NOT YET UP TO STANDARD:
The Legacy of Two Decades of Private, Governmental, and Donor Efforts to Promote Ugandan Horticultural Exports

LUZ DIAZ RIOS, STEVEN JAFFEE, SPENCER HENSON AND JOHNNY MUGISHA
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ABBREVIATIONS AND ACRONYMS

A2N  Africa 2000 Network
ACP  African, Caribbean, and Pacific countries
ADC  Agribusiness Development Center
ADF  African Development Foundation
AFPEC  Association of Fresh Produce Exporting Companies
ANEPP  Agriculture Non-Traditional Export Promotion Project
APEP  Agriculture Productivity Enhancement Project
ASPS  Agriculture Sector Programme Support project
BMFL  Bukonzo Mixed Farmers Limited
BSDP  Business Service Development Project
BUDS-EDS  Business Uganda Development Scheme, Enterprise Development Support
CAAS  Cooperative Agriculture and Agribusiness Support Project
CBI  Centre for the Promotion of Imports from Developing Countries
CEDE  The Centre for Development and Enterprise
COLEACP  Liaison Committee Europe-Africa-Caribbean-Pacific
DANIDA  Danish International Development Agency
DDT  Dichlorodiphenyltrichloroethane
DED  German Development Service
DFID  Department for International Development
EPADU  Export Policy Analysis and Development Unit
EPOPA  Export Promotion of Organic Products from Africa
EPV  Export Promotion Village
EU  European Union
FAO  Food and Agriculture Organization of the United Nations
FOB  Free on Board
FPPC  Food Processing Pilot Center
GAP  Good Agricultural Practice
GDP  Gross Domestic Product
GMP  Good Manufacturing Practice
GoU  Government of Uganda
HACCP  Hazard Analysis and Critical Control Point
HIVOS  Humanistisch Instituut voor Ontwikkelingssamenwerking (Dutch: Humanist Institute for Development Cooperation)
HORTEXA  Horticultural Export Association
HPOU  Horticulture Promotion Organization of Uganda
ICRAF  International Center for Agro-Forestry
ICS  Internal Control System
IDEA  Investment in Developing Export Agriculture project
ILO  International Labor Organization
IKN  International Knowledge Network for Sustainable Development
IPM  Integrated Pest Management
KSIIP  Kasese Smallholder Income and Investment Program
MAAIF  Ministry of Agriculture, Animal Industries, and Agriculture
MFEP  Ministry of Finance and Economic Planning
MKIS  Market Knowledge Information System
MoU  Memorandum of Understanding
MRLs  maximum residue levels
NaCRRI  National Crops Resources Research Institute
NAPU  Natural Pride of Uganda
NARO  National Agriculture Research Institute
NAADS  National Agriculture Advisory Services
NEMA  National Environmental National Authority
NES  Uganda National Export Strategy
NGO  non-governmental organization
NOGAMU  National Organic Agriculture Movement of Uganda
NTAE  Non-Traditional Agricultural Exports
ODA  Overseas Development Agency
PIP  Pesticide Initiative Programme
PMA  Plan for Modernization of Agriculture
PMO  primary marketing organization
PSFU  Private Sector Foundation Uganda
PSOM  Programme for Cooperation with Emerging Markets
ABBREVIATIONS AND ACRONYMS

RATES Regional Agriculture Trade Expansion Support
RPE Rehabilitating Productive Enterprise program
RUCID Rural Community in Development
SCOPE Strengthening the Competitiveness of Private Enterprise
SEP Strategic Export Programme
SHF smallholder farmer
Sida Swedish International Development Cooperation Agency
SMEs small- and medium-sized enterprises
SSA Sub-Saharan Africa
SWOT strengths, weaknesses, opportunities, and threats
UAWMPE Association of Women Mushroom Producers and Exporters
UBOS Uganda Bureau of Statistics
UEPB Uganda Export Promotion Board
UEPC Uganda Export Promotion Council
UgoCert Uganda Organic Certification Ltd.
UIA Ugandan Investment Authority
UNBS Uganda National Bureau of Standards
UNCTAD United Nations Conference on Trade & Development
UNIDO United Nations Industrial Development Organization
USAID US Agency for International Development
VAT value-added tax
VECO VredesEilanden Country Offices
WSSD World Summit on Sustainable Development
LIST OF STANDARD UNITS

MT  metric tons
kg  kilogram
km  kilometer
US$ international dollar
Ha  hectare
€   euro
£   British pound
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EXECUTIVE SUMMARY

During Uganda’s post-conflict period, several development assistance efforts sought to revive and diversify the country’s agriculture exports as a means of accelerating growth, reducing poverty, and lowering the fiscal vulnerability associated with the country’s extreme level of dependence on a single export commodity—coffee. Particular attention was given to the development of higher-value agro-food exports, including fruits and vegetables. Uganda appeared to be blessed with a favorable climate, ample natural resources, and a plentiful and inexpensive labor force, thus providing the bases for horticultural comparative advantage.

Beginning in the late 1980s and early 1990s, a few Ugandan firms made tentative steps to enter the European Union (EU) market for fresh fruit and vegetables. Early support was provided under several donor-led initiatives, which involved much experimentation with new crops and/or varieties and attempts to augment nascent private and public sector capacities. A significant part of the assistance was directed at individual companies. Other, more limited support measures were taken by the Government of Uganda (GoU).

Two models of development were envisioned, both involving so-called “lead firms.” First, companies were to emerge with their own farms and some out-growers, and compete with established Kenyan exporters in the market for temperate vegetables. Firms were expected to invest in farms, modern packinghouses, and other supply chain facilities. Second, entrepreneurs who were already working with a broad array of smallholder out-growers were to establish or expand export of various products directed at “ethnic” or immigrant community markets in European countries. Overall, knowledge would be generated and spread through research trials, demonstration plots, and other outreach programs.

In spite of these efforts, Ugandan horticulture attracted few investors with relevant experience and managerial capacity, or with ample access to financial resources. It was a new industry facing numerous “teething problems”—agronomic, logistical, institutional, and so forth. Very few of the early experiments or demonstration plots translated into commercial activity. The sector experienced little sustained investment, with most Ugandan entrepreneurs finding better and/or less risky returns in other endeavors. The few well-capitalized companies that did enter the sector struggled to make a profit. The activity of newly created industry associations was limited and donor dependent.

Hence, by the early 2000s, and after a decade of development assistance and government support, the Uganda horticultural export trade remained very small and seemingly fragile, with weaknesses at all levels in the supply chain, limited capacity for collective action, and relatively few individual success stories at the commodity or firm level. Stakeholders drew variant lessons.
from this early experience. Some contended that Uganda still possessed important assets to underpin a competitive horticultural industry, that useful learning had taken place, and that continued GoU and donor support could still enable the sector to gain a critical mass and become well positioned in external markets. Others argued that Uganda’s natural assets and lower labor costs had not and were not likely to overcome significant disadvantages (e.g., Uganda’s landlocked position) and that Uganda’s industry lacked any clear competitive advantage over the incumbent players in the international trade of temperate vegetables and most “ethnic” fruits and vegetables.

Most of the early attempts to grow and export temperate vegetables—in competition with Kenya and others—were unsuccessful. Thus, the bulk of Uganda’s small horticultural trade in the early 2000s consisted of various types of peppers and other vegetables directed to distribution channels in the United Kingdom and some other parts of Europe serving various ethnic minority/immigrant communities. Traditionally, importers and wholesalers of these products sought suppliers who could consistently meet consumer preferences for quality and variety, do so at competitive prices, and be reliable in delivering agreed volumes of produce. The increasingly intense focus—from the early/mid-90s onward—on food safety matters (and especially pesticide residue) in the overall EU market for fresh produce filtered only slowly into the distribution channels for (and regulatory oversight) of more “exotic” or “ethnic” fruits and vegetables. Hence, while African suppliers of temperate vegetables were being put under increasing pressure from their buyers to upgrade food safety and other standards, these pressures were largely missing—at least through the early 2000s in the ethnic food trade.

Nevertheless, these latter markets are certainly not stagnant. Increasingly, many of the so-called “ethnic” foods have been finding their way into mainstream consumer markets, not least of which through the catering trade and the proliferation of restaurants featuring an international cuisine. Some European importers servicing these emerging market segments stepped up pressure on their Ugandan suppliers to undertake and demonstrate improved production, hygiene, and quality management. Other importers still servicing the more traditional wholesale/retail channels also began asking questions about production and packing practices. Thus, by the mid-2000s, Ugandan exporters understood that they could no longer apply “business as usual,” with disjointed supply chains and outdated production and packing practices if they were to maintain, let alone enhance, their position in the European market.

Among Uganda’s several dozen horticultural export companies, various strategies have been employed to respond to the evolving regulatory and commercial environment within Europe. Some firms have focused their attention on upgrading out-grower production practices, packinghouse operations, and associated documentation in order to comply with and be certified
under GlobalGAP and other protocols. Others have sought to reposition themselves in the market by focusing on the procurement and sale of organic fruits and vegetables. Still others have shifted their businesses to focus on the production and sale of processed products, especially dried fruit. The remainder are just treading water—making minimum changes and continuing to trade on a periodic basis.

The attempts by Ugandan firms to adjust to, cope with, or even take advantage of emerging requirements and consumer preferences have been supported by various GoU, international donor, and NGO initiatives. From the early 2000s, both the donor community and the GoU embraced compliance with private standards such as GlobalGAP as a central focus of their support to the sector. The rationale was seemingly that standards compliance was both necessary to maintain Uganda’s limited toehold in the European market and an opportunity for exporters to differentiate themselves in parts of that market. A broad range of interventions sought to raise awareness of standards and to facilitate their adoption via training, technical assistance, and financial assistance, especially to cover certification costs (and, in some cases, purchases of equipment). This assistance was predominantly channeled through “lead firms.” These firms, in turn, were supposed to provide the proper signals, incentives, and support to smallholder farmers to adopt good agricultural practice (GAP) and otherwise be compliant with buyer and/or regulatory requirements. Some efforts were made to customize interventions to accommodate the preexisting capacities of firms and other basic structural conditions.

