

AGRIBUSINESS DEVELOPMENT CENTRE (ADC)

UGANDA'S INVESTMENT IN DEVELOPING EXPORT AGRICULTURE (IDEA) PROJECT

FINAL REPORT ON

**ASSESSMENT OF ADC/IDEA PROJECT'S IMPACTS IN
PROMOTING FRESH PRODUCE IN UGANDA**

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EXECUTIVE SUMMARY

1.1. Introduction

1.1.1 Overview of the IDEA Project

Ugandan's Investment in Developing Export Agriculture (IDEA) Project was initiated in March, 1995 as a five-year project, with funding from United States Agency for International Development (USAID). The project is executed by the Agribusiness Development Centre (ADC), which consists of both expatriate and local professional staff. Although the Project comprises seven components, the two main thrusts are the Low Value (LV) and High Value (HV) components. The strategy adopted by the ADC is to provide direct assistance to agribusiness firms and associations involved in buying/exporting selected NTAEs, so that these can in turn be linked with rural men and women. The ADC, through the HV component, is expected to meet the following targets for fresh produce by September 1999:-

- ☆ export value of fruits and vegetables per annum reaches US \$0.37 million,
- ☆ number of small holders and hired labourers involved in production increases by 1,000, and
- ☆ at least 40% of the producers, out growers and hired labourers are women.

1.1.2 Rationale for Impact Assessment

Having been involved in promoting export of fresh produce for more than a year and a half, the ADC found it necessary to assess project progress, outputs and impacts so as to understand achievements, challenges, lessons learned and areas which needed more emphasis. This report, therefore, presents findings from a study on the impact of ADC's intervention in fresh produce, in accordance with the Terms of Reference (TOR) attached in Annex 1.

1.2 Methodology Used

ADC/IDEA Project HV staff, the Monitoring & Evaluation (M&E) Specialist, two fresh produce exporters assisted by the ADC as well as 15 producers in Mpigi district were interviewed. In particular, the ADC staff provided some information on targets, inputs and important assumptions of the IDEA project. Firm-level data on fresh produce exports was provided by two agribusiness exporters, namely, Fruit Pack Ltd and Coseda Enterprises Ltd. Macro-level data on fresh produce exports covering the period 1994-1996 was collected from various issues of the Background to the Budget as well as from internal sources at the ADC. Production data was gathered at the farm level. Finally data on linkages and multiplier effects were collected at successive levels through producer-exporter chain.

Data collection instruments used were an interview checklist and two sets of questionnaires, one for fresh produce exporters and the other for producers (see Annex II). Where possible, observational methods was employed and relevant variables in the field were estimated. Data were entered and analyzed in Lotus 1-2-3 to generate

descriptive tables. Word Perfect for Windows was used to draw graphs. Results are presented with the aid of tables and graphical illustrations.

1.3 Uganda's Fresh Produce Sub-Sector and Nature of ADC's Intervention

1.3.1 The Fresh Produce Sub-Sector

Fresh produce may be generally defined to include fruits and vegetables. These crops have been produced in Uganda for quite a long time, with almost every household growing one type of fresh produce or another. The range of fruits and vegetables grown in Uganda is estimated to be at least 40 and out of these, about 30 have a potential for export. Of the 30 exportable crops, however, the following are the major ones being exported with over 0.5 mt per month: matooke, apple banana, ginger, hot pepper, chilli, pineapple, avocado, passion fruit, okra, and bottle gourd. The main suppliers of fresh produce for exports include farmers from the districts of Mpigi, Mukono, Mubende, Kabale, Kibaale, Bushenyi, Kasese, Jinja and Mbale.

Fresh produce growing is a profitable activity at the farm level, because producers get incomes of between 1.5 and 4 times the average costs incurred, while employees earn up to shs 5,500 per person a day. This rate of return to labour is about 1.5 to 6 times above the average prevailing wage rate of shs. 1,000 per person a day.

Procurement of fresh produce by export firms is carried out under an organized marketing system. Major players include exporters, contact farmers (and sometimes agents) in the middle as well as out growers and non-out growers at the grassroots. Procurement is normally done just a day before the date of shipment. The market is segmented in such a way that one export firm normally operates in a given area. Export firms procure more than 50% of assorted fresh produce from their own farms or those of company directors. About 30% - 40% is procured from out growers and the balance from non-out growers. Transport costs from the farm gate to collection centres are incurred by producers; while transport from collection centres to the export point is provided by the exporter/buyer. The cost of moving fresh produce from the farm level to the export point depends on the source of the product and its destination. To a lesser extent, the costs depend on the scale of operation; the bigger the volume of transaction, the smaller the unit cost.

1.3.2 ADC's Mandate and Promotional Mechanism

The type of assistance offered by the ADC to fresh produce exporters has varied. Generally, however, assistance has been rendered in identifying market contacts abroad, providing market information, on-farm technical advice, post-harvest handling methods and financing firms to participate in trade fairs. Through direct assistance to the export firms, the producers of fresh produce would indirectly benefit through an assured market and thereby increasing their income base.

1.4 Impact of ADC/IDEA Project's Assistance on Fresh Produce Exporters

1.4.1 Impact on Export Firms

During the period the ADC has been involved in promoting fresh produce in Uganda, three firms namely, Coseda Enterprises LTD, Jaco Commercial Agencies and Mairye Estates Ltd started exporting fresh produce. ADC's assistance to the export firms has helped them penetrate international markets, especially in the United Kingdom and the Netherlands. The collaboration between the ADC and the export firms has resulted into a strategy for expansion through re-investment of export proceeds. A wider spectrum of crops are now exported. In particular, crops which have been handled by these firms due to ADC intervention include apple banana, hot pepper, avocado, cerelle and anthra.

The volume and value of fresh produce in respect of Coseda Enterprises Ltd. increased from zero to 52.8 mt worth US\$ 45,240 in 1996. For Fruit Pack Ltd, however, there has been a general decline in the volume and value of exports, as the company specialized in more profitable crops starting in 1995. In spite of the reduction in export turnover by Fruit Pack Ltd, the overall volume and value of fresh produce are expected to have increased if data for the other two firms - both of whom started exporting fresh produce with assistance from ADC/IDEA project - are obtained. As regards ADC's target of export value of US \$0.37 million for fresh produce by the year 1999, findings show that the 1996 figure of about US \$0.230 for two firms (out of four assisted by the ADC) represents a significant milestone.

1.4.2 Impact on the Rural Poor

Between 1995 and 1996, there was, on average a 200% increase in acreage and nearly 300% increase in output. This was the time when the medium and small scale farmers also started growing more crops such as chilli cayenne, hot pepper and avocado for export. The growth rates in average incomes from fresh produce over the period 1995 - 1996 were 71% for the medium scale and about 650% for the small scale households. These growth rates far exceeded those experienced during 1994/95, before ADC/IDEA Project intervention. Unit prices received for the different fresh produce have also generally increased because of the assured export market. As a result of these developments, income from fresh produce in 1996 accounted for 49% to total household incomes, as opposed to 27% in 1995 and 21% in 1994.

The involvement of the ADC has generated employment to the rural population through exporters employing labourers on their own firms and hired casual labourers on the outgrower and non-outgrower farms. Findings show that there are more than 20 out growers in Mpigi District. of which 16 are males. On average, a fresh produce grower employs 2 males and 3 female casual labourers. It is therefore estimated that the total number of casual labourers could be as much as 40 males and 60 females in Mpigi district alone.

The income from sales of fresh produce has contributed to improvements in the social and nutritional status. especially for out growers. Fresh produce growers live in either

permanent or semi permanent structures, with iron roofs. No malnutrition related cases were observed among their children. Generally therefore, these farmers live a fairly good life.

1.4.3 Linkages and Multiplier Effects

The promotion of fresh produce has resulted into the following linkages:

- The producer gets some inputs (seeds, chemicals, etc.) through contact farmers.
- Each exporters' farm acts to some extent as a "demonstration farm" for training out growers on how to plant, maintain, harvest and handle fresh produce.
- Export firms provide assured market for the producers. Conversely, the exporters have a sustained source of quality products for export.
- Incomes accruing from exports of fresh produce are ploughed back through expansion and paying of the producers. The producers in turn use the income to among other things, increase output of fresh produce.

The increased volumes of exports have been made possible by a strategy of exporters expanding their sources of supply. As a result, more farmers have taken to growing fresh produce in Mpigi district. Some of the out growers obtain their fresh produce from non-out growers. In this regard, therefore, the impact of ADC's assistance has spread to more producers than the out growers contracted by exporters.

Furthermore, areas which had until 1995 not been engaged in fresh produce production for export are now engaged in this activity. Farmers in districts like Kasese, Mubende, Rakai and Masaka are out growers both for ADC clients and other buyers.

1.5 Conclusions and Recommendations

1.5.1 Conclusions

Despite the wide range of crops covered, fresh produce is still a small export commodity as it accounts for hardly 0.2% of total foreign exchange earnings. Besides, export business of fresh produce from Uganda is hardly 5 years old.

