coffee prices have fallen drastically.
- Uganda has a competitive advantage. Animals could be included.
- The goal is noble: to increase incomes. I don't know why they mention men and women, since the whole family benefits. The country is 90 percent rural.
- The project should also increase the value of exports, and thereby improve the balance of payments.
- This open approach of calling for inputs into the design is a welcome change from the common practice where consultants just come and write their report and leave. Often we never get to see the report, or if we do it just makes us angry.
- We bring diverse ideas to the workshop, especially regarding the institutional framework. There is room for argument over this.
- Thank you for your sound ideas. We are glad that at least some of our ideas will get into the report. It is not like other consultants who sneak in and out and then recommend that they be sent back for more study.

- **Thanks to USAID, to our moderator, to the leaders of the groups and to all of you for your contribution.**

ANNEX G

SCOPE OF WORK

ANNEX G SCOPE OF WORK

BACKGROUND

USAID/Uganda is planning a new agribusiness development project for its agriculture and natural resources (ANR) portfolio. The proposed Investment in Developing Export Agriculture (IDEA) Project will be a six-year effort whose purpose is "to increase incomes, particularly rural men's and women's returns to labor, from selected non-traditional agricultural exports." The project will be a major vehicle for achieving USAID/Uganda's program strategic objective of increasing rural men's and women's incomes from agricultural exports and will contribute to the Government of Uganda's development objective of increasing non-traditional agricultural exports (NTEs) in order to raise incomes and improve its balance of payments.

The project will address production and marketing constraints of poor institutional/organizational support for NTEs and inadequate and or inaccessible information and technology at all stages of the production and marketing process. Production credit for rural smallholders, especially women, may also be a constraint that the project will address, but additional information is needed to make a decision on this. Other production and marketing constraints such as export finance, roads and storage facilities are being addressed by USAID's and other donors' activities.

The project will use a demand-driven, private sector-oriented approach to providing hands-on assistance to producers and exporters to initiate and expand exports of selected high and low-value agricultural commodities. It is anticipated that project interventions will result in substantial increases in exports in at least four NTE commodity groups and a fully functioning system of public and private sector institutions to facilitate and support agribusiness export activities.

The project will have three components. First, an Agribusiness Resource Center (ARC) will assist exporters to develop an export activity from conceptualization to actual production and export. The ARC will be located in the Uganda Export Promotion Council (UEPC), assuming that the the UEPC is restructured in a manner that is conducive to private sector-oriented export facilitation. Second, IDEA will finance research and technology development for low and high-value crops by the National Agricultural Research Organization (NARO) and other qualified entities. Third, the project will strengthen the departments of Agricultural Economics and Food Technology at Makerere University to enable them to provide appropriate training and Ugandan leadership in agribusiness development.

ARTICLE I - TITLE

Project Development and Support (PD & S) - 617-0510

ARTICLE II - OBJECTIVE

USAID/Uganda is seeking the services of a Contractor to prepare substantive sections (specified below) of a Project Paper (PP) for the Investment in Developing Export Agriculture Project (617-0125). The document prepared by the Contractor will be directly incorporated by the USAID Mission into a PP.

ARTICLE III - STATEMENT OF WORK

A. General

The Contractor will provide technical specialists to participate in designing the the Investment in Developing Export Agriculture Project and to prepare a document that will serve as the substantive basis for the PP. The Contractor will work cooperatively with any other personnel who may be provided by USAID under a separate contract to work on the design exercise, and will incorporate the inputs of other contract personnel into the final report. The document prepared by the Contractor will present a focused and detailed plan of project assistance to the agribusiness sector that will accomplish the stated purpose of the IDEA project. Where appropriate, the Contractor will present alternative approaches to accomplishing project objectives and provide a recommendation and justification for the preferred option.

The document will include, but will not be limited to, the following sections: executive summary; project rationale and description; description of type and quantity of inputs; implementation plan, including procurement plan; monitoring and evaluation plan; summary of technical, social (including WID) and institutional analyses; and proposed conditions and covenants. The document will also have annexes containing comprehensive technical, social, institutional and women in development (WID) analyses. All of the specified sections shall satisfy the requirements for the corresponding sections of a PP as defined in A.I.D. Handbook 3. All sections of a PP not identified above will be the responsibility of USAID/Uganda.

The Contractor will be required to present a final draft document to USAID/Uganda and Government of Uganda representatives prior to departing Uganda. Additionally, the Contractor will meet with Mission and GOU representatives on a regular basis -- at least once per week -- to make a verbal presentation on progress and to present issues for discussion and resolution. Recommendations and agreements reached as a result of these periodic meetings will be incorporated into the document. The USAID Core Design Team (comprised of the Agricultural Development Officer, the Project Development Officer, the Supervisory Program Economist and the Agricultural Economist) and designated GOU and other advisory personnel will meet with and consult with the Contractor as necessary.