The available evidence suggests that most firms had very limited capacity to absorb this assistance and, more importantly, to translate it into more competitive and sustainable operations. With limited exceptions, increased awareness and knowledge has not been translated into improved practices along the value chain, predominantly because Ugandan exporters lack the financial resources to invest in improved physical facilities or in sustained upgrading to operating systems and ongoing training of staff. Uganda’s horticulture export trade remains fragile, with weaknesses at all levels in the supply chain. One or two small firms have been able to achieve GlobalGAP certification, yet will probably require donor financing to cover at least partially the costs of recertification. Likewise, some interesting initiatives have emerged in the organic sector, but most have ongoing donor assistance. The incentives for other exporters to invest in substantive upgrades to their production and/or procurement systems are limited, unless much of the cost is defrayed through sustained technical and/or financial assistance.

In many cases, weak market signals and lack of specialization in production for exports provide insufficient motivation for exporters and producers to do things differently in a consistent and sustained manner. Further, export-oriented horticulture is not sufficiently attractive to invite significant new investment, either from domestic or international sources. Evidently, donor and/or
government support will remain essential if Uganda is to maintain its limited foothold in European markets, yet at the same time we must be realistic about what this support is likely to achieve in the short and medium terms.

Clearly, the challenge of standards compliance is just one among a set of challenges faced by this industry. In recent years, the dedicated attention by donors and the government to standards compliance may have overlooked many of the more fundamental matters of management, applied research, technology transfer, and access to finance, which are required to ensure sustainable participation in international markets. Support to maintain and consolidate limited gains in some export sectors and to address underlying industry constraints is needed, but with a focus on approaches that integrate compliance issues within the wider set of production and marketing factors.

Given the industry’s small size ($4.7 million, the value of exports to the EU in 2007), low profitability, and fragile competitive position in European markets, it is difficult to see how horticultural exports will yield significant gains in terms of rural income and employment. A few thousand smallholders are irregularly involved in supplying this trade. Some recent gains have been made in exports, notably hot peppers, yet overall the industry is probably falling farther behind its main competition from within and outside of Africa. Donor and/or government support to the participation of a few lead firms in international markets is unlikely to present opportunities for enhanced livelihood to many producers. Indeed, it is probable that the greatest scope for absorbing large numbers of smallholders is with promotion of horticultural production for local and/or regional markets.

For the international development community, several broad lessons can be drawn from this industry case study. First, dedicated programs focusing simply on standards compliance (or, more narrowly, certification) are not likely to be successful in the context of emergent (immature) industries. Put another way, “compliance” is likely to be no more than a fleeting mirage where fundamental supply chain weaknesses persist. Efforts to promote GAP and associated systems of record keeping and traceability are more likely to be successful where farmers have reliable market outlets, the basic agronomic challenges for the focal crop(s) have been well addressed, and other factors provide strong incentives for farmers to adjust practices and make investments as per the recommendations or urgings of buyers. Thus, development assistance interventions focused on standards compliance and related upgrading are likely to have greater and more sustainable impact when applied in contexts where many other technical and supply chain problems have been resolved and where there are clear market signals that compliance is demanded. In circumstances where more fundamental constraints are still unsolved, efforts to build awareness and capacity for standards management need to go hand in hand with complementary measures. In the Ugandan context, it is not evident that this has been the case.
Second, in supporting standards compliance, efforts involving “great leaps forward” are unlikely to have high success rates. In many instances, donor assistance sought to defray the costs of certain upgrades by both lead firms and producers, including the steps toward achieving GlobalGAP certification. However, most exporters have found themselves having to make huge leaps in capacity in order to achieve prevailing benchmarks in more exacting markets, essentially transforming their entire businesses, when there are few tangible assurances that the pertinent investments will result in new or more remunerative trading opportunities. Programmatic subsidies can help to offset some of the initial upgrading costs, yet the firms are left with the recurrent costs of running a more complex business and supply chain operation. For most of the incumbent players in Uganda’s horticultural industry, this “new” latter business model may be inappropriate and unsustainable, except with sustained donor and/or governmental support. A more graduated, incremental process of management system and commercial practice upgrades may prove to be more sustainable in circumstances where the core industry players are primarily smaller companies.
INTRODUCTION

The relative prosperity enjoyed by Uganda during the 1960s, based largely on the traditional exports of coffee, tea, cotton, and tobacco, was eroded by a devastating civil war over the period 1971 to 1985. The war disrupted agricultural production and marketing, and weakened public and private infrastructure. By 1988, the only major export was coffee, representing 95 percent of total merchandise exports. During the post-conflict period, several development assistance efforts sought to revive and diversify Uganda’s agriculture exports as a means of accelerating growth, reducing poverty, and lowering the fiscal vulnerability associated with such high export dependence on a single commodity. Particular attention was given to the development of higher-value agro-food exports, including fruits and vegetables.

Although producing a wide range of fruits and vegetables and having one horticultural crop (plantain) as a core staple food, Uganda was a relative newcomer to the field of horticultural exports. Local stakeholders and development assistance agencies sought to emulate the success of neighboring Kenya and/or other examples of emerging successful horticultural trade from sub-Saharan Africa (SSA). Uganda appeared to be blessed with a favorable climate, ample natural resources, and a plentiful and inexpensive labor force, thus providing the bases for horticultural comparative advantage. Yet, could these assets be translated into a successful horticultural export trade? Could horticultural production and trade make an important contribution to the recovery and growth of the Ugandan economy? And, could export-oriented horticultural production boost incomes for large numbers of Ugandan smallholder farmers?

During the immediate post-conflict period, development assistance efforts focused on promoting macroeconomic stabilization, rehabilitating physical infrastructure, strengthening basic public services, and creating a better enabling environment for private investment. By the late 1980s, selected donor interventions began to target the development of nontraditional agricultural exports (NTAE). Over the subsequent decade, these efforts involved the exploration of potentially remunerative products and markets and the creation or augmentation of underlying capacities in the private and public sectors. Entirely new supply chains were formed, with emphasis put on introducing and expanding the production of nontraditional crops and introducing Ugandan entrepreneurs to pertinent market players.

More recently, and at least since 2002, a major thrust of NTAE-related development assistance has centered on helping Ugandan stakeholders to comply with emerging regulatory and private standards, including those for food safety and environmental management. Whether needed to retain market (segment) access or providing a basis for brand/company/product differentiation, compliance with emerging standards has been perceived as increasingly critical for the competitiveness...
of Ugandan NTAE. While this has been especially evident for Uganda’s important fish exporting industry, which was temporarily banned from the EU market during the late-1990s due to food safety product and institutional concerns, an increasing awareness of the role and importance of standards compliance has also taken place in Ugandan horticulture.

Since the early to mid-1990s, the development of Uganda’s NTAE has been quite uneven, although the composition of the country’s food and agricultural export basket is certainly now much more diversified. Considerable success has been achieved in the development of fish exports (which exceeded $124 million in 2007) while, until recently, Uganda’s floricultural exports underwent sustained growth. Other NTAE, however, have either remained very small or experienced wide year-to-year fluctuations. At the same time, Uganda has developed a sizable trade in staple food commodities (plantain, maize, beans, etc.), supplying regional markets as well as humanitarian relief programs.

Despite strong government interest and a broad range of development assistance interventions, Uganda’s horticultural exports have remained very modest. Fruit and vegetable exports, largely geared toward the EU, totaled less than $5 million in 2007, with the level of trade showing uneven patterns from year to year. Persistent production, marketing, and financial constraints have led some industry players to exit from this trade. Although other export firms remain active, only modest amounts of private investment have taken place and institutions for collective action remain weak, while the overall industry lacks a sufficient critical mass to achieve economies of scale or scope or to differentiate itself in targeted international markets. External development assistance has recently been scaled back, with some traditional donors to the sector phasing out their support entirely. Thus, after nearly two decades of development assistance, Uganda’s horticultural export sector is still struggling and its impact on Uganda’s overall economy arguably remains marginal. Increased attention to and some success in the adoption of improved food safety, environmental, and other standards have not counterbalanced underlying competitive and structural weaknesses in the sector.

This paper retrace this experience of unfulfilled promise, highlighting the interplay among industry, government, and development assistance initiatives and the factors that have prevented the sector from realizing its expected growth and maturation. From these experiences, selected lessons are drawn that can inform the design of future interventions in this field, whether in Uganda or elsewhere in sub-Saharan Africa. The paper is based upon interviews with selected respondents, including government authorities, exporting companies, donors, and practitioner organizations, carried out in 2007 and 2008. It also draws upon past project reports,

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1 See the background paper on Ugandan trade and standards prepared for the Diagnostic Trade Integration Study (Jaffee et al., 2006).
country- and industry-specify case studies, and international statistics.

The paper is divided into four sections. Section 1 provides a brief historical perspective on the emergence of the Ugandan fruit and vegetable export industry and examines the role played by different government and donor initiatives in the initial shaping of the sector, between the late 1980s and late 1990s. Section 2 highlights the strategic commercial approaches adopted by Ugandan exporting companies and farmers during the 2000s in response to past performance and in the face of evolving regulatory and market requirements, especially in the European Union. Section 3 examines the rationale for, means of support of, and apparent efficacy of a range of recent programs seeking to improve or sustain the competitiveness of Uganda’s fruit and vegetable exports via improved compliance with regulatory or private standards. Lessons are drawn from this experience. Section 4 provides a brief set of general conclusions.
CHAPTER 1 A Role for Fruit and Vegetable Exports in Uganda’s Growth and Poverty Reduction Strategy?