A comparison of costs incurred and the value of output realized gives an output: input ratio of 1.5 to 4:0; gross margins of shs. 400,000 to 1,200,000 per ha per annum; and returns to labour of shs. 1,500 to 5,500 per person per day. Fresh produce is therefore, a profitable activity at the farm level. At the export level, fresh produce has a Domestic Resource Cost (DRC) ratio of about 0.3 - 0.5, thus showing relatively high net foreign exchange earnings per unit of fresh produce. Even when compared to other crops, fresh produce ranks high in profitability.

The ADC in so working with its clients has contributed positively in:

- ◆ Raising rural incomes through increased output and assured market for the producers.
- ◆ Improving on the quality of fresh produce through on-farm technical advice to exporters.

- ◆ Identifying market outlets, thereby increasing volumes and values of fresh produce exported from Uganda.
- ◆ Increasing employment through expansion of acreage and output at the farm level.

1.5.2 Recommendations

(a) Promoting Fresh Produce

The ADC should undertake a rigorous drive to promote fresh produce by:

- ✦ Undertaking research on other varieties which meet international standards, with view to building on the current export diversification drive.
- ✦ Identifying more market outlets and availing market information on prices.
- ✦ Extending on-farm technical advice beyond the exporter's farm, to out growers. Due to the fact that fresh produce in the world market is of high quality, the ADC should focus more on extension agents for outgrower schemes. The use of outgrower initiative is indeed a useful tool as this would help disseminate technology, provide extension support and undertake farmer training at relatively low costs. As a start, contact farmers can be offered the necessary technology directly by ADC/IDEA Project HV staff. The contact farmers could in turn disseminate that technology to all out growers.

(b) Increasing Rural Incomes

In order for the producers to realize higher incomes, the ADC should put more emphasis on diversification of market outlets as well as spreading out to embrace more suppliers. The ADC could consider facilitating exporters by financing the initial cost of linking up with producers.

(c) Environmental Concern

There is a need for the ADC to focus on the environmental aspect as well. With increased output, there is a likelihood of encroaching on the wetlands/swamps. An environmental assessment is therefore recommended.

(d) Improving Efficiency

The ADC should lay more emphasis on efficiency and economies of scale. This would indeed help the export firms and producers to cut down on unit costs. There is also a need to expedite the completion of research trials initiated by the ADC in 1995/96.

(e) Gender Balance

There is need to place more emphasis on gender balance. Export firms and companies operated by women would be treated with affirmative action by the ADC. If no such a firm exist at present, deliberate effort should be made to initiate and promote women firms. More women out growers should also be

involved in ADC's promotional drive. Export firms should be encouraged to use women out growers. These are important if the 40% women involvement is to be met.

(f) Building the Entrepreneurial Factor

The ADC should further sensitize the rest of the business community about IDEA Project services, with a view to assisting new firms/individuals enter the fresh produce export business.

(g) Financing

There is need for the ADC to initiate lines of export financing for NTAEs in general and fresh produce in particular. Such financing could assist exporters in financing all their export transactions, especially for shipment which has hitherto been often a credit transaction. Also, the ADC should liaise with micro project funding agencies, with a view to linking fresh produce growers to soft loans.

1.0 INTRODUCTION

1.1 Overview of IDEA Project

Uganda's Investment in Developing Export Agriculture (IDEA) Project was initiated in March, 1995 as a five-year project, with funding from United States Agency for International Development (USAID). The IDEA Project is executed by the Agribusiness Development Centre (ADC) which consists of expatriate and local professional staff.

The goal of the IDEA Project is to increase incomes for rural men and women from selected Non-Traditional Agricultural Exports (NTAEs). As stipulated in the IDEA Project Document, this goal would be measured against the following indicators and targets:-

- (i) Increase in rural men's and women's household expenditures that match growth rates in the value of agricultural production.
- (ii) Increase in rural incomes from production of NTAEs that match economic growth rates.
- (iii) At least 10% increase in the value of NTAE exports.

Although the Project comprises seven components, the two main thrusts are the High Value (HV) and Low Value (LV) components. HV crops include fresh produce (i.e fruits and vegetables), spices (i.e vanilla, chillies) and roses. On the other hand, LV crops include maize and beans. In order to contribute to the Project's goal, each component aims at increasing production and marketing of the selected NTAEs. More specifically, the Project goal is to be achieved through:-

- (a) Increasing production levels, farm-gate values and exports of the selected NTAEs.
- (b) Increasing the percentage of women among those engaged in NTAEs.

The strategy adopted by the ADC is to provide direct assistance to agribusiness firms and associations involved in buying/exporting selected NTAEs, so that these can in turn be linked with rural men and women. Impact on rural men and women is, therefore, assumed to trickle down through backward/forward linkages and multiplier effects. The key rationale behind this strategy is that any assistance offered by the project should be market-driven.

1.2 Rationale for Impact Assessment

The ADC has been involved in providing assistance to agribusiness firms and associations involved in exporting/buying a wide range of fresh produce. Having been involved in promotional activities for more than a year and half, the ADC has found it necessary to assess progress, outputs and impact so as to understand achievements, challenges, lessons learned and areas which need emphasis in future. In line with the

Terms of Reference (TOR) attached in Annex 1, the assessment was intended to specifically determine:-

- (a) Income levels and expenditure patterns of men and women involved in fresh produce.
- (b) Employment and wage bill distributions of men and women, with focus on labor utilization and participation in decision making.
- (c) Levels of production, productivity and economics of producing and exporting fresh produce.
- (d) Crop husbandry practices and technologies used at subsequent levels of the commodity system.
- (e) Number of men and women impacted by the Project.
- (f) Social welfare, nutritional status and assets owned by the household.
- (g) Quality and value of NTAEs produced and exported and the extent of ADC's contribution.
- (h) Effects on the environment caused by the promotion of fresh produce.
- (i) Backward and forward linkages and multiplier effects associated with fresh produce production and exports.
- (j) Sustainability of fresh produce as an NTAE commodity.

1.3 Report Outline

This report presents findings from a study on the impacts of ADC's intervention in fresh produce. The study focused on two of the three fresh produce export firms assisted by the ADC, namely, Fruit Pack Ltd and Coseda Enterprises Ltd.

The report contains five chapters. The first chapter presents a background to the study. Methodology used in the study is presented in chapter 2. Chapter 3 gives an overview of the fresh produce sub-sector and the assistance offered by the ADC to fresh produce agribusiness firms. The impacts of ADC's assistance on fresh produce marketing and exports are presented in Chapter 4. Chapter 5 reviews the main findings and presents recommendations for future project intervention.

2.0 METHODOLOGY

2.1 General Approach

In order to assess the impact of the Project within the agreed period and budget, rapid assessment methods (RAM) were employed. The approach involved interviewing the ADC/IDEA Project staff especially those involved in HV crops, fresh produce exporters and producers. Means, ranges, modes and percentage were computed for selected indicators for the periods before and after ADC intervention. They were then compared and contrasted descriptively rather than using rigorous Analysis of Variance (ANOVA). That was done because the degrees of freedom were too small to facilitate ANOVA.

2.2 Study Coverage and Data Sources

At the micro level, 2 fresh produce exporters and 15 producers in Mpigi district were surveyed. At the macro level, export data covering the period 1994-1996, which takes into account one and a half years of ADC/IDEA Project intervention were analyzed. Four sets of data were collected. The first related to the objectives, targets, inputs and important assumptions of the Project in general and the fresh produce component in particular. The data were collected from the IDEA Project Document and from interviews with IDEA Project staff. The second set related to fresh produce exports and were collected from two agribusiness exporters, namely, Fruit Pack Ltd and Coseda Enterprises Ltd. The third set covered farm-level data and were collected through interviewing fresh produce growers. The fourth set of data was on linkages and multiplier effects. This was collected at successive levels through the producer-exporter chain.

2.3 Sampling Procedure and Sample Size

With the guidance of ADC/IDEA Project M & E Specialist and two export firms operating in Mpigi district, namely, Coseda Enterprises Ltd and Fruit Pack Ltd, counties to be visited in Mpigi district were selected. In each county, producers were sampled in such a way as to get a representative cross section of men and women out growers and non out growers. The numbers of men and women were determined on the basis of the TOR. A breakdown of fresh produce farmers interviewed is given in table 2.1 below.

Table 2.1: Category of Fresh Produce Farmers Interviewed

Category of Farmer	Male	Female	Total
Directors of Exporting Firms	2	--	2
Out growers	6	3	9
Non-Out growers	2	2	4
Total	10	5	15

2.4 Methods of Data Collection

The data collection instruments used were an interview checklist and two sets of questionnaires, one for fresh produce exporters and the other for producers (see Annex II). Where possible, observational method was employed and relevant variables in the field were estimated.

2.5 Data Processing, Analysis and Presentation of Results

Data were entered and analyzed in Lotus 1-2-3 to generate descriptive tables. Results are presented with the aid of those tables and graphical illustrations.

2.6 Survey Response

Survey responses was 100% in terms of having interviews with relevant ADC/IDEA Project staff as well as getting questionnaires filled by fresh produce farmers. The number of exporters who provided questionnaire data was, however, 2 out of the 3 specified in the TOR. Due to lack of relevant data from the third exporter (i.e Jaco Commercial Agencies), analysis has been performed for only two exporters.