A copy of the Project Identification Document (PID) and relevant background documents will be provided to the Contractor by USAID/Uganda prior to the start of the performance period. Additional documents, suggested contacts and other guidance on design issues will be provided by the USAID Mission upon the technical team's arrival in Uganda. (The Mission has contracted separately for the preparation of an annotated bibliography of all documents related to export development in Uganda. These documents will be available for the Contactor's use.)

B. Specific Tasks

The key tasks to be accomplished by the Contractor include, but may not be limited to, the following:

1. Review and synthesize relevant documents dealing with non-traditional agricultural exports and related topics such as technology development and transfer and human resource development needs in Uganda.
2. Obtain sufficient information about other Mission activities and programs such as private sector office initiatives, cooperative support and natural resources programming to understand the role of IDEA in the Mission's portfolio. Special attention should be focussed on the ANEPP (Agricultural Non-Traditional Export Promotion Project) to assure that IDEA is designed with multiple linkages to complement ANEPP.
3. Address the following four issues in designing the major project component, the Agribusiness Resource Center: (1) what will the ARC do and how will it function as an entity; (2) where will it be located institutionally; (3) how will it relate to other institutions; and (4) what resources are required to make the ARC work? The Contractor must be prepared to discuss with Mission, GOU and private sector representatives various institutional options for the ARC and to clearly identify its functional role in support of export production and marketing. Tentative agreement on the fundamental institutional arrangement will be reached within the first five (5) days of the design effort.
4. The project will also provide support to agricultural research and training institutions, and possibly to producer/exporter associations. The Contractor will identify an appropriate package of assistance to NARO and Makerere University that will support the achievement of the project purpose, and determine the extent and nature of assistance for producer/exporter associations.

5. Work with other institutions such as the National Agricultural Research Organization (NARO), Makerere University, the Uganda Investment Authority (UIA), Uganda Manufacturers Association (UMA), the Export Policy Analysis and Development Unit (EPADU), Uganda National Farmers Association (UNFA) and donor agencies such as the World Bank, EEC and UNDP to assure that appropriate relationships and linkages between these programs are understood and incorporated into the design. Particular emphasis must be placed on identification of practical needs of potential producers and exporters of NTEs.
6. Identify any other resources such as credit (particularly production credit), infrastructure, market information and specific inputs that are necessary for project success. Where these resources are not provided by the project, identify other potential funding for these inputs.
7. Propose a resolution of all project design issues identified in the PID (section on PP design issues provided at the end of this SOW).
8. Prepare, within the first five days of the consultancy, a workplan for the remainder of the performance period and an annotated table of contents for the project document, including sub-headings as appropriate. Present the table of contents and document preparation schedule to Mission and GOU team members for review.
9. By the beginning of week five of the consultancy, distribute a complete draft of the project document to USAID, GOU and private sector participants. Three days after distribution, make a verbal presentation of the key features of the proposed project at a one day workshop for these same individuals. Prior to the workshop, obtain reviewers' inputs for issues and plan an agenda for the workshop which will allow all individuals to express their views and participate in a dialogue on the issues. (Funding for workshop facilities, if needed, will be provided by the USAID Mission.)

10. After the workshop, revise the document to incorporate the proceedings of the workshop, and attempt to resolve any outstanding issues identified by workshop participants.
11. Prior to departing from Uganda, present a final draft of the project document to the USAID Mission. A cover memorandum transmitting the final document shall detail any unresolved issues, make suggestions for their resolution, and indicate any follow-up work to be done by the Contractor.

The primary responsibilities of individual members of the Contractor's team are described below. Team members may also be assigned other tasks by the team leader.

- The Senior Trade and Investment Promotion Specialist (Institutional Specialist)/Team Leader, with experience in NTE promotion institutions in developing countries, will be responsible for identifying the strengths and weaknesses of institutions (both private and public sector) involved in promoting agricultural exports, and defining appropriate linkages between the ARC and these institutions. S/he will work with the Agribusiness Development Specialist to determine the most appropriate institutional structure for the ARC. In addition, the institutional specialist will identify mechanisms for management and coordination of project implementation. This individual will also be expected to propose ways of making the project sustainable through transferring some functions of the ARC to private sector organizations or through other means. As team leader, this individual will be responsible for organizing the work of the team and ensuring that team members coordinate and interact appropriately with each other and with primary stakeholders. The team leader will have primary responsibility for communication between the Contractor and USAID and will work with USAID to finalize the document.