In Uganda, one of the most destructive economic effects of the civil war was the flight of private capital. Opportunities for reversing the negative effects of the loss of private capital largely depended upon policy choices, which Uganda has been proactively exercising since 1987. At the beginning of 1986, GDP was 20 percent lower than in the 1970s and inflation was raging at around 240 percent per year (World Bank, 2000). The Government, with the support of the World Bank\(^2\) and other donors, embarked on a stabilization and structural adjustment program in 1987, followed by economic liberalization reforms, with gradual results that have been frequently acknowledged (World Bank, 2000; IDA, 2006; DTIS, 2006).\(^3\)

Complementing these broader reform and stabilization measures, other initiatives were undertaken that specifically sought to strengthen Ugandan agro-enterprises as a means of generating sustained growth and reducing poverty. The US Agency for International Development (USAID) was the most active development assistance partner in this endeavor (Box 1). Over the period 1988 to 2002, USAID spent nearly US$76.5 million on programs for which the primary focus was NTAE development and associated farmer–agribusiness linkages. Support for horticultural exports formed a subset of these NTAE development initiatives.

1.1 Conceptualizing the Challenges of Ugandan NTAE Development

Programming interventions to promote NTAE development in Uganda has required a careful and continuous assessment of available market opportunities, a clear definition of needed supply and coordination capabilities, and the design of suitable interventions to facilitate the emergence, strengthening, and sustainability of such capabilities. The critical challenge is to translate a country’s/industry’s/company’s basic sources of comparative advantage into a sustained competitive response. To do so, it is necessary to benchmark the target entity’s “starting point” in terms of the presence of basic and advanced productive assets and its apparent capacity to innovate. In horticulture, as with various other categories of NTAE, basic productive factors include land and water resources, agro-climatic conditions, geography and topography, and demographic and labor conditions. More advanced productive assets include logistics infrastructure, science and technology systems, and entrepreneurial skills, among others.

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\(^2\) During 1987–1997, the World Bank’s portfolio for reconstruction and rehabilitation of the Uganda economy reached nearly US$2 billion.

\(^3\) During the 1990s, Uganda attained one of the highest per capita real GDP growth rates in the world, albeit from a low base, of 3.4 percent per annum, double that of the 1.7 percent per annum for all developing countries (IF, 2006).
For nearly a quarter century, USAID has been providing support to agro-enterprise development in Uganda. As Table 1 illustrates, the areas of relative emphasis have evolved under this program. Initially, under the 1984–1988 Rehabilitating Productive Enterprise (RPE) Program, the focus of attention was on the post-conflict rehabilitation and recapitalization of enterprises. By the late 1980s, the center of attention shifted to NTAE development, especially under the Agricultural Non-Traditional Export Promotion (ANEPP) and Investment in Developing Export Agriculture (IDEA) projects. More recently, greater attention has been given to matters of farmer and enterprise productivity and commercialization and in servicing domestic and regional markets. The most recently completed Agricultural Productivity Enhancement Project (APEP) emphasized pro-poor growth, as reflected in the selection of economic subsectors that are potentially relevant to large numbers of poor or marginalized producers. Other recent projects, including the Strengthening the Competitiveness of Private Enterprise (SCOPE) and Regional Agriculture Trade Expansion Support (RATES) projects, have supported the development of industry competitiveness strategies, a branding strategy for Uganda (i.e., “gifted by nature”), the harmonization of regional standards, and other nonenterprise-specific means of promoting Ugandan exports.

In considering available capacities, it is important to distinguish between those capacities that are directly associated with the focal farmer and the industry players, so-called internal capacities, and those that are present in supportive institutional structures and general physical infrastructure that is not dedicated to a particular commodity or supply chain. The latter we refer to as external capacities. As will be illustrated below, interventions to support Ugandan NTAE (and specifically horticultural exports) have combined attention to strengthening both internal and external capacities, with mixed success. Figure 1
FIGURE 1. Overall set of factors determining an effective supply response to NTAE market opportunities
TABLE 2. Examples of internal and external capacities critical for NTAE development

<table>
<thead>
<tr>
<th>Category</th>
<th>Internal</th>
<th>External</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>On-Farm</td>
<td>Off-Farm</td>
</tr>
<tr>
<td>Human capital</td>
<td>Entrepreneurship</td>
<td>Product-handling skills</td>
</tr>
<tr>
<td></td>
<td>Production skills</td>
<td>Marketing skills</td>
</tr>
<tr>
<td></td>
<td>Managerial skills</td>
<td>Managerial skills</td>
</tr>
<tr>
<td>Physical capital</td>
<td>Equipment</td>
<td>Post-harvest facilities</td>
</tr>
<tr>
<td></td>
<td>Buildings</td>
<td>Chilled distribution</td>
</tr>
<tr>
<td>Social capital</td>
<td>Farmer groups</td>
<td>Agribusiness organizations</td>
</tr>
<tr>
<td></td>
<td>Clustering</td>
<td>Clustering</td>
</tr>
<tr>
<td></td>
<td>Supply chain relations</td>
<td></td>
</tr>
<tr>
<td>Natural capital</td>
<td>Access to land</td>
<td>Access to water</td>
</tr>
<tr>
<td></td>
<td>Land quality</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Access to water</td>
<td></td>
</tr>
<tr>
<td>Financial capital</td>
<td>Access to finance</td>
<td>Access to finance</td>
</tr>
<tr>
<td></td>
<td>Own financial Resources</td>
<td>Own financial Resources</td>
</tr>
</tbody>
</table>


illustrates the complexity of factors involved in matching market opportunities with emergent supply capacities. Table 2 provides an illustrative listing of certain internal and external capacities necessary for NTAE development.

1.2 The Early Challenges of Horticultural Export Development in Uganda

Unlike neighboring Kenya, whose extra-regional horticultural exports were initiated in the 1950s, Uganda was a newcomer to horticultural exports. Although Ugandan farmers have long produced a range of fruits and vegetables, this production was for household consumption or local/urban domestic sale. Bananas and plantains have long been the dominant horticultural crops, accounting for some 95 percent of the volume of Ugandan fruit and vegetable production through the late 1980s.

Initial trial and error activities under ANEPP/CAAS

Efforts to promote horticultural export development started in 1988 through the Agriculture Non-Traditional Export Promotion Project (ANEPP), funded by USAID. Under ANEPP, the possible scope for many types of NTAE was explored through market and technical studies, field trials, enterprise and farmer training, and other interventions. The early experience was opportunistic and involved much trial and error. Results were very mixed, although the project did catalyze a considerable amount of experimentation (Box 2).
apex grower/exporter association, the Horticultural Export Association (HORTEXA), and the construction of a cold storage facility at the Entebbe airport that, notably, remained unused until 2000.

Uganda’s initial foray into the EU market for fresh fruit and vegetables centered on a few comparatively low-value products. For example, of the country’s exports of 530 MT in 1992, nearly two-thirds was accounted for by cooking banana (matooke), with most of the remainder being chilies, okra, and other so-called “Asian vegetables,” servicing UK immigrant communities. Subsequent efforts, implemented under the ANEPP and Cooperative Agriculture and Agribusiness Support (CAAS) projects, sought to explore the feasibility of Ugandan participation in selected higher-value EU market segments. For example, support was provided to undertake field trials for snow peas and asparagus (see below).

By the mid-1990s, the most established NTAE sectors in the high-value spectrum were vanilla and flowers. High-end horticulture exports were still in a trial-and-error phase. Yet, some promising initiatives identified during the early 1990s would subsequently be further pursued under the Investment in Developing Export Agriculture (IDEA) project.

**Box 2**

**INITIAL GAINS ON NTAE DEVELOPMENT FROM EXISTING CAPACITY**

Although Uganda’s NTAE increased substantially from 1988 to 1991, most of the expansion was based on increased utilization of existing capacity, stimulated by a liberalized market environment and trade reforms, rather than by diversification into new product lines. In 1991, Uganda’s NTAE were dominated by a few product lines, including sesame (38%), maize (14%), beans (13%), fish products (17%), and hides/skins (14%). With the exception of fish exports, all other NTAE trade was highly erratic, with short-term booms followed by sudden crashes. For example, the remarkable success achieved in sesame exports during the early 1990s ended with the decline of international prices in 1993, when the leading player, Sudan, returned to the international market. Following a series of market opportunity studies, a decision was reached that ANEPP support to NTAE would be extended from 9 to 17 sectors, with new attention to be given to such commodities as peppers, vanilla, fruits, groundnuts, bananas, flowers (mainly roses), cocoa beans, and ginger.

With specific regard to horticulture, most support efforts under ANEPP were directed at individual private initiatives, seeking to overcome particular technical and marketing constraints to export development (Eriksson et al., 1994). Field trials of new crops were cost-shared, thus representing a sharing of risk of new crop development between the project and the private players. Some initiatives were also aimed at the broader industry level, with support provided to an emergent apex grower/exporter association, the Horticultural Export Association (HORTEXA), and the construction of a cold storage facility at the Entebbe airport that, notably, remained unused until 2000.

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**Broadening the base through capacity building and strengthening end-market linkages**

The leading role of USAID in supporting horticulture development in Uganda through the
ANEPP and CAAS projects continued with the implementation of the IDEA project in 1995. The project was implemented through a then new approach to private sector development, focusing on vertically integrated commodity support systems. Multiple interventions, including research, training, financial intermediation, association development, and farmer and enterprise-level support, would be undertaken in selected commodity chains. At the same time, some measures were taken to strengthen the capacities of certain public and private service providers. A grant element was designed to provide operational support to selected research and extension activities.

At the time of the IDEA project design, the link between higher-value NTAE and poverty reduction was being questioned. Both the 1994 CAAS program evaluation (Roof et al., 1994) and an agribusiness assessment report (Eriksson et al., 1994) drew attention to the much higher numbers of Ugandan smallholders producing basic food commodities that had yet to gain a foothold in supply chains for higher-value NTAE. Consequently, the IDEA project involved a dual strategy. Support would be provided for both low- and high-value commodities. The former, including maize, beans, and other food staples, were perceived to have large potential for regional exports and to involve relatively large numbers of smallholder farmers. For higher-value commodities, including flowers, horticultural crops, and spices, the expectation was that exports to international markets could be increased, yet the numbers of participating farmers would be far lower. The prime developmental impact from such sectors was expected to be through employment generation, on farms, in packinghouses, and in other downstream activities.