3.0 UGANDA'S FRESH PRODUCE SUB-SECTOR AND NATURE OF ADC'S INTERVENTION

3.1 Definition of Fresh Produce

Fresh produce may be generally defined to include fruits and vegetables. The range of fresh produce is wide and it is estimated that there are at least 40 crops which may be categorized as fresh produce. For purposes of this study, however, fresh produce was defined to include those fruits and vegetables which have been exported over the period 1994 - 1996 by 2 of the 3 agribusiness firms assisted by ADC/IDEA Project, namely, Fruit Pack Ltd and Coseda Enterprises Ltd. The Fresh produce exported include: matoke, fresh beans, bottle gourd, chilli cayenne, hot pepper, okra, avocado, apple banana, carelle, anthra and mangoes.

3.2 Major Producing Areas

Fresh produce has been produced in Uganda for quite a long time. Almost every household in Uganda grows one type of fresh produce or another. For instance, it is common to find at household level, mangoes, oranges, jack fruit, passion fruit, pawpaw and chillies growing but hardly attended to. This, to some extent, reflects the fact that in the past, fresh produce has not been seriously considered as an income earner.

According to interviews with agribusiness export firms, the main fresh produce growing districts include Mpigi, Mukono, Mubende, Kabale, Kibaale, Bushenyi, Kasese, Jinja and Mbale. The range of fresh produce grown for the export market has gradually increased to about 30. Of those 30, however, the major ones with over 0.5 mt of exports per month, are: matoke, apple banana, hot pepper, chilli cayenne, pineapple, avocado, passion fruit, okra and bottle gourd.

3.3 Economics of Growing Fresh Produce

3.3.1 Cost of Production

The cost of producing a kilogram (kg) of fresh produce varies from one crop to another. The study was not able to capture accurate cost of production figures because of three main reasons:-

- (a) Most producers were not able to recall costs incurred in production.

- (b) There is predominant use of family labour especially on small scale farms, which is paid for in kind rather than cash.
- (c) Inter-cropping of perennial and annual crops was found to be a common farming practice. As such the study was not able to differentiate the cost of producing a perennial/tree crop from that of producing an annual crop.

More generally, the following items/activities were identified to be the main cost items and ranked according to the percentage of farmers who reported having purchased or incurred costs in utilizing them in 1996 (see table 3.1).

Table 3.1: Major Production Cost Items

Cost Item	No. of Farmers	Percentage
Spray pump	3	20
Hand hoes	15	100
Slashers and pangas	15	100
Chemicals/fertilizers	6	40
Salaries	3	20
Employees	2	13
Casual labourers:(bush clearing /tilling the land)	9	60
Purchasing of seedlings	9	60
Water cans	6	40
Wheelbarrows	6	40

3.3.2 Profitability at Farm Level

Based on the average prices received, the profitability of fresh produce products at the farm level can be summarized as in table 3.2 below:

Table 3.2: Selected Profitability Indicators at the Farm Level

Indicator	Unit	Range
Output: input ratio*	--	1.5 - 4.0
Net income **	shs/ha	400,000 - 1,200,000
Returns to labour***	shs/person day	1,500 - 5,500

Note: *Output: Input ratio = $\frac{\text{Unit price received}}{\text{Unit cost of production}}$

**Net Incomes = Gross value of output - cost of production

***Returns to Labour = Net margins/Hired labor

It is clear from table 3.1 above that fresh produce is a profitable enterprise at the farm level as producers get between 1.5 to 4 times the amount spent and that returns to labour of shs: 1,500 to 5,500 is about 1.5 to 6 times above the average prevailing wage rate of shs: 1,000 per person per day.

3.4 Cost of Marketing & Exporting fresh Produce

The cost of moving fresh produce from the farm level to the export point depends a great deal on the source of the product and its destination. To a lesser extent, the costs depend on the scale of operation - the bigger the volume of transaction the smaller the unit cost. Results obtained from the two export firms are summarized in table 3.3 below.

Table 3.3: Cost of Marketing and Exporting Fresh Produce (US \$/Tonne)
(Destination - European port)

Cost of Item	Cost (US \$/mt)
Handling from source to packing shade	20
Sorting and packaging	20
Transport from packing shade to airport	250
Clearing costs	120
Airway bill	6
Handling at airport	700
Freight	1,300
Bond and airport fees	3
Others	25
Overheads (at 5%)	122
Total Cost/Tonne	2,566

Source: Fruit Pack Ltd and Coseda Enterprises Ltd

3.5 Fresh Produce Marketing and Export Arrangement

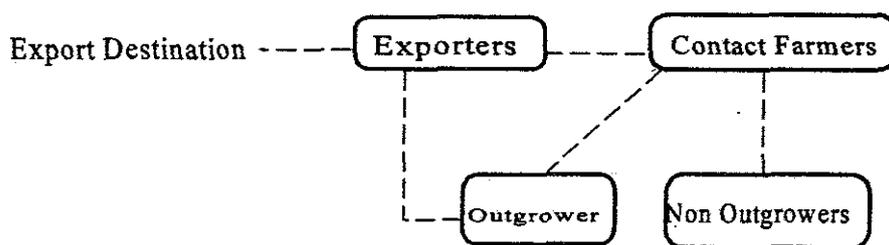
Procurement of fresh produce by export firms is carried out under an organized marketing system. Major players along the marketing chain include agribusiness export firms at the apex, contact farmers (and sometimes agents) in the middle as well as out growers and non-growers at the grassroots (See Figure 3.1). The system functions as follows:

- Each of the two export firms studied has a fresh produce farm in its area of operation. The market is segmented in such a way that one export firm normally operates in a given area. At the exporter's farm, there is a packing shade, which also acts as a collection centre for fresh produce.
- Export firms procure more than 50% of assorted fresh produce from their own farms or those of directors of the exporting company. About 30% - 40% is

procured from out growers and the balance from non-out growers. Out growers are producers who are loyal and normally sell to one exporter or his/her contact farmer. Non-out growers, on the other hand, can sell to any buyer.

- ❑ A few out growers are selected by the export firm to act as contact farmers. Their role is two-fold. First; they act as collection centres for out growers and non-out growers whose farms may be far from the export firm's packing shade. Second but to a less extent; they distribute seeds/seedlings and other inputs to growers.
- ❑ Transport costs from the farm gate to collection centres are incurred by producers; while transport from collection centres to the packing shade and thereafter to the airport is provided by the export firm.
- ❑ Procurement is normally done just a day before the date of shipment. This is intended to minimize losses, especially those which might arise due to poor storage facilities.
- ❑ There is very little, if any inter-firm procurement/marketing. This is mainly because, each firm plans its purchases ahead of time according to shipment orders. Inter-firm trade was estimated to constitute less than 5% of total procurement at any given time.
- ❑ About 90% of total procurement are by cash-on-delivery basis; about 5% on advance terms; while another 5% may be on credit.

Figure 3.1: Fresh Produce Marketing Chain



3.6 ADC's Mandate and Promotional Mechanism

The ADC, through IDEA Project's HV component, is expected to meet the following targets for fresh produce by the year 1999:-

- Export value of fruits and vegetables reach US 0.37 million per annum.
- Number of small holders and hired labor involved in production should increase by 1,000.
- At least 40% of the producers, out growers, hired labor should be women.

In order to achieve the above targets, the HV component has worked closely with Uganda Horticultural Exporters Association (HORTEXA), individuals and companies. In this analysis, ADC's assistance is focused on Fruit Pack Ltd and Coseda Enterprises Ltd. The extent of involvement and type of assistance offered by the ADC has varied. Generally, however, assistance has been rendered in identifying market contacts abroad, providing market information, on-farm technical advice, post-harvest handling methods and financing firms to participate in trade fairs. A detailed breakdown of the assistance offered to each company is presented in table 3.4 below.

Table 3.4: ADC's Assistance to Exporters of Fresh Produce

Name of Firm	Type of Assistance Offered
Fruit Pack Ltd	<ul style="list-style-type: none"> - Market information on prices and supplies in different markets - Market contacts by identifying real buyers abroad - On-farm advice on agronomy practices - Quality assurance through advice on post-harvest handling methods - Funding trade fair in Nairobi - Provision of packing materials for trial shipment
Coseda Ltd	<ul style="list-style-type: none"> - Linking the company to a regular buyer in Holland. - Identifying seeds and breeds - Provision of packaging materials for trial shipment - On-farm advice on agronomy practices - Funding of trade fair to Rotterdam and Nairobi - Provision of market information

4.0 IMPACTS OF ADC/IDEA PROJECT'S ASSISTANCE ON FRESH PRODUCE EXPORTERS

4.1 Impacts on Fresh Produce Exporters

4.1.1 Entry of Agribusiness Firms into Fresh Produce Export

During the period the ADC has been involved in promoting fresh produce in Uganda, three firms, namely, Coseda Enterprises Ltd, Jaco Commercial Agencies and Mairye Estates Ltd started exporting fresh produce.

Of the firms assisted by the ADC, only Fruit Pack Ltd had been in the fresh produce export business before ADC's/IDEA Project's intervention. Interviews with directors of Coseda Enterprises Ltd, however, also indicated that while Coseda Enterprises Ltd started exporting fresh produce in 1996, the major promoters had in fact been involved in exporting some fresh produce since 1994, under another association of exporters. Three of the four agribusiness firms assisted by the ADC, namely, Fruit Pack Ltd, Coseda Enterprises Ltd and Jaco Commercial Agencies are indigenous companies, owned by Ugandans.