- The Senior Sectoral Development Specialist (Research/University Training), with a background in research management, impact assessment and research/university/private sector linkages, will be responsible for defining the roles of NARO and Makerere University in the project and determining appropriate types and levels of support for research and training at these institutions. This individual may also assist in assessing training needs of agribusinesses and producers of exports.
- The Senior Sectoral Development Specialist (Production and Marketing), with extensive private sector experience and knowledge of export crops and markets common to Uganda, will provide direction to USAID on how constraints to production and marketing can be overcome, based inter alia on the commodity studies currently under preparation through the Export Policy Analysis and Development Unit (EPADU). The product of the specialist's work will be a description of how best (within the scope of a demand-driven, market-responsive, private sector-biased support project) to overcome the various constraints likely to emerge for the selected commodities.
- The Senior Business Development Specialist (Agribusiness), with practical experience developing and exporting high value agricultural commodities in developing countries, will take the lead in addressing the issues relating to the ARC identified in B.3 above. S/he will be responsible for defining the structure and functions of the ARC and defining a specific program of assistance for producers and exporters and explaining how the program will work.
- The Senior Trade and Investment Promotion Specialist (Economist/Rural Sociologist), with experience in agribusiness projects using small scale producers, will provide a perspective on the economic and social impact of the project on rural Ugandans. Although the benefit-cost analysis for the project will be the responsibility of USAID staff, and an initial analysis is contained in the PID, the agricultural economist/rural sociologist will provide project-relevant input data for the economic analysis. Data requirements will be determined in consultation with USAID economists. In addition, this individual will be responsible for ensuring that the needs of smallholder producers are addressed in the project, and for proposing ways of increasing the participation of women producers and exporters in the project. S/he will author the social soundness and WID analyses.

ARTICLE IV - REPORTS

All draft and final reports will be submitted to James Dunn, Chief of the USAID Core Design Team. As noted in Article III, a draft document shall be submitted by the beginning of the fifth week of the performance period, and a final draft report shall be submitted prior to the Contractor's departure from Uganda. At USAID's option, the Contractor may be given up to five working days following the team leader's departure from Uganda to complete work on the draft at the Contractor's home office. The number of copies of each report to be reproduced will be determined in consultation with Mr. Dunn, but will not exceed forty (40) in the case of drafts and five (5) in the case of final reports. The USAID Core Design Team will be responsible for the review and final approval of the report.

ARTICLE V - RELATIONSHIPS AND RESPONSIBILITIES

James Dunn, Agricultural Development Officer and Chief of the USAID Core Design Team will provide technical direction to the Contractor. Susan Fine, Project Development Officer and Deputy Chief of the USAID Core Design Team will provide guidance on meeting A.I.D. requirements for the project design process and the project document. The Contractor is also expected to work in collaboration with other staff of the USAID Mission and the GOU/private sector IDEA Design Committee. All contacts with the GOU will be coordinated through the Agriculture and Natural Resources Office.

ARTICLE VI - TERM OF PERFORMANCE

- A. The effective date of this delivery order is May 13, 1993 and the estimated completion date is July 31, 1993.

- B. Subject to the ceiling price established in this delivery order and with prior written approval of the project officer (block 5 on cover page) the contractor is authorized to extend the estimated completion date, provided that such extension does not cause the elapsed time for completion of the work, including the furnishing of all deliverables, to extend 30 calendar days beyond the original completion date. The contractor shall attach a copy of the project officer's written approval for any extension of the term of this delivery order to the final voucher submitted for payment.
- C. It is the contractor's responsibility to ensure that the project officer approved adjustments to the original estimated completion date do not result in costs incurred which exceed the ceiling price of this delivery order. Under no circumstances shall such adjustments authorize the contractor to be paid any sum in excess of the delivery order.
- D. Adjustments which will cause the elapsed time for the completion of the work to exceed the original estimated completion date by more than 30 calendar days must be approved in advance by the contracting officer.

ARTICLE VII - WORK DAYS ORDERED

A.	<u>Functional</u>	<u>Work Days</u>	<u>Fixed Daily Rate</u>	<u>Total</u>
	Senior Trade & Investment Specialist (Kennedy)	49	\$710.00	\$ 34,790
	Senior Sectoral Development Specialist (Picha)	22	\$645.00	14,190
	Senior Sectoral Development Specialist (Walker)	28	\$645.00	18,060
	Senior Business Development Specialist (Neubert)	34	\$645.00	21,930
	Senior Trade & Investment Promotion Specialist (Sensenig)	28	\$710.00	<u>19,880</u>
	TOTAL			\$108,850

ARTICLE VIII - CEILING PRICE

(1) For Work Ordered	\$108,850
(2) For Other Direct Costs	\$75,995
Ceiling Price (1) + (2)	\$184,845

The contractor will not be paid any sum in excess of the ceiling price.