Initiatives undertaken by the IDEA project to support horticulture in the latter half of the 1990s included (1) the establishment of research agreements with entrepreneurs to assess productivity and/or varietal selection for different crops; (2) technical assistance to individual firms on technical and business management matters and to HORTEXA; (3) market contact visits involving Ugandan exporters and overseas market importers; and (4) the creation of a Market Knowledge Information System unit (MKIS) that disseminated market information and technical/commercialization bulletins for asparagus, baby banana, hot peppers, okra, and other crops (Table 3).

Much of the support to individual companies came through a program of cost-sharing grants. Simultaneously, another donor, the Dutch Centre for the Promotion of Imports from Developing Countries (CBI), provided support to the emerging sector by supporting overseas trade missions and overall business training and market information.

With the understanding that the consolidation of emergent NTAE would require long lead times, the IDEA project was conceived with an initial time horizon of five years, with the possibility of a second phase. Indeed, the original 1995 to 1999 project was extended for a second phase covering 2000 to 2004. During the second phase, support to firms with specific links to high-value markets was emphasized.
Hence, the earliest focus of donor support to NTAE development targeted policy advice and support for public institutions to undergo the necessary reforms to provide an enabling environment for private investments. At the institutional level, USAID support led to the establishment of the Export Policy Analysis and Development Unit (EPADU) placed at the Ministry of Finance and Economic Planning (MFEP), and the Ugandan Investment Authority (UIA) in 1991 (USAID/ODA). In 1996, the need for an institution providing support services to the emerging export sector was addressed through the creation of the UEPB, replacing the dysfunctional Uganda Export Promotion Council (UEPC) set up by the Government of Uganda (GoU) in 1969.

### 1.3 Identifying Suitable Entry Points: Toward Public and Private Capacity Building

A significant challenge faced by cooperating agencies is to define the entry point and the right actors to partner with. In Uganda, the process of facilitating horticulture exports featured shifts in such entry points and assistance beneficiaries over time. As illustrated in Table 4, USAID assistance shifted from an early emphasis on building public capacities to a subsequent focus in the mid-1990s on private sector capacity building. The public sector institutions that were supported were not commodity-specific but were pertinent to NTAE as a whole. Initiatives led by CBI focused on industry actors, with some support also going to the Uganda Export Promotion Board (UEPB) (see below) to provide industry training.

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### Table 3. Summary of key interventions undertaken in horticulture by the IDEA project through 1999

<table>
<thead>
<tr>
<th>Activity</th>
<th>Clients/Firms Reached</th>
<th>Grant Value (US$)</th>
<th>Technical Assistance (Days)</th>
<th>ADC's Expected Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td>6</td>
<td>152,000</td>
<td>215</td>
<td>Low to high</td>
</tr>
<tr>
<td>Feasibility studies</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>High</td>
</tr>
<tr>
<td>Training and marketing</td>
<td>11</td>
<td>170,000</td>
<td>480</td>
<td>Low to high</td>
</tr>
<tr>
<td>Institutional strengthening</td>
<td>1</td>
<td>72,000</td>
<td>200</td>
<td>Medium</td>
</tr>
<tr>
<td>Irrigation</td>
<td>1</td>
<td>12,000</td>
<td>20</td>
<td>Medium</td>
</tr>
<tr>
<td>Strengthening farm infrastructure</td>
<td>2</td>
<td>16,000</td>
<td>45</td>
<td>Low to medium</td>
</tr>
</tbody>
</table>

Source: Kiza and Ngabirano (1999). “Low” means no tangible exports directly resulting from IDEA assistance; “Medium” means less than US$50,000 FOB in exports resulting from IDEA assistance; “High” refers to more than US$50,000 of exports.

6 Thus, about 80 percent of the initial ANEPP budget, about US$51.5 million, was designated to promote trade policy reforms, and only 20 percent for technical assistance and public institutional capacity building.

7 Overseas Development Agency (UK), known today as Department for International Development (DFID).
Likewise, in an effort to rebuild the agriculture research infrastructure weakened during the civil war, several donors supported the creation of the National Agriculture Research Institution (NARO) in 1992. NARO was born as a semi-autonomous agricultural research agency with a mandate covering crops, livestock, forestry, and fisheries. Most of the research undertaken since independence had been heavily focused on cotton, tea, and coffee. Thus, with little research on those crops considered to have the best export potential, the importance of building NARO’s capacities to perform its role and to respond to the needs of the NTAE sector, including horticulture, was apparent.

The assumption of initial capacity-building efforts was that there was a need to strengthen the set of public institutional capacities as a first step toward subsequent support to private industry. Public sector institutional capacity building was assumed to be critical to the promotion of private investment in emergent industries. Yet, the uptake of new functions by NARO, UEPB, and other public institutions proved to be slow. Additionally, in

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**TABLE 4.** Entry point of the main initiatives supporting horticulture development in Uganda during the period 1988–2002

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td>Industry actors</td>
<td>Industry actors, through the Agribusiness Development Center (ADC)</td>
<td>Industry actors, through the Agribusiness Development Center (ADC)</td>
<td></td>
</tr>
<tr>
<td>Focus on direct support to Government. Some indirect assistance to the industry through generalize training and seminars</td>
<td>Although the support to EPADU and UIA continued during this period, there was a shift in institution building efforts from the GoU agencies to private sector trade associations.</td>
<td>Institution building efforts focused on private sector trade associations</td>
<td>Less emphasis on trade associations institutional building and more emphasis on individual companies through direct assistance</td>
<td></td>
</tr>
<tr>
<td>Moving toward direct assistance to agribusiness</td>
<td>Emphasis on direct assistance to agribusiness (including integrated packages to address technical/marketing and financial needs)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* The last two years of the project were practically a transition to the project’s successor, the APEP project.
** CBI support to export development has extended until today.
the promotion of NTAE, and particularly those sectors with an expected high participation of smallholders (such as horticulture), strong and qualified technical assistance was a must. However, public capacities to provide technical assistance and extension services to support diversified horticulture production were missing. Although efforts undertaken by ANEPP and CAAS, through general training and workshops, created awareness on relevant issues, they proved to be too general and lacking focus (Eriksson et al., 1994). Thus, the baseline or starting point for public institutional capacity building was low, and the gap to be narrowed too broad to achieve sustainable results within the timeframe of a single project/intervention.

Recognizing the likely long lead time and financial resources needed to strengthen pertinent public sector capacities, a shift in orientation in NTAE development assistance began to emerge by the early 1990s. Thus, in 1992 the focus of the ANEPP project moved from policy analysis and reforms to more direct assistance targeting the needs of individual companies through short-term technical assistance, direct grants for feasibility studies, market development, and financial support.

The focus on direct assistance to private sector actors, initiated by ANEPP, was further advanced through the implementation of the IDEA project. In the IDEA project, an important component of institutional capacity building efforts was the strengthening of emerging industry associations, which required significant time and resources. Meanwhile, transitional and innovative ways of providing adequate support to horticulture and other emergent sectors had to be found. Thus, the project established an Agribusiness Development Center (ADC) as a way to consolidate in a single unit foreign and local expertise, and to provide services to NTAE sectors, including horticulture (Box 3).

Box 3
THE INTERMEDIARY ROLE OF THE DONOR TO OVERTAKE PUBLIC AND PRIVATE INSTITUTIONAL CAPACITIES: THE AGROBUSINESS DEVELOPMENT CENTER

In the implementation of the IDEA project, the implementer assumed a critical role not only in the coordination and provision of direct technical assistance and training but also in provision of marketing information and financial linkages to enterprises, through the creation of the Agribusiness Development Center (ADC). ADC’s role in the provision of services to NTAE sectors was seen as transitional. The ADC was supposed to facilitate a “critical mass” of NTAE activity. It was expected that the strengthened industry/commodity associations would predominantly assume the ADC’s functions at the close of the IDEA project (USAID, 1997). It is not evident that any of the attendant industry/commodity organizations have achieved sufficient capacity to take on these functions. Additionally, support provided to Makerere University was designed to enable this entity to play a longer-term role in generating innovations and providing sources of expertise required for the emerging industries. Furthermore, policy and regulatory efforts would be enhanced through the dialogue between ADC and the public and private actors, and by the exchange of information on identified constraints to export development.
**Figure 2.** Interventions supporting export horticulture development in Uganda during the 1990s

**FIGURE 2. Interventions supporting export horticulture development in Uganda during the 1990s**

<table>
<thead>
<tr>
<th>Initiatives enhancing industry’s internal resources</th>
<th>Initiatives enhancing industry’s external resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strengthening associations (IDEA)</td>
<td>Policy: macroeconomic recovery, stabilization, and liberalization</td>
</tr>
<tr>
<td>Facilitating access to market information (IDEA)</td>
<td>Infrastructure: building basic infrastructure roads</td>
</tr>
<tr>
<td>Achieving agronomic success and/or improving quality (ANEPP, IDEA, GoU)</td>
<td>Institutions: creation/strengthening public institutional infrastructure</td>
</tr>
<tr>
<td>Improving post-harvest infrastructure (IDEA, GoU)</td>
<td>World Bank</td>
</tr>
<tr>
<td>Promoting end-market linkages (IDEA, CBI)</td>
<td>USAID (ANEPP and IDEA)</td>
</tr>
<tr>
<td></td>
<td>DFID, DANIDA, and other donors</td>
</tr>
</tbody>
</table>

*Figure 2* summarizes the division of attention between internal and external capacity building in relation to Ugandan horticulture during the 1990s. During the 1990s, the emergent horticulture sector benefited, directly and indirectly, from several interventions aimed at creating and/or strengthening external and internal industry capacities for export development. Initiatives aimed at augmenting the set of external industry capacities to support export development covered, among others, efforts to provide an enabling environment for private investments, which started in the mid-1980s. At the level of institutional capacity building, donors’ efforts initially centered on strengthening public sector capacities, but shifted in the mid-1990s toward a focus on private sector capacity building. Although other donors, such as CBI, supported initiatives aimed at strengthening/creating internal industry capacities by providing direct production and marketing support to industry actors, undoubtedly the efforts on this front were mainly led by USAID, through the ANNEP and IDEA projects.