4.1.2 Market Contacts

Penetration of the international fresh produce market, particularly in the case of Coseda Enterprises Ltd, has been made possible through the intervention of the ADC. Even in the case of the Fruit Pack Ltd. which has been in the export business in the past, the contribution by the ADC has helped strengthen buyer confidence.

4.1.3 Commodity Diversification

The collaboration between the ADC and the fresh produce export firms has resulted into a strategy for expansion through re-investment of export proceeds. A wider spectrum of crops is now being handled as a result of assured market outlets and market information services. Establishment of out grower schemes and contract farmers has also ensured sustainable supply of fresh produce.

Table 4.1 shows types of fresh produce, volumes and values exported by Fruit Pack Ltd and Coseda Enterprises Ltd over the period 1994 - 1996. The table clearly illustrates that:-

- ★ For Coseda Enterprises Ltd, 1996 was the first year of export. This confirms that the company's entry into the fresh produce export business is linked to ADC/IDEA project's intervention. Crops such as avocado, carelle and anthra feature as additional fresh produce commodities on the list.
- ★ Fruit Pack Ltd has since 1995 stopped exporting mangoes and fresh beans. It has generally reduced exports of chilli cayenne and matoke, kept export of bottle gourd relatively constant but increased export of okra. Under its shift in export concentration, the company started exporting hot pepper in 1995 and apple banana in 1996.
- ★ The range of fresh produce exports has expanded in 1996 compared to 1994 and 1995. This phenomenon depicts increasing focus on export diversification.

Table 4.1: Levels of Fresh Produce Exports (in MT)

Exporter	1994		1995		1996	
	Volume	Value	Volume	Value	Volume	Value
Fruit Pack Ltd						
- Chilli cayenne	--	--	78	39,000	31.2	18,720
- Hot pepper	--	--	--	--	20.8	16,640
- Okra	--	--	12.48	6,240	31.2	20,280
- Bottle gourd	--	--	41.6	20,800	41.6	27,040
- Apple banana	--	--	--	--	12.48	8,112
- Matoke	166.4	83,200	166.4	83,200	64.48	25,792
- Mango	41.2	20,800	--	--	--	--
- Fresh beans	187.2	93,600	--	--	--	--

Coseda Ltd						
- Chilli cayenne	--	--	--	--	Summer	Season
- Hot pepper	--	--	--	--	21.6	14,040
- Okra	--	--	--	--		
- Avocado	--	--	--	--		
- Apple banana	--	--	--	--	Winter	Season
- Carelle	--	--	--	--	31.2	31,200
- Anthra	--	--	--	--		
- Ginger	--	--	--	--		

NOTE: (i) Volume is in mt; Value for Fruit Pack Ltd is in UK pounds and in US\$ for Coseda Enterprises Ltd
(ii) Figures for Coseda Enterprises Ltd are consolidated/an assortment

4.1.4 Export Volume and Values

Table 4.2 below shows annual export volumes and values for assortment of fresh produce exported by Fruit Pack Ltd and Coseda Enterprises Ltd. As can be seen from the table, the volume and value of fresh exports in respect of Coseda Enterprises Ltd increased from zero in 1995, to 52.8 mt in 1996 worth US\$ 45,240.

For Fruit Pack Ltd, however, there has been a general decline in the volume and value of exports, as the company specialized in the more profitable crops starting in 1995. In spite of Fruit Pack Ltd's reduction in export turnover, the overall volume and value of fresh produce exports are expected to have increased, if data for the other two exporters - both of whom started exporting fresh produce under ADC/IDEA Project - are obtained.

As regards the target export value of US \$0.37 million for fresh produce by the year 1999, it can be seen that the 1996 figure of about US\$ 0.230 for two firms (out of four assisted by the ADC) represents a significant milestone.

Table 4.2: Annual Export Volumes and Values (Assortment of Fresh Produce)

Exporter	1994		1995		1996	
	Volume	Value	Volume	Value	Volume	Value
Fruit Pack	395.2	197,600	298.48	149,240	201.76	116,586
Coseda	--	--	--	--	52.80	45,240

Note: Volume in metric tonnes (mt)
Value in UK pounds for Fruit Pack and US \$ for Coseda

4.2 Impacts on the Rural Poor

4.2.1 Increased Area and Output

Over the period 1994-1996, there has been a general increase in area and output of fresh produce. The increase in area and output for some fresh produce has been more than 300%. In particular, between 1995 and 1996, there has been a two folds increase in area and an increase of nearly three folds in output. Based on a sample of out growers interviewed and discussions held with fresh produce exporters, the average area and output for selected fresh produce per outgrower is as given in Table 4.3.

**Table 4.3: Average Area and Output for Selected Fresh Produce per Outgrower:
(1994 - 96)**

Crop	Area (acres)			Output (kg)		
	1994	1995	1996	1994	1995	1996
Chilli cayenne	--	0.5	2.0	--	2,500	15,000
Hot pepper	--	1.5	3.5	--	40,000	91,600
Okra	1.5	1.5	2.5	38,880	38,880	65,000
Apple banana	0.5	0.6	1.5	400	400	750
Avocado	--	0.3	1.0	--	500	2,100
Bottle gourd	2.0	2.0	2.5	1,600	2,000	2,800

As can be seen from table 4.3 above, there has been a general increase in the acreage and output for fresh produce. In particular, there were marked increases during 1995/96. Apart from realizing a general increase in acreage and output, producers started growing of crops such as chilli cayenne, hot pepper and avocado in 1995. To this effect therefore, the increase in area and output has also been accompanied by product diversification.

4.2.1 Increased Incomes

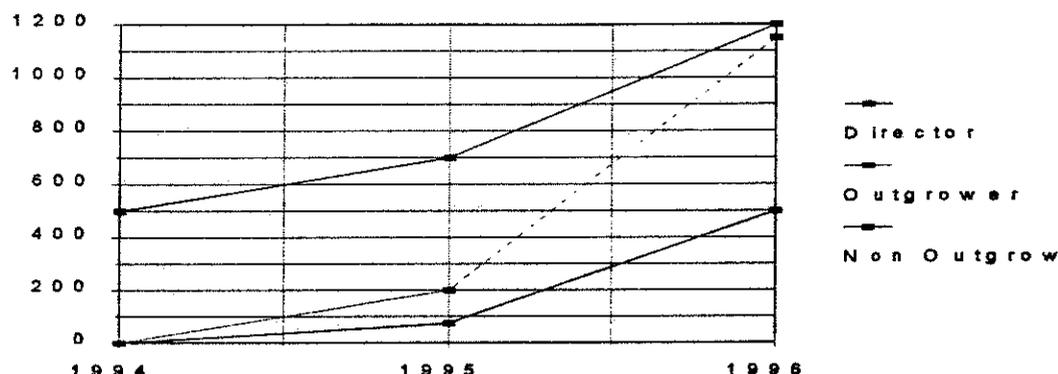
Table 4.4 shows the average annual earnings per outgrower from sale of fresh produce between 1994 and 1996.

**Table 4.4 Incomes from Sales of Fresh Produce per household
(shs '000)**

Year	Income per Annum From Sale of Fresh Produce		
	Director of firm	Outgrower	Non-outgrower
1994	500	0	0
1995	700	200	75
1996	1,200	1,150	500
Average	800	450	109

From the above table and figure 4.1, it may be noted that incomes from sales of fresh produce has increased between 1994 and 1996 by 140% (from shs 500,000 to shs 1,200,000) for directors of export firms and from zero to shs.1,150,000 per outgrower and to shs 500,000 per non outgrower. The growth rate in average incomes over the period 1995 - 1996 was about 71% for the directors and over 650% for the small scale out growers and non-out growers. These rates, which were realized during the ADC/IDEA Projects intervention far exceed those experienced during 1994-1995. Also, income levels for the year 1996 far exceed averages for the study period 1994-1995, thus showing a more marked impact on the rural poor.

Fig 4.1 : Incomes from sale of Fresh Produce:- 1994 -96
(shs '000 per household per annum)



In terms of selected produce, the trend shows increases in both volumes and values over the years. From table 4.5 it can be seen that sales volumes for all crops have increased between 1994 and 1996; with a more pronounced increase between 1995 and 1996. Sales value of fresh produce have similarly increased, with 1996 showing highest increase. Unit prices received for the different fresh produce have also generally increased.