ARTICLE IX - USE OF GOVERNMENT FACILITIES AND PERSONNEL

- A. The Contractor and any employee or consultant of the Contractor is prohibited from using U.S. Government facilities (such as office space or equipment) or U.S. Government clerical or technical personnel in the performance of the services specified in the contract, unless the use of Government facilities or personnel is specifically authorized in the contract, or is authorized in advance, in writing, by the Contracting Officer.
- B. If at any time it is determined that the Contractor, or any of its employees or consultants have used U.S. Government facilities or personnel without authorization either in the contract itself, or in advance, in writing, by the Contracting Officer, then the amount payable under the contract shall be reduced by an amount equal to the value of the U.S. Government facilities or personnel used by the Contractor, as determined by the Contracting Officer.
- C. If the parties fail to agree on an adjustment made pursuant to this clause, it shall be considered a dispute, and shall be dealt with under the terms of the clause of this contract entitled "Disputes".

ARTICLE X - EMERGENCY LOCATOR INFORMATION

- A. The contractor agrees to provide the following information to the Mission Administrative Officer on or before the arrival in the host country of every contract employee or dependent:
 - A. The individual's full name, home address, and telephone number.
 - B. The name and number of the contract, and whether the individual is an employee or dependent.
 - C. The contractor's name, home office address, and telephone number, including any after-hours emergency number(s), and the name of the Contractor's home office staff member having administrative responsibility for the contract.
 - D. The name, address, and telephone number(s) of each individual's next of kin.
 - E. Any special instructions pertaining to emergency situations such as power of attorney designees or alternate contact persons.

ARTICLE XI - LOGISTICS SUPPORT

LOGISTIC SUPPORT: The USAID Mission does not have sufficient office space, facilities and transport to support the Contractor. The Contractor is required to provide office space, computers, transport and other forms of logistical support. The USAID Mission will assist the Contractor to the extent practicable in making logistical arrangements. The Contractor will not have access to USAID telephone and telefax facilities for international communications.

ARTICLE XII - ACCESS TO CLASSIFIED INFORMATION

The Contractor will not have access to classified information.

ARTICLE XIII - INSPECTION AND ACCEPTANCE

Inspection and acceptance of services and deliverables required by this Order will be performed by James Dunn, Agricultural Development Officer, USAID/Uganda, or his designee.

ARTICLE XIV - DUTY POST

The Duty Post for this Order is Kampala, Uganda.

ARTICLE XV - LANGUAGE REQUIREMENTS

None

ARTICLE XVI - WORK WEEK

The contractor is authorized up to a six day work week with no premium pay.

ARTICLE XVII - SPECIAL PROVISION

Due to the Advisory and Assistance nature of the technical assistance required under this delivery order, the contractor may be precluded from bidding on any resulting competitive procurements.

EXCERPT FROM IDEA PID

3. PP Design Issues

The following have been identified as major issues that should be addressed during the next stage of project design. This list of issues is not intended to be comprehensive but rather to highlight some of the more important issues the PP design team will be expected to address.

a. Balance between commercial viability and impact on rural incomes. The project's intent is to promote NTEs with the best chances of commercial success. At the same time, the project should promote commodities that can be produced by rural smallholders or that have a significant rural labor component in order to accomplish the project purpose. These two objectives are not necessarily compatible. The design team should suggest ways that the project can balance these two objectives, perhaps by setting out explicit criteria for commodity selection.

b. ARC structure. The most appropriate structure for the ARC will depend on how the GOU defines institutional roles and responsibilities for export development and promotion.

c. Strengthening private sector entities and transferring functions to the private sector. Mechanisms and incentives for strengthening private or quasi-private organizations and transferring some ARC support functions to them during the course of the project must be planned explicitly.

d. Womens' participation. Interventions to ensure a high degree of womens' participation in the project must be included in the project design.

e. Monitoring impact. The project must have a sound monitoring and evaluation plan to ensure that interventions are having the desired effect, particularly at the purpose level, and to identify areas for improvement.

f. Human resource development needs for agribusiness. A preliminary assessment of training needs in each project component should be conducted as part of the PP design, and the most appropriate types of training to meet these needs should be identified.

ANNEX H

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ANNEX J
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