### 1.4 Achievements and Frustrations from the mid-1990s to 2000s

The initiatives undertaken by firms and donors to promote horticultural development during the early to mid-1990s began to yield noticeable positive results. By 1997, a set of small companies was accessing international markets, export-oriented production had spread to a few districts, and there was evidence of regularized linkages between producers and exporters. Consequently, the mid-term evaluation of the IDEA project recommended a more rigorous drive to promote fresh produce trade by undertaking and completing research to extend diversification opportunities by identifying more markets and improving the delivery of market information, as well as finding effective ways to involve out-growers (Kiiza, 1997).
More and more companies entered the sector. By 1998, there were some 81 registered horticultural exporters, although only a dozen or so companies accounted for the bulk of the trade, with most of the others operating on a part-time and mostly speculative basis. By the end of IDEA Phase I in 1999, fresh fruit and vegetable exports were still relatively modest, with an estimated FOB value of $3.3 million, yet there were perceived to be good prospects for future growth. Indeed, a target figure of $10 million was set for IDEA Phase II. Further, it was believed that Uganda’s horticultural exports could reach some $50 million within a decade if significant private investment were to occur. With such a trajectory, export-oriented horticulture could provide a remunerative source of income for relatively large numbers of Ugandan smallholders.9

Although Uganda’s horticultural trade was then still based primarily on the sale of comparatively lower value commodities channeled to the UK ethnic food market, there were expectations that both product and market diversification could occur. Indeed, by 1999 representatives from most of the major UK supermarket chains and a number of important European continental distributors had visited Uganda.

Some Ugandan companies were entering into supply agreements with these buyers. Thus, a considerable amount of support under IDEA Phase II was geared toward enabling companies with established end-market linkages to participate in higher-value segments of the EU market. This included considerable support for field trial and technology transfer programs, as well as for strengthening nascent out-grower schemes.

The implementation of these interventions in the sector as a whole was mixed, while the overall results fell well below expectations. Uganda’s fresh produce exports failed to take off, nudging up slightly in value from year to year and reaching some 3,500 MT by 2002, valued at $3.5 million (Sergeant & De Vette, 2004).10 The trend in fresh produce exports lagged considerably behind parallel gains observed for exports of flowers, spices, cocoa, fish, and various lower-value food commodities (Table 5). Despite considerable research and development to assess agronomic feasibility, alongside other efforts, little success had been made in diversifying Uganda’s fresh produce export basket, particularly directed at EU markets. Much of the research effort was eventually discontinued or resulted in only small adoption of new crops. An important exception, however, was the introduction and spread of scotch bonnet peppers, which gained an increasingly important role in Uganda’s fresh produce export trade (see below).

9 The end evaluation of IDEA Phase I, carried out in 1999, highlighted the importance of horticulture exports as a vehicle to generate growth. Products such as chilies, hot peppers, passion fruit, peppers, okra, and baby vegetables could be produced competitively in Uganda, while the potential of asparagus should be further explored, they concluded. The evaluation team also recommended strengthening the work on critical products, from a food security perspective, and with regional markets potential, such as matooke. (USAID, 1999)

10 According to IDEA data, and reported by Sergeant and De Vette (2004), the total value of horticulture exports reached US$4.4 million in 2002, of which US$0.9 million were regional exports (about 2,539 MT).
TABLE 5. Estimated value of Uganda’s high-value exports, 1988–2002 (US$ million FOB)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Roses/plant cuttings</td>
<td>0.0</td>
<td>0.2</td>
<td>25.0</td>
<td>2.3</td>
<td>13.6</td>
<td>21.1</td>
</tr>
<tr>
<td>Fresh produce</td>
<td>0.6</td>
<td>0.7</td>
<td>10.0</td>
<td>0.6</td>
<td>3.2</td>
<td>4.4</td>
</tr>
<tr>
<td>Vanilla</td>
<td>0.0</td>
<td>0.4</td>
<td>2.0</td>
<td>0.24</td>
<td>2.0</td>
<td>9.4</td>
</tr>
<tr>
<td>Cocoa</td>
<td>0.0</td>
<td>0.7</td>
<td>3.0</td>
<td>0.6</td>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Other high-value products11</td>
<td>—</td>
<td>—</td>
<td>1.0</td>
<td>—</td>
<td>0.5</td>
<td>0.2</td>
</tr>
<tr>
<td>Fish12</td>
<td>0.3</td>
<td>9.0</td>
<td>—</td>
<td>17.5</td>
<td>30.8</td>
<td>87.4</td>
</tr>
</tbody>
</table>

Source: IDEA (2003), World Bank (1996)

Diversification dead ends

From the mid-1990s, an array of donor-supported initiatives was implemented, seeking to diversify Uganda’s horticultural export product basket. Most of these initiatives involved market and/or agronomic testing. Few were successful and even fewer led to sustainable and significant trade volumes.13 Although much was learned from these experiences, it was becoming increasingly evident that Uganda would not be able to replicate the scale and scope of neighboring Kenya’s success in this field.

Especially frustrating, given the level of effort devoted and the expectations for relatively rapid trade growth, were efforts to promote exports of temperate vegetables (Box 4). Another dead end occurred in relation to dried mushroom exports; these had previously been deemed to have high potential for linking large numbers of women farmers to international markets (Box 5).

Modest yet uneven progress in institutional capacity building

The limited progress of horticulture export expansion and diversification was matched by mixed or unsatisfactory results in various initiatives aimed at strengthening broader institutional capacities. Here, we briefly highlight major developments related to horticultural research, industry association development, and the provision of technical support services.

The efforts to assess varieties and expand production of horticulture products during the 1990s were undertaken through a

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11 Other high-value products include dried pineapple and banana, bird’s eye chili, and various spices.

12 Fish was not one of the sectors supported by the IDEA project but was the focus of several other donors. The source for the data on fish exports is the UBOS (Uganda Bureau of Standards), as reported by Keizire (2004).

13 A range of constraining factors was experienced. For example, various types of peas and green beans did not prosper under Uganda agro-climatic conditions. A mushroom support program encountered market access and cost competitiveness problems. Some introduced crops that required intensive cultivation practices and gained little acceptability among smallholder farmers (USAID, 2004).
Box 4
DEVELOPING A SUPPLY OF PRODUCTS WITH LOW AGRONOMIC POTENTIAL AND FEW COMPETITIVE ADVANTAGES: THE CASE OF TEMPERATE VEGETABLES

Kenya’s success in exports of temperate vegetables and growing EU consumer demand created interest among Ugandan investors and donors in the possibility of developing a similar trade. Under the ANEPP/CAAS projects, field trials for snow peas were established in the Kabale region, involving 50 farmers, while trials for asparagus were set up in Mukono District. Poor agronomic results led to the end of these trials, yet under the IDEA project new varietal trial and other work relating to green beans was implemented in conjunction with several private companies.

A grant was provided to a company called Fruit Pack to develop trials and out-grower schemes in the Kabale and Kasese districts. The preliminary results of the trials indicated that good-quality product could be produced in the Kabale region, although the availability of land with proper soil conditions seemed to be a limiting factor. In contrast, the Kasese region presented advantages associated with less fragmented land, availability of irrigation, and a higher degree of organization among farmers. Yet, due to the location, about 400 km from Kampala, transportation acted as a limiting factor.

In contrast, the partnership established with Mairye Estates produced more-positive results. The company benefited from substantial technical and financial support for the establishment of trials and the commercial production of the variety of bobby beans initially identified as having agronomic and market potential. The company had established contacts with major European buyers and was supplying product to the main UK supermarkets. Increased exports were expected to be the result of expanded production through an out-grower scheme established by the company in the Kabale district.

However, basic infrastructure, including roads, electricity hookups, and water availability, proved to be a binding constraint, and the initiative was short-lived. Over time, it became increasingly apparent that the varieties of green beans that grew well in Uganda did not have much market potential in the European Union. Similarly, there was a realization that the climate was a limiting factor to achieving export quality products. The climate around Lake Victoria is too warm for the temperate crops demanded in Europe, and in many of the cooler areas, the level of rainfall tends to compromise quality.

Consequently, both agronomic and logistical factors acted to limit the feasibility of Uganda becoming a strong competitor to well-established Kenyan exporters. After nearly a decade of continuous donor support and firm efforts, there was a realization that Uganda could not compete effectively in the EU market for temperate fresh vegetables.

Source: Kiiza and Ngabirano (1999); IF (2006).
Box 5
COORDINATED SUPPLY CHAIN RESPONSE TO A POORLY IDENTIFIED MARKET OPPORTUNITY: THE CASE OF DRIED OYSTER MUSHROOMS

USAID initiatives promoting mushroom production in Uganda started under the ANEPP project in the Kabale district. Mushroom production was considered to be a potential winner from a poverty reduction perspective, given the low capital and land requirements. USAID supported the initiative of a private firm that was, at the time, distributing planting materials to producers and buying the product for export to Europe. The initial assistance focused on quality improvements through technical assistance, training, and support for improved infrastructure, for example, stoves to reduce fuel costs. The need to increase production was evident, as the company was supplying only half of its buyers’ demands, estimated at about 80 kg per week.

In 1996, the horticulture sector had generated exports valued at US$20,000, in a planted area of about a hectare, and created around 300 jobs. The donor provided a US$40,000 grant to an Association of Women Mushroom Producers and Exporters (UAWMPE) to support production, training, and the achievement of organic certification. The exporter, on the other hand, was supported by specialized technical assistance, visits to the United Kingdom and Holland to strengthen end-market linkages, and assistance in accessing credit through a local financial institution. Expectations of growth potential led to the development of a proposal for an ambitious “Ugandan Mushroom Project,” yet an IDEA-hired consultant found little evidence for unmet market potential and discouraged continued USAID support. The consultant’s report noted:

Currently, Ugandan export volume is about 50 kilograms of dehydrated product per month; an amount which can barely be absorbed by the current market. If and until new markets can be identified for dehydrated oyster mushrooms, ADC/IDEA recommends no further expansion of production by existing Ugandan producers and no new investments by those currently not in the sector. USAID 2001a, pg. 2.