Table 4.5 Total Volumes, Prices and Values of Selected Fresh Produce

Commodity	1994			1995			1996		
	Vol	Val	Unit	Vol	Val	Unit	Vol	Val	Unit
Chilli cayenne	--	--	--	--	--	--	1.5	0.8	533
Hot pepper	--	--	--	--	--	--	10	0.6	600
Okra	10	3.5	350	10	4.0	400	15	8.3	550
Apple banana	0.5	0.1	200	0.7	0.2	286	1.2	0.5	417
Avocado	---	--	--	0.5	0.2	400	1.5	0.9	600
Bottle gourd	1.6	0.3	188	2.0	0.5	250	2.0	0.9	450

Note: Vol. = (Volumes in mt); Val. = (Values in mill shs); and Unit = (Unit price in shs/kg)

4.2.2 Contribution to Household Incomes

As shown in table 4.6 below, there has been a general increase in incomes from fresh produce and its contribution to the total household incomes. The increase is attributed to:-

- ★ Improved unit prices for fresh produce
- ★ Increased area under fresh produce
- ★ Increased levels of output and marketing
- ★ Increased range of fresh produce crops

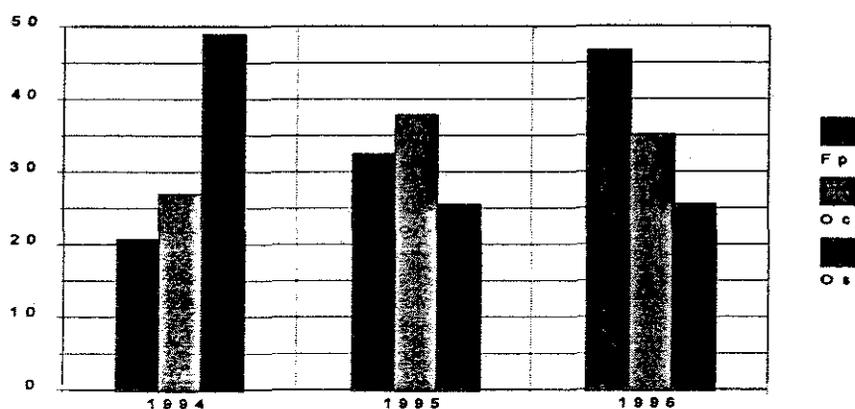
All the above are linked to ADC's assistance which not only opened the way for foreign market but also created assured internal market for the out growers. In terms of total household incomes, the contribution by fresh produce has increased over the period 1994-1996.

Table 4.6 Average Household Incomes by Source: 1994 - 1996
(Based on an average outgrower)

Source	1994	1995	1996
Fresh produce	320	500	1,150
Other crops	500	700	600
Other sources	720	650	600
Total	1,540	1850	2,350
% of fresh produce to total income	21	27	49

Figure 4.2 further illustrates that incomes from fresh produce in 1996 accounted for 49% as opposed to 27% and 21% in 1995 and 1994 respectively.

Figure 4.2: Contribution of Fresh Produce to Farm Incomes
(as % of total income)



Note: Fp => Fresh produce; Oc => Other crops; Os => Other sources

4.2.3 Employment

The involvement of the ADC has generated employment to the rural population in two ways:

- (a) Through the export firms employing the rural labour in case of own farms and also contracting with out growers. The employment level in the form of out growers is given in Table 4.7. As can be observed from the table, 16 out of 20 out growers are males, representing 80%. Female employment, therefore stands at 20%, which is below IDEA Project's target of 40%. A list of out growers is given in Annex III.

Table 4.7 Out growers Contracted by Export Firms

Exporter	Number of Out growers		
	Male	Female	Total
Fruit Pack	7	0	7
Coseda	9	4	13
Total	16	4	20

- (b) Through the employment of labour on the farm. A number of farmers have hired casual labourers who are paid a wage rate of shs. 1,000 per day. On average a grower of fresh produce employs 2 male and 3 female casual labourers. With at least 20 out growers involved in fresh produce growing in Mpigi district, the total number of casual labourers employed could be as much as 40 males and 60 females. In the case of hired labour, therefore, female employment accounts for about 60%, which is above IDEA Project target of 40%. In addition, each outgrower uses family labour force of 2 males, 4 females and 2 children on average. Female family labour constitutes at least 50%, which is again above IDEA Project targets of 40%.

4.2.4 Social and Nutritional Status

The fresh produce out growers live in either permanent or semi permanent structures with iron roofs. The farmers have three meals a day and their children do not have any malnutrition-related diseases. Most of the producers have access to piped water, boreholes or protected springs. Average distance to source of safe water is between 0.5 and 1 km. All fresh produce growers are able to send their children to school. These indicators are above the Ugandan average and those provided in the socio-economic baseline survey of 1995, conducted by Vinlaw Associates Ltd.

4.3 Linkages and Multiplier Effects

4.3.1 Linkages

The strategy adopted by the ADC in promoting fresh produce is that of "vertically integrated commodity systems approach". In this strategy, a given commodity is

considered on the basis of its market prospects which is then tied to the production aspects. Through this approach, constraints in the production and marketing systems can be identified, technology introduced and marketed linkages cemented. The promotion of fresh produce by the ADC has resulted into the following linkages:-

- (a) The producer gets some inputs (seeds, chemicals, etc) through contact farmers.
- (b) Each exporter's farm acts to some extent as a " demonstration farm" for training out growers on how to plant, harvest and handle fresh produce.
- (c) Incomes accruing from exports of fresh produce are ploughed back through expansion and paying of the producers. The producers in turn use the incomes to among other things, increase output of fresh produce.

4.3.2 Multiplier Effects

The increased volumes of exports have been made possible by a strategy of exporters expanding their sources of supply. As a result, more farmers have taken to growing fresh produce in Mpigi district. Some of the out growers obtain their fresh produce from non-out growers. In this regard, therefore, the impact of ADC's assistance has spread to more producers than the out growers contracted by exporters.

Furthermore, areas which had until 1995 not been engaged in growing fresh produce for export are now engaged in this activity. Farmers in districts like Kasese, Mubende, Rakai and Masaka are out growers both for ADC clients and other buyers. Although the increased interest in fresh produce growing may not explicitly be attributed to the ADC, it is nevertheless plausible to argue that ADC's intervention has at least had an indirect impact.

4.4 Summary of Findings

ADC's contribution toward the promotion of fresh produce in Uganda has realized a number of positive impacts. The success stories attributed to ADC's involvement are summarized in sections 4.4.1 - 4.4.8.

4.4.1 Increased Export of Fresh Produce

Analysis shows that for one of the two firms studied namely, Coseda Enterprises Ltd exports volumes have increased. Even in the case of other firms assisted by the ADC, such as Jaco Commercial Agencies, exports of fresh produce was only made possible through ADC's intervention. The growth trend continues to rise as can be seen from fresh produce export figures by firm, for the period September - December, 1996 given in Annex IV.

4.4.2 Market Contacts

The two firms interviewed acknowledged ADC's efforts in identifying markets abroad. They estimated that ADC's assistance in this respect accounts for 25%-40% to their success. This has been achieved through sponsoring the firms to attend trade fairs, linking the firms to a regular buyer, providing market information on prices and suppliers in different markets.

4.4.3 Assured Market for Producers

The commodity systems approach adopted by the ADC has encouraged the export firms to establish out growers schemes. As a result, farmers are now assured of a sustainable market. The produce is purchased at the farm gate/ contact farm, thereby reducing transportation and related marketing costs the farmer might have incurred.

4.4.4 Improved Producer - Buyer Linkages

With an outgrower arrangement, the exporters are assured of constant supply. The exporters in turn offer fair prices to the producers and also assist in buying and distributing basic inputs (seedlings and chemicals) as well as training. To this effect, ADC's contribution has led to a stronger producer-exporter linkage.

4.4.5 Increased Output of Fresh Produce

With assured demand and good prices, farmers are able to increase production. Findings from out growers interviewed show that most of them are re-investing their proceeds in order to expand acreage and output. The export firms assisted are also re-investing their proceeds in order to expand their farms and also expand on coverage.

4.4.6 Employment

ADC's assistance towards the promotion of fresh produce has increased opportunities both on the farms and with the export firms. Rural labour can now be utilized on the expanded area under fresh produce. At the same time, the export firms, through their diversification drive, have opened up more buying centres and also established their own farms. All these require more labour.

4.4.7 Contribution to Household Incomes

With assured market outlets and increased output, incomes from sale of fresh produce has substantially increased, especially over the period 1995 - 1996. Whereas in 1994, sales from fresh produce accounted for only 21% of total income, in 1996 fresh produce accounted for 49%. This is 22% above the 1995 contribution of 27%.

4.4.8 Multiplier Effects

The increased volumes of exports have necessitated exports to expand their supply sources. More producers in the districts of Mpigi and Mubende are now involved in fresh produce production. Even in districts as far as Kasese and Bushenyi, farmers have taken to fresh produce production. Although it was not possible for the study to establish the number of new entrants, estimates given by the two exporters indicate that the number of fresh produce growers in 1996 could be twice the number in 1994/95.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

5.1.1 Significance of Fresh Produce

Exports of fresh produce is still a relatively new phenomenon in Uganda. Despite the wide range of crops produced, fresh produce is still a small export commodity. In

terms of foreign exchange earnings, fresh produce accounts for hardly 0.2% of total annual earnings. Quantities of fresh produce exported is still low. Yet fresh produce is grown by nearly all household in Uganda mainly for home consumption and local markets. Cabbages, tomatoes, mangoes, avocados, jack fruits, hot pepper, etc. are to be found in almost every village in Uganda. In terms of dietary intake, fresh produce forms regular household meals. Table 5.1 shows the export volumes and earnings from fresh produce in relation to total earnings and earnings from other NTEAs between 1994 and 1996.

Table 5.1 Export Earnings (US millions)

Year	Fresh Produce		NTAE	TOTAL
	Volume (mt)	Value	Value	Value
1994	870	0.726	93,092	459,939
1995	793	0.661	150,750	560,664
1996	1,153	1.073	n.a	n.a

Source: Background to the Budget and Civil Aviation Authority

5.1.2 Economics of Production and Marketing

A comparison of the costs incurred (inputs) and value of output realized (output) gives an output:input ratio of 1.5 to 4.0, gross margins of up to shs. 1,200,000 and returns to labour of shs. 1,500 to 5,500. This clearly shows that fresh produce is profitable to grow at the farm level. Looking at the export level, analysis also shows that fresh produce has a relatively high net foreign exchange earnings per unit of produce.

Compared to most crops produced at the farm level, fresh produce ranks high in profitability, both at the farm and export levels.

5.1.3 Key Issues in Fresh Produce

The key issues associated with the production and marketing for fresh produce include:-

- ❖ **Environmental Concerns:** There is a significant usage of pesticides during the production stage. Furthermore, with expansion in area, there is a danger of encroaching on wetlands and river catchments.
- ❖ **Inadequate Funding:** Both the exporters and producers have limited sources of funds to either boost exports or purchase inputs and hire labour on the firm. Lack of funds thus tends to deter expansion both in output and export volumes.
- ❖ **Quality of Seeds/Seedlings:** It is important that the fresh produce exported maintains internationally acceptable standards. Quality of seeds/seedlings should therefore be of the acceptable standards.

- ❖ **Extension Services:** A few producers are of the opinion that with adequate extension services, better quality and increased output can be realized. In most cases, extension services are clearly lacking. Emphasis should be on identification of breeds, provision of on-farm technical advice, as well as continuous training on quality and post-harvest handling methods.

5.2 Perception of ADC's Assistance

The contribution of the ADC in promoting fresh produce in Uganda is a positive effort as it impacts both on the buyer/exporter and the producer. The ADC has, in so working with its clients, contributed positively in:

- (a) Raising rural incomes through increased output and assured market for the producers.
- (b) Improving on the quality of fresh produce through on-farm technical advice to exporters.
- (c) Identifying market outlets, thereby increasing volumes and values of fresh produce exported from Uganda.
- (d) Increasing employment through expansion of acreage and output at the farm level.

5.3 Recommendations

Despite the successes achieved through ADC's intervention in the fresh produce sub-sector, there is a number of concerns which still needs to be addressed. For instance the number of producers impacted is still small, women participation at the out growers and buyer/exporter levels is minimal and there are growing concerns on the environment. More importantly, unit costs of marketing are still high and export volumes are relatively low. Finance continues to be a problem to most of the exporters/buyers. All these raise the questions of sustainability and competitive advantage. With a view to improving efficiency, gender balance, competitive advantage and ensuring sustainability, the following recommendations are made.

5.3.1 Research and Technology Transfer

The ADC should undertake a rigorous drive to promote fresh produce by:

- (a) Undertaking and completing research on other varieties which meet international standards, with a view to building on the current export diversification drive.
- (b) Identifying more market outlets and availing more market information on prices.
- (c) Extending on-farm technical advice beyond the exporter's farm, to out growers. Due to the fact that fresh produce in the world market is of high quality, the ADC should focus more on extension agents for outgrower schemes. The use of outgrower initiative is indeed a useful tool as this would help disseminate technology, provide extension support and undertake farmer

training at relatively low costs. As a start, contact farmers could in turn disseminate that technology to all out growers. The detailed mechanism for technology transfer, including technical and cost implications could not be determined fully from the present study.

5.3.2 Increasing Rural Incomes

In order for the producers to realize high higher incomes, the ADC should put more emphasis on diversification of market outlets as well as spreading out to embrace more suppliers. The ADC could consider facilitating exporters by financing the initial costs of linking up with producers.

5.3.3 Environmental Concern

There is a need for the ADC to focus on the environmental aspects as well. With increased output there is a likelihood of encroaching the wetlands/swamps. It is therefore recommended that an environment assessment be undertaken and codes of conduct prepared.

5.3.4 Improving Efficiency

The ADC should lay more emphasis on efficiency and economies of scale. This would indeed help the export firms and producers to cut down on unit costs.

5.3.5 Gender Balance

There is a need to place more emphasis on gender balance. Export firms and companies operated by women should be treated with affirmative action by the ADC. Deliberate effort should be made to initiate and promote firms operated and managed by women. More women out growers should also be involved in ADC's promotional drive. Export firms should be encouraged to use women out growers.

5.3.6 Building the Entrepreneurial Factor

With a view to assisting new firms/individuals enter the fresh produce export business, the ADC should further sensitize the rest of the business community about the IDEA Project services. Practically, this could be made possible by the ADC working closely with business associations which are currently involved in other activities rather than NTEAs. The other aspect which the ADC should consider is to facilitate exporters to set up their offices in major fresh produce importing countries. That way, an exporter in Uganda would also be an importer and distributor in the target country.

5.3.7 Financing

The ADC should initiate lines of export financing for NTAEs in general and fresh produce in particular. Such financing could assist exporters in financing their export transactions, especially for shipment which has hitherto been often a credit transaction. Also, the ADC should liaise with micro project funding agencies, with a view to linking fresh produce growers to soft loans.

ANNEXES

Annex I

Terms of Reference

ANNEX I

CIEMONICS INTERNATIONAL INC
AGRIBUSINESS DEVELOPMENT CENTRE
USAID FUNDED IDEA PROJECT

Requisition Ref No. CS1
Purchase Order No. 008

PURCHASE ORDER FOR SERVICES

I. Background

The Uganda's Investment in Developing Export Agriculture (IDEA) Project was initiated in March 1995 with the goal of increasing rural men's and women's incomes. To achieve the above goal, the Agribusiness Development Centre (ADC) was established to assist agribusiness firms and associations expand production and marketing of selected non-traditional agricultural export (NTAE) crops and products.

In order to measure the impacts of the IDEA project on its clients, the ADC is to commission commodity studies for four selected commodities. The studies to be conducted by Ugandan consulting firms and individuals will cover a wide spectrum of ADC clients, namely producers, traders/buyers and exporters.

II. Purpose

The purpose of these studies will be to measure the people-level impacts of the selected NTAEs in terms of net annual returns, savings and the general economic and social betterment of the clients. The studies will also enable monitoring of productivity, crop husbandry practices, post-harvest handling, farm storage, input usage at farm level, etc. Other aspects to be covered will include women participation, income utilization, differences between male and female growers, forward and backward linkages in the NTAE sector, any multiplier effects and sustainability. The studies will thus measure progress towards achieving USAID's Strategic Objective One (SO1).

The main objectives of the studies will be to :-

- Determine income levels and expenditure patterns of men and women for the selected NTAEs.
- Determine employment and wage bill distributions of men and women, with focus on labour utilization and participation in decision making.
- Obtain levels of production, productivity and economics of producing and exporting the selected NTAEs, with focus on level of technology and husbandry practices.
- Obtain number of men and women impacted by the project for the selected NTAEs.

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- Determine the social welfare, nutritional status and assets owned by households.
- Obtain quantity and value of NTAEs produced and exported and the extent of ADC's contribution.
- Obtain backward, forward linkages and multiplier effects associated with NTAE production and exports.
- Determine the effects on the environment caused by the promotion of the selected NTAEs.
- Compare the above with baseline information previously generated and assess the sustainability of the selected NTAEs.

III. Approach

1. Data sources:

The primary data source will be the fresh produce growers in Mpigi district. A sample of 15 producers will be interviewed. Out of the 15 producers (to be randomly selected), at least 8 will be women. The 3 exporters of fresh produce (Jaco Commercial, COSEDA and Fruit Pack) who have been assisted by the ADC will also be interviewed.

2. Variables to be measured:

These will include the following:

- area under fresh produce, varieties grown and technology used;
- average yield levels and output of fresh produce;
- incomes attributed to fresh produce;
- decision making in income utilization;
- social and nutritional status of the producers;
- labour utilization by gender;
- export volumes and values;
- employment by firm and wage bills by gender;
- backward, forward linkages and multiplier effects associated with chilli;
- perception on contributions of ADC and where future project interventions should focus.

3. Procedures:

The procedure to be followed will involve the selection of farmers using a stratified random sampling procedure. Questionnaires will be administered to the selected farmers.

IV. Reporting

The contractor will report to:

Mr. Peter Wathum,
 ADC/IDEA Project Monitoring and Evaluation Specialist
 Plot 18 Prince Charles Drive, Kololo, Kampala
 Tel. 255482/3 Fax. 250360.

The M&E Specialist will closely monitor progress during the study period, including verification of data collection.

V. Deliverables

The following deliverables will be required:

- Inception report/study design, requiring details of the approaches outlined above and designing of the questionnaire. This will be discussed and agreed upon with the IDEA M&E Specialist.
- Draft report, bringing out an analysis of all variables. The report should be as comprehensive as possible and should clearly spell out methodology, findings and analysis.
- Final report, which incorporates all ADC comments and fully addresses the TOR. Annexes should include list of persons interviewed, production and exports trends and other major findings.

VI. Timing and Duration

The design of the survey instruments would commence by the second week of January with field data collection and analysis expected in the third and fourth weeks of January 1997 respectively. A draft final report is due early February and final report mid February, 1997. The study will therefore take a period of 4 weeks.