Several years later, a new attempt to develop a supply of dried oyster mushrooms was undertaken, with donor support, in several districts near Kampala. During 2003–2004, the Business Service Development Project (BSDP), implemented by the International Labor Organization (ILO) with funding from DFID, supported the implementation of a pilot initiative to take advantage of what seemed to be a market opportunity identified by a small exporting company. The goal was to establish a monthly supply of 250 kg of dried mushrooms to satisfy the demand of a UK buyer. The donor provided technical assistance in terms of expertise, planning of the activities, and oversight of the operation. The stakeholders, on the other hand, were responsible for most of the investments required to undertake production and processing activities. Several factors contributed to the failure of the project, including poor technical capacities of the actors, lack of trust and transparency, and weak commitment on the part of the exporter, as highlighted by the evaluation report:

. . . the lack of follow-through with the partners on agreed activities created the impression that his interest was elsewhere, or worse, that the market was actually non-existent. Kairumba and Nyabuntu (2005), pg. 16.

Only 11 kg of dried mushrooms were produced, a quantity that, according to the firm involved, was too small to be exported.

A substantial proportion of assistance to Uganda’s horticultural industry in the mid to late-1990s was directed at individual companies. Two models were envisioned, both involving so-called “lead firms”:

- Companies were to emerge with their own farms and some out-growers, aimed at competing with established Kenyans exporters in the temperate vegetable market. As in Uganda’s emerging floriculture industry, firms entering this space were expected to invest in farms, modern packinghouses, and other supply chain facilities.¹⁵

- Engage with entrepreneurs that were already working with a broad array of smallholder out-growers, aimed at establishing and/or expanding exports of various fruits and vegetables, predominantly directed at ethnic markets in European countries. Knowledge was generated and spread through ongoing research trials, demonstration plots, and other outreach programs.

Yet, Ugandan horticulture attracted few investors with the pertinent experience and managerial capacity, and who could access the required financial resources. It was a new industry facing many “teething problems” and had no obvious source of competitive advantage over well-established players in the market, notably established exporters in neighboring Kenya. Reflecting this, the sector attracted little substantial investment, with most Ugandan entrepreneurs experiencing technical assistance and support services, there was an assumption that the research capabilities of the private sector were in place or could be easily augmented with the support and assistance of the ADC team. Yet, according to IDEA reports, the experience fell short of expectations. Several trials undertaken via agreements with the private sector had to be rehabilitated, repeated, or abandoned due to poor maintenance and reporting by the firms, including those for asparagus, apple banana, hot pepper, and bird’s eye chili. Many of the contracted private companies lacked the experience and organizational capability to effectively manage field research activity and to report results for broader dissemination. Although some of the horticultural research programs that involved a planning and monitoring role by NARO performed somewhat better, NARO’s ability to provide field-level supervision was often constrained. The shortcomings of the research program made it difficult to anticipate and prevent pest and disease problems and to identify other constraints to productivity enhancement. Thus, the technical and agro-economic base for the fledgling new industry remained shallow.¹⁴

¹⁴ The mid-term and final evaluation of IDEA Phase I highlighted that the focus of research activities on private actors did not sufficiently leverage technical and management capacity of public institutions to support field activities. Adjustments in the approach to research and technology transfer activities during the second phase of IDEA included efforts to bring together public and private actors. Research agreements on green beans, hot peppers, and other commodities were also established with private firms, with NARO playing a direct role in planning, monitoring, and supervising research activities, while demonstration programs in banana, matooke, and cocoa were directly implemented by NARO.

¹⁵ An assessment of the critical factors determining the success of the floriculture industry in Uganda is presented by Sergeant and de Vette (2004).
better and/or less risky returns in other sectors, including some other NTAE. The few well-capitalized companies that did enter the sector struggled to make a profit.

Although experiences with individual nascent export firms were below expectations, there also proved to be limited basis for collective action via industry “apex” associations. HORTEXA was created in 1990 under ANEPP and subsequently was supported by IDEA and other donor programs. Through grants and various cost-sharing programs, HORTEXA received upward of $160,000 from IDEA over the period 1995 to 2000. This support included participation in horticultural research programs, training of members, and cost-sharing grants directed at 10 members for investments in supplementary irrigation and field packing facilities. However, as with several other apex associations formed to support NTAE development in Uganda, HORTEXA developed only modest institutional capacity and was unable to mobilize resources from among its membership to sustain the activities initiated with donor support.

HORTEXA members included small and/or young companies that faced enormous technical, marketing, and financial challenges. It is difficult to determine whether HORTEXA, and other associations in emerging NTAE sectors, evolved in response to the needs of the nascent export sector or as a means to access development assistance. What is clear, however, is that multiple factors have limited the capabilities of HORTEXA to perform the expected roles.16 Although some support for HORTEXA continued during the second phase of the IDEA project, institutional capacity building through association development was deemphasized. Thus, the project activities centered on selected “lead firm” clients in an effort to boost crop diversification and horticulture exports.17

Over nearly a decade, Uganda’s horticultural sector benefited from the services provided by ADC (see Box 3), including direct technical assistance and training, provision of marketing information, and financial linkages between banks and individual enterprises. With the end of the IDEA project, efforts were made to train industry organizations, such as HORTEXA, to take on some of ADC’s functions. For example, training was provided in the preparation and dissemination of technical and commercialization bulletins. However, immediately upon donor support ending, such activities ceased. Similarly, attempts

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16 Based upon the experiences of the IDEA project, the following preconditions for viable associations include the provision of valuable services to members, active membership, and a commodity with significant export value. The positive growth of associations is dependent upon natural, mutual needs among the members to come together to increase strength. These preconditions were not present in the case of HORTEXA, which was comprised of small companies going through a gestation period, and consequently facing enormous technical, marketing, and financial challenges. Thus, a lack of membership commitment, and the absence of an agreed-upon vision, trust, and member cohesion, were critical factors limiting the success of HORTEXA.

17 A bottom-up approach to association development and involvement was recommended in the final evaluation of IDEA Phase I in 1999, on the assumption that local district associations would be more likely to render meaningful member-focused services and be more easily targeted for technical assistance, training, and other outreach programs.
were made to transfer export promotion, business training, and market information functions to the UEPB. However, resource constraints severely limited the ability of the UEPB to undertake these functions; the UEPB was supposed to be funded from import taxes, although these did not materialize, while donor interest in the promotion of horticultural exports from Uganda has tended to wane.

Thus, by the early 2000s Uganda had established a modest export trade in fresh fruit and vegetables, largely consisting of lower-value crops targeting the ethnic/immigrant market and wholesale vendors in the United Kingdom. It is evident that development assistance efforts had contributed substantially to the formation of this trade via technical and business management support as well as facilitating linkages to end markets. Without these development assistance efforts, it is unlikely that the majority of the most active players would have entered and/or remained in this sector.

Yet, after a decade of development assistance and government support, the Uganda horticultural export trade remained fragile, with weaknesses at all levels in the supply chain, limited capacity for collective action, and relatively few individual success stories at the commodity or firm level. Ugandan scotch bonnet peppers were beginning to be recognized by overseas markets, yet few Ugandan companies had gained recognition as consistent and reliable suppliers. A considerable amount of experimentation had been done with different crops and products, yet little of this effort bore fruit, either due to implementation problems or the realization of agronomic and/or logistical constraints. Although the GoU was to initiate a Strategic Export Program in 2001 that would include some support to horticulture, by that time there were growing doubts about the sector’s growth potential:

Uganda cannot be competitive in exports of some of the major traded commodities, such as French beans, banana, pineapple, mango, and avocado. In the case of temperate vegetables, the climatic conditions are not favorable; in the case of tropical fruits, due to their weight, they are generally shipped by sea and air freight costs are prohibitive. As a landlocked country, Uganda cannot develop competitive advantage. Products, which are currently exported, and which have growth potential include fresh chili and hot pepper, passion fruit, okra, baby vegetables, and sun-dried tropical fruit.

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18 The IDEA project had provided technical support to the government during the design and planning of the UEPB and also assisted in the elaboration of its strategy and action plan, although over time direct financial and technical support was deemphasized.

19 With regard to firm-level technical assistance, other donor initiatives undertaken in the early 2000s did enable the emergence of alternative private support structures, filling some of the gaps remaining after the closure of the ADC. These will be discussed in Section 3.

20 An assessment of the impacts of the IDEA project carried out in 1999 (Carvalho & Muñax, 1999) indicated that, in the stakeholders’ view, about 50–75 percent of the export growth in this sector was a result of the IDEA contribution. Yet, other factors cited were a positive government export policy and increased air cargo space. There was clearly a perception among beneficiaries of a significant contribution by IDEA for commodities such as hot peppers and passion fruit.

As the IDEA project wound down and a new USAID-supported agricultural supply chain project was designed, a decision was made not to continue support for export-oriented horticulture given the myriad of constraining factors and the assessment that large numbers of livelihoods could not be enhanced given reasonable expectations for growth in this sector. Thus, in the follow-up APEP program, the only horticultural commodity receiving USAID support was banana, with a focus on productivity enhancement and domestic marketing matters.
CHAPTER 2 Emerging Standards and the Commercial Responses by Ugandan Horticultural Exporters

Over the past decade or so, the challenge of international competitiveness in the horticultural export sector has increasingly been linked to the development of capacity to manage food safety and plant health risks. In the European Union, the main destination market for Uganda’s horticulture exports, existing public food safety standards have become more stringent, while new standards are being applied to address previously unknown or unregulated hazards and other related consumer concerns. These official requirements cover a broad set of issues including grades, packing materials, hygiene, microbiological and chemical contaminants, phytosanitary risks, safe and effective use of pesticides, and traceability.²²

In parallel, private operators have been increasingly tightening their requirements to address food safety risks, as well as the quality, environmental, and social concerns of consumers and civil society organizations. In higher-end EU markets, private individual or collective initiatives have led to a number of private standards, which in some cases are more prescriptive and stringent than official regulations (Humphrey, 2008). Importers in these segments of the EU market are increasingly demanding their suppliers to demonstrate compliance with these private standards.