VII. Place of Work

The consultant will be based in Kampala and will provide all necessary office space, data processing, transport, per diem and logistics to carry out the assignment. Working in close coordination with M&E Specialist, the consultant will be expected to visit project sites and interview producers as necessary.



Annex II

Study Instruments

ADC/IDEA PROJECT

CHECKLIST FOR IMPACT ASSESSMENT FOR FRESH PRODUCE

1.0 PRODUCERS.

- 1.1 District
- 1.2 Average area under passion fruit by gender.
- 1.3 Varieties grown.
- 1.4 Husbandry practices/Technology/Inputs used and sources.
- 1.5 Yield levels achieved.
- 1.6 Labour utilization by gender.
- 1.7 Quantity marketed.
- 1.8 Location of market.
- 1.9 Buyer.
- 1.10 Transportation/costs to market
- 1.11 Average prices offered.
- 1.12 Decision making in marketing.
- 1.13 Decision making in income utilisation.
- 1.14 ADC assistance/contribution.
- 1.15 Social status.
- 1.16 Nutritional status.
- 1.17 Other assistance/contribution.
- 1.18 other crops grown.
- 1.19 Income from other crops.
- 1.20 Expenditures: Labour
 - Inputs
 - Other Education
 - Health
 - Feeding
 - Entertain
- 1.21 Farm Assets.
- 1.22 Outlook/Proposals.

2.0 Firms.

- 2.1 District.
- 2.2 Location of supplies/suppliers.
- 2.3 Procurement price.
- 2.4 Handling costs.
- 2.5 Transport costs.
- 2.6 Finance costs.
- 2.7 Export processing/related costs.
- 2.8 Employment and wage bill by gender.
- 2.9 Participation in decision making by gender.
- 2.10 Firm assets.

- 2.11 Quantity procured.
- 2.12 Quantity exported.
- 2.13 Varieties procured.
- 2.14 Varieties exported.
- 2.15 Export earnings.
- 2.16 Export markets/linkage.
- 2.17 Initiatives/Intervention by ADC - Loan or Grant.
- 2.18 Impact of the initiatives.
- 2.19 Future Plans/Outlook.
- 2.20 Other costs.
- 2.21 Export World Market Price.
- 2.22 Contractual arrangements with producers and ADC.
- 2.23 Identification of producers for interview.
- 2.24 Investments.

3.0 ADC/IDEA Project.

- 3.1 Sub sector participants.
- 3.2 Exporting - Prices, markets, varieties, trends.
- 3.3 Shares of world market prices from farm gate to FOB/FOT.
- 3.4 Package of initiatives.
 - to firms
 - to producers
- 3.5 Method of delivery.
- 3.6 Assessment of impact.
- 3.7 Actual beneficiaries/target groups reached.
- 3.8 Profile of firms/groups.
- 3.9 MAAIF/NARO involvement Research/Extension.
- 3.10 Contractual arrangements with Firms/Clients.
- 3.11 Identification of firms for interview.
- 3.12 Lessons learned/sustainability prospects.

**ADC/IDEA PROJECT
COMMODITY STUDIES FOR IMPACT ASSESSMENT**

**QUESTIONNAIRE FOR ADC's CLIENTS
THE FRESH PRODUCE BUYERS/EXPORTERS**

1.0 Particulars of Firm/Company.

Name of Firm _____

Location/Address _____

Type of Company _____

Ownership _____

Date of Registration/incorporation _____

Main line(s) of business, previous and current

Previous _____

Current _____

Nature of relationship/collaboration with ADC

Type of assistance received from ADC:

Type of assistance	Details

Assets/Investment _____

2.0 Fresh Produce Procurement and Exports.

Source areas

District (s) _____

Counties _____

Sub-counties _____

Parishes _____

Assembly/Storage Point _____

Do you have outgrowers? If so, indicate the arrangements with them.

Procurement

Year	Types	Quantities (kg)	Average prices shs/kg
1994			
1995			
1996			

Exports

Export Point _____

Year	Varieties	Quantities kg	Ave. Price shs/kg	Destination
1994				
1995				
1996				

Procurement and Marketing Costs

<u>Particulars</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>
(i) Handling Costs			
(ii) Transport Costs			
(iii) Export Processing Related Costs.			
(iv) Financing Costs			
(v) Wage Bill			
(vi) Other Costs (specify)			

3.0 Employment

Category	Number	Average wages (per month)	
		Cash	Kind

4.0 Impacts of ADC Assistance

Benefits accruing to firm/company _____

Comparison of before and after situation _____

Benefits to rural Population (production, employment, sales etc) _____

Types and number of beneficiaries by gender

5.0 Overall Assessment and Recommendations.

What factors motivated you into exporting fresh produce for marketing?

What benefits have you derive from using an out grower system?

How has the income obtained from fresh produce helped in your business?

What are the problems associated with exporting fresh produce?

Suggest how the above problems may be solved

How can the production, quality and exports of fresh produce be improved?

What has been your overall assessment and recommendations regarding the promotion of fresh produce as an export?

**ADC/IDEA PROJECT
COMMODITY STUDIES FOR IMPACT ASSESSMENT**

**ASSESSMENT OF IDEA PROJECT'S IMPACTS ON
PRODUCERS OF FRESH PRODUCE IN MPIGI DISTRICT**

Date Name of Interviewer.....

1. LOCATION OF FARM

County..... Sub-county
 Parish..... Village
 Distance to selling centre (kms).....

2. FAMILY PARTICULARS

Name of Farmer Sex Age.....
 Education Family size (#)

Labour Available for Farm Activities:

Type of labour	Number of male	Number of female	Number of children
Family			
Casual/Temporary			
Permanent			
Total			

Does any member have specialized training in the production of fresh produce? If so, state category and field of specialization.

Category of labour Field of specialization

3. FARM PARTICULARS AND LAND RESOURCES

(Give figures in acres)

Total land area _____ Total area under cultivation _____
 Area under fresh produce _____ Area fallow _____
 Area under forests/woodland _____ Area under pasture/grazing _____
 Area under structures _____ Area under other uses _____
 Total area suitable for cultivation _____

4. FARM ASSETS

Farm asset	Number		General condition
	In use	Not in use	
Equipment			
Machinery			
Farm structure			
Livestock			

5 CROPS GROWN

Crop	Number of varieties	Total area 1996 (acres)

6. PRODUCTION OF FRESH PRODUCE

List types of fresh produce, area and output between 1994 and 1996

Fresh produce (type)	Area (acres)			Output (kg)		
	1994	1995	1996	1994	1995	1996

Technology used in in cultivation, maintenance, harvesting and storage.

.....

7 SALES OF FRESH PRODUCE

Indicate quantity sold (kg), value realized (shs) by type

Fresh produce (type)	1994		1995		1996	
	Qty	Value	Qty	Value	Qty	Value

Indicate location of market, type of buyer and mode of transport used over the last three years

Particulars	1994	1995	1996
Location of market			
Type of buyer			
Mode of transport			

Give annual incomes over the last 3 years

Source	1994	1995	1996
(a) Agricultural			
Fresh produce			
Other crops			
(b) Other sources (off-farm)			

10. EXPENDITURES

Give Expenditure for 1996

Type of Expenditure	Total Expenditure
(a) Farm inputs	
(b) Consumer goods	
(c) Other expenditures	

11. SOCIAL AND NUTRITIONAL STATUS

Type of dwelling unit and general status of homestead (describe)

Percent of school-going age children actually in school. Boys ____ Girls ____

Availability of safe water and distance to source _____

Number of meals a day ____ . Any malnutrition-related diseases? _____

Type of fuel used for cooking _____

10. ENVIRONMENTAL ISSUES

a) Do you experience any problem of fertilizer run-off? Yes No
If yes, what steps have you taken to solve the problem?

b) Do you cultivate in the following areas? swamps/ wetlands forest/woodland
 hill tops/mountainous areas game parks/reserves (Tick the appropriate response).

c) Do you have any problem of soil erosion? Yes No
If so, state the extent of magnitude

What steps have you taken to solve the problem of soil erosion?

d) Do you normally clear trees, woodlands or bushes before cultivation? Yes No
Have you planted any trees in the last 3 years? Yes No

e) Has the productivity of your land increased decreased remained unchanged? Give reasons for your answer.

How have you achieved (or intend to achieve) increased production?

f) Do you use chemicals for storing fresh produce? Yes No
If yes, state the type and quantity of storage chemicals used.

<u>Crop</u>	<u>Storage Chemical</u>	<u>Quantity Used</u>	<u>Duration</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

What type of farm storage do you have (describe and give estimated capacity)

g) How do you dispose of the crop residues and wastes?

h) What positive environmental impacts has been caused as a result of your activity as a fresh produce farmer?

i) What are the adverse environmental impacts caused as a result of your activity as a fresh produce farmer?

What mitigation measures have you adopted?

j) Suggest ways of mitigating any negative impact agricultural production might have on the environment

Adverse effects associated with fresh produce growing (e.g erosion, chemicals, deforestation and use of environmentally fragile areas - hill tops, swamps etc.)

11. GENERAL

★ Who decides on the marketing of fresh produce? (Tick appropriate response)
 Man Woman Both

★ Who decides on income utilization? (Tick as appropriate)
 Man Woman Both

★ How do you get seeds, other inputs and technical support ?