While public and private food safety, quality, and other standards are evolving in the European Union, the level of supply chain oversight by importers and emphasis on good practice implementation varies across segments of the market, giving rise to a broad spectrum of buyer requirements and associated means to verify compliance (Figure 3). These requirements start with preferred varieties, grades, and packing materials, and progressively incorporate a wider range of compliance parameters related to food safety practices, record keeping, and traceability along the supply chain and risk and quality management structures. Compliance is assessed through first- and second-party inspection in the less demanding segments of the EU market and through third-party conformity assessment and precertification in higher-end segments. The targeted segment and the specific product and/or process²³ define the challenges associated with compliance, while the starting point of the firm or farmer defines the degree of effort and investment required in order to achieve compliance in the targeted market.

²² A detailed description of official EU requirements for imports of fresh fruit and vegetables is presented by Graffham (2006).
²³ The actual risk is determined by how the product is consumed (e.g., whether the product is consumed cooked, semi-cooked, or raw), characteristics of the product (e.g., level of perishability), and practices during production, harvest, and post-harvest (e.g., rate of pesticide use during production, use of chemicals post-harvest; use of free water during post-harvest operations; degree of handling, etc.).
In the United Kingdom, the market destination for over 60 percent of Ugandan horticulture exports in 2007, most of the largest retailers are demanding that their suppliers source products that are produced on farms that are certified to GlobalGAP or their own propriety standard (for example Tesco’s Nature’s Choice). At the same time, there is a significant market where there is little or no demand for GlobalGAP or other pre-harvest private food safety standards. Within this latter market, however, it is still possible to discern segments that differ in their food safety and quality requirements across products and distribution channels (Box 6).

Given that Ugandan horticultural exports are predominantly targeted at ethnic and wholesale markets in the United Kingdom, at the current time the core compliance challenges lie to the left of the spectrum in

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24 GlobalGAP, formerly EurepGAP, is a private sector body that sets voluntary standards for the certification of agricultural products around the globe. The scope of the standard applied to horticulture can be found at http://www.globalgap.org.
Although the major supermarket chains dominate in markets for fresh fruit and vegetables in the United Kingdom, accounting for 80 to 85 percent of retail sales, there remains a sizeable market for produce from farms that are not certified to GlobalGAP or other pre-farm-gate private food safety standards (e.g., Tesco’s Nature’s Choice); what is termed the “noncertified market” for brevity below. It is estimated that this subsector was valued at £1.71 billion in 2007, consisting of distribution through independent retail stores (£1.34 billion) and sales to the food service industry (£0.37 billion).

All produce supplied to the noncertified fruit and vegetable subsector must satisfy legal requirements, for example, with respect to phytosanitary certificates and not exceeding regulatory limits on pesticide residues. Further, any actor in the horticultural supply chain must be able to identify where all produce in which they trade has been purchased. There are, however, significant differences in the requirements of importers beyond regulatory requirements, such that the noncertified market for fruit and vegetables in the United Kingdom is positioned variously along the spectrum in Figure 3.

Much of the flow of imported fruit and vegetables to independent retail stores is through the major wholesale markets. Here, importers sell on to retail customers and/or traders. Smaller importers and their customers typically make purchases on the basis of price and physical appearance, with little or no attention given to food safety parameters beyond general cleanliness, degree of deterioration, and such. Larger importers, however, are beginning to ask questions about where and how the fruit and vegetables they purchase has been produced. Further, some of these companies are beginning to elaborate their own standards as part of their “due diligence” for their customers. For example, they are tending to purchase only from suppliers that can trace back the produce they supply to the farmer, and where records are kept on, for example, use of pesticides. While this is far from meeting the requirements of GlobalGAP, it does indicate that food safety issues are on the “radar screen” of some of the more important importers and suppliers to wholesale markets.

Food service companies, as a general rule, are more discerning than independent retailers with respect to food safety and quality. Thus, a number of medium and even small food service companies are auditing their wholesale suppliers in order to ensure that they are sourcing from reputable producers. While traceability is the key requirement of these buyers, they also tend to buy preferentially from importers that can demonstrate that producers have followed basic good agricultural practice (GAP), maintain records, and so forth. While GlobalGAP is far from being a strict requirement, the more discerning buyers in this value chain are aware of the attendant issues and can conceivably see certification becoming a reality in the future.


**Figure 3**, with a predominant focus on achieving consistency in quality and supply, while maintaining price competitiveness through cost efficiencies. Exporters that are more to the center of **Figure 3** and/or are attempting to shift toward the right, need to implement...
proactive approaches toward the gradual adoption of improved production practices, mainly associated with pesticide use and associated record keeping. Any attempt to shift market focus across the spectrum of buyer requirements toward higher-end segments of the market, however, likely require substantial investments in compliance capacities, improved managerial skills, and changes in procurement strategies. In this section, we highlight the range of strategies pursued by Uganda’s horticultural exporters in response to the challenges and opportunities associated with the evolving market and regulatory picture for food safety and quality in the European Union.

2.1 Recent Structure of Ugandan Fresh Produce Exports to Europe

In 2006, Ugandan fruit and vegetable exports to Europe were around 4,700 MT, valued at US$4.7 million. Over the period 2004 to 2006, some 122 firms participated in this trade, although only 28 of these were regular traders, while around half of these firms exported no more than 1 MT per week on average. Indeed, many of these firms are not real exporters but rather act as supply agents that source and export on commission for overseas companies, with many of the more active players being involved on a speculative and periodic basis. At the same time, however, there are signs of consolidation in the sector. While the 10 largest exporters only accounted for 40 percent of exports by value in 2004, the share of the 10 largest exporters had increased to around 80 percent by 2006 Table 6.

Among the top five exporting firms, four were established in the mid-1990s and have achieved a regularized position in selected overseas wholesale markets and/or ethnic food distribution channels. The two largest exporters accounted for around 50 percent of exports in 2006, with the single largest firm representing 36 percent. Most of the other export firms, which predominantly entered the sector during the 1990s, have remained small. It is interesting to note that the three leading recipients of IDEA project support have either experienced a recent contraction in their fruit and vegetable exports or have exited the trade entirely.

Although the basket of horticultural exports from Uganda to the European Union is quite broad, consisting of nearly 50 products, most individual products are exported in very small quantities. Further, just three products—banana (matooke and apple banana), pineapple, and capsicum27—

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25 According to COMTRADE data.

26 This company reported substantial increases in exports in the three years from 2004 to 2006, and volumes and values that are significantly higher than those reported by UEPB statistics. This suggests an ever higher share of this company in total exports.

27 In this segment, the country faces international competition from consolidated players such as Morocco, Turkey, Israel, and Jordan. Former competitors, such as the Dominican Republic and Egypt, have been losing market share. Within the sub-Saharan Africa region, Ghana is the leading supplier of hot peppers and chilies to the EU market; EU imports from Ghana rose from over 500 MT in 2003 to 2,970 MT in 2007. Uganda is the second largest supplier followed by Kenya. In 2007, EU imports from these countries were estimated at 1592 Mt and 1137 Mt, respectively.
accounted for over 80 percent of the value of exports in 2007 (Figure 4). The main export market is the United Kingdom (Figure 5), which is also the market exhibiting the most appreciable growth through the 2000s.

On the basis of EUROSTAT import data, exports of bananas, capsicum, and pineapple would appear to have increased over the period 1999 to 2007, while imports of fresh vegetables (including green beans and some other fresh vegetables) increased to 2005 but have since diminished significantly (Figure 6). It should be noted, however, that contradictory trade statistics from different sources—Government of Uganda, EUROSTAT, and COMTRADE—make it difficult to elaborate in a reliable way on trends in the volume and/or value of exports over time.28

Most of Uganda’s horticultural exports consist of relatively low-value and low-margin products sold through wholesale distribution channels. Hot peppers/chilies have provided somewhat better margins and account for half or more of the trade for most of the leading exporters (see Table 7). Product share of total fruit and vegetable exports of some leading exporting companies 2007). At the same time, exports of hot peppers/chilies are rather erratic (Figure 7).29 Exports of scotch bonnet peppers have exhibited a volatile pattern as a result of production problems due to pests and diseases. Trade in other types of hot peppers, however, has apparently experienced more steady growth in recent years. Around two-thirds of Uganda’s hot peppers/chilies trade is with the United Kingdom.

Uganda’s main market for matooke and apple bananas is the United Kingdom, which accounted for 80 percent of exports in 2007. The small trade in pineapple is directed mainly toward Germany and Belgium. Uganda’s current trade in green beans and other somewhat higher-value temperate vegetables is now very tiny.

28 For example, according to EUROSTART data, exports of capsicum are experiencing an increasing trend, yet very different figures are reported by national and international statistics. The same is seen with data for bananas.

29 The composition of Uganda’s capsicum trade has been changing in recent years, but the specific components cannot be discerned from trade statistics.