★ What factors motivated you into growing fresh produce for marketing?

★ Are you growing fresh produce as an out grower? Yes No
if yes, state the buyer and arrangement in place

★ What benefits have you derived from being an out grower ? If you are not an out grower, what advantages do you think out growers have?

★ How has the income obtained from fresh produce helped you and your family?

★ Will you in the coming seasons grow more fresh produce, less or just the same amount? Give reasons for your decision.

★ What are the problems associated with growing of fresh produce

★ Suggest how the above problems may be solved

★ How can the production and quality of fresh produce be improved?

Annex III

List of Outgrowers

Annex III: LIST OF OUTGROWERS

COSEDA LTD

Name of Outgrower	Category
David Lule	Coseda Director/Outgrower
Benon Mayanja (Mr)	Coseda Director/Outgrower
John Mary Matovu	Coseda Director/Outgrower
George Ssemwezi	Coseda Director/Outgrower
Jane Masereka	Coseda Director/Outgrower
Benon Mayanja (Mrs)	Coseda Director/Outgrower
Grace Nakubulwa	Coseda Director/Outgrower
Nabuta Gerald	Coseda Director/Outgrower
Sister Nabawanuka	Outgrower
Zakayo Mukalazi	Outgrower
Alysious Ssozi	Outgrower
Emmanuel Luswata	Outgrower
Ssembugo	Outgrower

Fruit Pack Ltd

Sam Kibalama	Fruit Pack Director/Outgrower
Sserubo	Outgrower
Ssebiragala	Outgrower
Nadhubi	Outgrower
James Musoke	Outgrower
Lazaro	Outgrower
Ssemanso	Outgrower

Annex IV

Fresh Produce Exports : September - December 1996

Table 1. Fresh Produce Exports for September 1996

Product	Volume
• Matooke	44703
• Apple Banana	11227.5
• Sweetpotato	6167.5
• Chilli	4029.2
• Plantain	3689.5
• Ginger	3467.5
• Avocado	2607.5
• Pineapple	2470
• Dudhi	2155
• Hot Pepper	1500
• Bean	1220.5
• Passion Fruit	1087.5
Maize Flour	948
Jackfruit	805
Cassava leaf	675
• Okra	656
• Mango	642
Turia	544
• Sugarcane	530
Egg Plant	511
Halid	464
Yam	429
Ground Nut	393.4
Pea	340
Guava	300
Gonja	254.5
Pawpaw	200
Others	
Cassava	196
Papri	95

Table 2. Company Fresh Produce Exports for September 1996

Company	Volume
Vital	17593
London Fruit	15789.7
Sun Trade	9877.5
Mustak Enterprises	9254.5
Lusaka Growers	8724
African Vegetables	8610
Fruit Pack Ltd	6754
Afi Uganda	3613.9
Exotic Farm	1891.5
Darana Fruit Packers	1720
Free Chem	1653.5
Coseda Enterprises	1587
Tropical Garden	1185
Fruit Expo Ltd	1057
Wood Land Range	978
Bird Link	694
Famous Distributors	625
Seke Fruit Packers	410
Siraj Ndahura	402
Divine Developments	200
Total	92619.6

Bitter Tomato	82
Pumpkin	58.5
Patra	58
Bullet	40
Dodo	36
Orange	20
Cucumber	12
Carrot	3
Mushroom	1.5
Muscade Nut	1
• <u>Total</u>	<u>92619.6</u>

Table 4. Company Fresh Produce Exports for October 1996

Company	Volume
Mustak Enterprises	32456
Vital	19652
Lusaka Growers	19133
London Friut	17172
Fruit Pack Ltd	11660
Sun Trade	10587
Supper Fruit	7868
Afi Uganda	6674.4
Tropical Garden	5772
African Vegetables	3742.9
Victoria Biotechnology	3115
Cargo Fruit	2240
Cepa / P / C	2000
Coseda Enterprises	1592
Euro - Exotic	1590
Ahmad Exotic	1570
Baraka	1400
Jaco	1092
Free Chem	971
Ripotex	870.5
Fruit Expo Ltd	600
Siraj Ndahura	445
Woodland Range	256
Sekitto	110
Al Khalifa	30
Total	152598.8

Table 3. Fresh Produce Exports for October 1996

Product	Volume
• Matooke	65489
• Apple Banana	16743
• Chilli	9862
• Passsion Fruit	6708
• Sweetpotato	6157.5
• Mango	5040
• Dudhi	4646
Bitter Tomato	4457
• Hot Pepper	3334.5
Cassava leaf	3260
✓ — • Papain	3115
Pawpaw	2828
• Sugarcane	2573.4
• Ginger	2469
• Pineapple	2417.5
• Okra	2300
Egg plant	2168.5
Yam	1835
Jackfruit	1792
• Bean	1653
Maize Flour	1640
• Avocado	805
Halid	676
Ground Nut	378.9
Others	
Millet	65
• Plantain	52.5
Simsim	30
Pumpkin	25
Turia	25
Patra	20
Cucumber	13
Pea	11
Green Pepper	6
Cabbage	3
• Total	152598.8

Table 5. Fresh Produce Exports for November 1996

Product	Volume
• Chilli	20187.5
• Matooke	18327.5
Guava	11952.8
• Passion Fruit	9350.5
• Apple Banana	8804
• Mango	7862
• Bean	7475.2
• Okra	5888
• Dudhi	5369
• Sweetpotato	4101.2
Jackfruit	4060
• Ginger	2507
• Avocado	2502
• Pincapple	2277
Bitter Tomato	1923
Yam	1372.5
• Plantain	1256
• Sugarcane	1238
Pawpaw	1137.5
Ground Nut	1081
Egg Plant	1048
Maize Flour	1034
• Hot Pepper	885
Pea	800
Patra	486
Cassava Leaf	260.5
Cucumber	200
Others	
Dodo	105
Pumpkin	76
Simsim	72
Gonja	70
Total	123708.2

Table 6. Company Fresh Produce Exports for November 1996

Company	Volume
Lusaka Growers	20989
London Fruit	19815.8
Fruit Pack Ltd	11184
Vital	9591
Mustak Enterprises	9002
Sun Trade	8823
Supper Fruit	8309.5
Tropical Garden	7347
Afi Uganda	5951.7
Cargo Fruit	4941
Tropical Organic Produce	3275.2
Baraka	3040
Free Chem	2670
African Vegetables	2301
Fruit Expo Ltd	1720
Rima Ltd	1595
Coseda Enterprises	1543
Jaco	1220
Siraj Ndahura	390
Total	123708.2

Table 7. Fresh Produce Exports for December 1996

Product	Volume
• Matooke	27786
• Ginger	11193
• Apple banana	5803
• Plantain	5477
• Pineapple	5309.9
• Chilli	5280
• Dudhi	4427
• Okra	4184
• Passsionfruit	4039
• Hot Pepper	3465
• Sweetpotato	3038
• Avocado	2872.5
Bitter Tomato	985
• Mango	821.5
Egg Plant	735
• Bean	622
Ground Nut	480
Guava	433
• Sugarcane	278
Yam	264
Others	
Jackfruit	144
Cassava leaf	100
Maize Flour	91
Cucumber	59
Pca	50
Pumpkin	48
Patra	46
Turia	33
Cassava	30
Pawpaw	21
Millet	5
• Vanilla	1
• Total	88120.9

Summary of Fresh Produce Exports for January 1997

Fresh Product	Volume (Kg)
Matooke	26,188
Apple Banana	7,984
Ginger	7,769
Hot pepper	7,405
Chilli	4,966
Maize Flour	3,714
Avocado	3,436
Sweetpotato	3,221
Pineapple	2,225
Dudhi	2,159
Okra	2,134
Passionfruit	1,711
Groundnut	1,189
Bitter Tomato	908
Bean	730
Sugarcane	698
Mango	648
Jackfruit	529
Cassava Leaf	430
Gunda	400
Yam	301
Millet Flour	250
Turia	180
Cassava	109
Pawpaw	94
Egg Plant	80
Pea	64
Pumpkin	30
Total	79550

Table 8. Company Fresh Produce Export for December 1996

Company	Volume
Mustak Enterprises	18534
Lusaka Growers	15148.5
London Fruit	15058.5
Sun Trade	10057.4
Fruit Pack Ltd	5841
Vital	5525.5
Sseke	4514
Afi Uganda	3910
Coseda Enterprises	3707
Rima Ltd	1821
European Traders Ltd	1223
Baraka	1045
Cargo Fruit	899
Ripotex	715
Sekitto	102
Okello	20
Total	88120.9

Company Fresh Produce Exports for January 1997

<u>Company</u>	<u>Volume (Kg)</u>
London Fruit	17,090
Tilda Fruit	11,825
Sun Trade	9,099
Fruit Park	7,978
Mustak	7,085
AFI	6,285
Lusaka Growers	5,300
Cosenda	3,847
Rima	3,293
Fruitexpo	2,577
Masaka Growers	2,558
Smart	1,060
Kiranda Farmers	553
Free -Chem	460
Siraji Ndahura	410
Big Link	80
Tropical Garden	34
Precise Cargo	16
Total	79550