### TABLE 6. Share of largest export firms in total fruit and vegetables exports to the European Union (%)

<table>
<thead>
<tr>
<th>Companies</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quantity</td>
<td>Value</td>
<td>Quantity</td>
</tr>
<tr>
<td>Top 10</td>
<td>42.8</td>
<td>36.8</td>
<td>52.3</td>
</tr>
<tr>
<td>Top 5</td>
<td>28.0</td>
<td>23.0</td>
<td>33.2</td>
</tr>
<tr>
<td>Top 2</td>
<td>20.7</td>
<td>12.8</td>
<td>21.3</td>
</tr>
</tbody>
</table>

Source: Calculations based on UEPB statistics and information provided by companies.
FIGURE 4. Product share of EU fresh fruit and vegetable imports from Uganda, 2007

Source: Calculations based on EUROSTAT data

FIGURE 5. EU imports of fruit and vegetables from Uganda by main destination, 2000 to 2007

Source: Calculations based on EUROSTAT data

FIGURE 6. EU imports of fruit and vegetables from Uganda by product, 1999 to 2007

Source: Calculations based on EUROSTAT data
FIGURE 7. Ugandan exports of chilies/hot peppers, 2003 to 2007

Source: Data from UEPB export statistics

TABLE 7. Product share of total fruit and vegetable exports of some leading exporting companies 2007

<table>
<thead>
<tr>
<th>Exporting company</th>
<th>Product</th>
<th>%</th>
<th>Product</th>
<th>%</th>
<th>Product</th>
<th>%</th>
<th>Product</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hot peppers</td>
<td>50</td>
<td>Matoke</td>
<td>20</td>
<td>Sweet potatoes</td>
<td>15</td>
<td>Fresh avocados/Others</td>
<td>15</td>
</tr>
<tr>
<td>2</td>
<td>Hot peppers</td>
<td>40</td>
<td>Sweet peppers</td>
<td>30</td>
<td>Avocados</td>
<td>10</td>
<td>Others</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>Hot peppers</td>
<td>34</td>
<td>Matoke</td>
<td>28</td>
<td>Green chilies</td>
<td>14</td>
<td>Okra</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>Hot peppers</td>
<td>70</td>
<td>Matoke</td>
<td>10</td>
<td>Apple bananas</td>
<td>10</td>
<td>Avocados</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>Hot peppers</td>
<td>60</td>
<td>Sweet potatoes</td>
<td>18</td>
<td>Okra</td>
<td>12</td>
<td>Matoke</td>
<td>10</td>
</tr>
<tr>
<td>6</td>
<td>Hot peppers</td>
<td>30</td>
<td>Matoke</td>
<td>25</td>
<td>Okra</td>
<td>25</td>
<td>Sugarcane</td>
<td>10</td>
</tr>
<tr>
<td>7</td>
<td>Matoke</td>
<td>50</td>
<td>Hot peppers</td>
<td>30</td>
<td>Sweet potatoes</td>
<td>9</td>
<td>Apple bananas</td>
<td>5.8</td>
</tr>
<tr>
<td>8</td>
<td>Hot peppers</td>
<td>90</td>
<td>Matoke</td>
<td>5</td>
<td>Okra</td>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: UEPB data. Note that the numbers in the left-hand column do not represent rankings.

2.2 Strategic Responses to an Evolving Market: Comply, Redirect Focus, or Exit?

We have seen how Uganda’s fruit and vegetable export sector is populated by a small number of larger emergent firms and numerous smaller companies, many of which export intermittently. The predominant focus of the export trade is distribution channels directed at ethnic/immigrant markets, while very few exporters have penetrated mainstream supermarkets. Traditionally, these distribution channels have been primarily concerned with product quality and cost considerations, with substantially less focus on food safety, environmental, and social concerns. Yet, these markets are not static and there are signs that broader attention is being given to consumer concerns and the evolution of regulatory systems affecting the fresh produce wholesale business in export markets.
Thus, the overseas buyers/distributors of Ugandan fresh produce have begun to look for more assurances about product safety and/or related production/packinghouse practices. At a minimum, Ugandan exporters have come to perceive that “business as usual,” with disjointed supply chains and outdated practices, is not sustainable if they are to maintain and even enhance their position in the European market.

Although most of the industry is operating from a position of relative weakness and low profitability, each exporter has had to take proactive measures to adjust to an evolving regulatory and market environment. Based on interviews with 24 of the main export firms it is possible to discern a number of distinct “strategies” that firms have employed, and indeed have sought external assistance to support: (1) attempts to comply with emerging standards; (2) product diversification toward less risky products; (3) shifting market focus to achieve differentiation; (4) targeting less strict regional markets; and (5) exiting the horticultural business (Figure 8).

Given the nature of the main EU market served by Ugandan fruit and vegetable exporters, wholesale markets directed at ethnic food retailers, few firms have experienced strict demands from their buyers in terms of good practice implementation and guarantees of compliance. Not surprisingly, Mairye Estates Ltd. was the first firm in Uganda to pursue GlobalGAP certification for its fresh vegetable production, and certification for its packing

**FIGURE 8.** Strategic options implemented by Ugandan exporters in response to compliance issues and competitiveness forces

<table>
<thead>
<tr>
<th>Firm strategic option</th>
<th>Level 1</th>
<th>Level 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase competitive position in existing market segment</td>
<td>Ensured compliance with quality/grades/consistency in fresh wholesale markets</td>
<td></td>
</tr>
<tr>
<td>Targeting the same market segments with less risky products</td>
<td>Shift product mix or category (e.g., from fresh to dried fruits or vegetables)</td>
<td></td>
</tr>
<tr>
<td>Use assured compliance to gain competitive advantage</td>
<td>Shift in market segment</td>
<td></td>
</tr>
<tr>
<td>Exit export market to supply domestic/regional markets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exit the business</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
operation against the BRC Global Standard for Food Safety (Box 7). An attempt to get out-grower suppliers of chili certified under GlobalGAP Option 2 was initiated by the company in 2005, with the support of the Pesticides Initiatives Programme (PIP) (see below). However, following the company’s decision to focus on flowers as a more profitable export business and to cease horticultural exports, this initiative did not materialize.

For some Ugandan companies, the pressure to upgrade operations has come from their main buyer, typically European traders who specialize in sourcing exotics for supermarkets. In one case, the EU buyer directly requested compliance with the GlobalGAP standard, while in a second case the buyer requested an exporting company to comply with EU residue levels after detecting pesticide residues in some of the company’s shipments. Both exporters sought to obtain GlobalGAP certification to signal their compliance, yet neither was successful. Around six other exporters initiated the process of GlobalGAP certification for their own or out-grower farms, not at the behest of their buyers but due to a desire eventually to

Box 7
PARTNERING WITH “LEAD FIRMS” TO BOOST HORTICULTURE EXPORTS: THE CASE OF MAIRYE ESTATES

Mairye Estates is a family-owned business. The farm was originally established in the 1950s on a 600-acre piece of land, growing coffee and sugar cane. During the post-conflict period, the family returned to Uganda and repossessed their property to resume the farming business. Low coffee prices motivated investments in vegetables and flowers for the export market. In 1994, with the support of ANEPP, the company initiated pilot trials on French beans, asparagus, zucchini, chili, limonium, and roses. The firm’s efforts to diversify and expand exports continued with the support of the IDEA project for nearly a decade, concentrating on floriculture and selected horticultural products. The company has achieved notable results in floriculture exports, taking a leading position, with nearly 4 million roses per month exported to Europe. In spite of the company’s continuous efforts, and considerable levels of donor support, the results in fruit and vegetable exports have been less positive.

Taking advantage of promising export markets
Most of the research on green beans throughout the life of the IDEA project was undertaken through agreements with this company. The firm also benefited from the project’s support in the areas of end market linkages and financial facilitation. In 1996, the positive outcomes of the trials undertaken for green beans resulted in a contract to supply UK supermarkets, with an estimated value of US$360,000 per year and an expected potential of more than US$2 million. By the late 1990s, the company had managed to consolidate an export market for green beans and Asian vegetables to the United Kingdom and faced growing demands for a varied set of horticultural products. IDEA supported the company in its attempts to expand and to diversify production through the establishment of commercial trials on promising varieties of chili, okra, baby vegetables, passion fruit, and papaya, and continuation of the trials on green

Continued
beans. Most of the company’s initial gains in horticultural exports came from production on its own farm, but expansion of export volumes to supply growing demands in the United Kingdom required a complementary strategy to distribute production risks, increase production capacity and achieve consistency in supply. The establishment of links with out-growers seemed the way forward.

**Attempts to develop out-grower schemes**

By 1999, with the support of IDEA, the company had undertaken a series of trials on French and runner beans in the Kabale region, about 350 km southwest of Kampala. Results of the trials indicated that yields and quality were far superior in Kabale than at Mairye Estates, which is located in Wakiso district. Motivated by these results and by the encouraging market developments, the company established an out-grower scheme to build up a reliable supply of high-quality beans. To support the company’s efforts, the World Bank provided a matching grant, while the IDEA project funded the establishment of a temporary on-site cold store and supported technical expertise from Kenya. Growers invested in refrigerated trucks to transport the crop directly to Entebbe airport, while the company provided inputs and other variable costs and ensured a market for the product. Yet, poor agronomic results and transportation and other logistical problems limited the development of a reliable and effective supply to satisfy growing demands.

A second attempt to develop an out-grower scheme was undertaken by the company in 2004, with a market opportunity to supply chilies. The scheme involved a joint venture, including around 320 small farmers, through the creation of a company called *Farm Fresh* with initial ownership by Mairye Estates but with projections of 40 percent being owned by the farmers. Farmers were organized by the company into eight groups and registered as community-based organizations. Contracts between *Farm Fresh* and the small farmers were established, which included the provision of inputs and technical assistance, transportation, and purchasing of the production. Training to farmers was delivered by a local service provider with funding from the Catholic charitable foundation CordAid, through a matching grant. CordAid also supported the company’s efforts to get GlobalGAP certification for out-growers through a loan, and provided grants for the development of physical infrastructure in the production area including collection sheds, spray equipment, and so on. The Dutch government, through the PSOM-Program, supported investment in a new packinghouse to increase the production capacity of the company.

**Leaving the vegetable export business: reputation risks and low margins**

Numerous factors constrained the scope for *Farm Fresh* to consolidate a reliable supply of product and to expand vegetable exports. High air freight costs and seasonality of out-grower production played a critical role. Additionally, the price of land mitigated farmer profitability; the land surrounding the company’s farm was owned by large landowners, thus most of the company’s out-growers were not landowners, but rather rented land for production. Other factors included the high costs of agricultural inputs and problems associated with poor product quality control.

According to company staff, the nature of the vegetable export business in Uganda was too risky in comparison with the efforts and investments required. The company had already built a reputation as a reliable supplier of flowers to supermarkets in Europe. To avoid risking its reputation with European buyers the company withdrew from the vegetable export business in 2006 to concentrate in this more profitable sector.

Source: Ribbink et al. (2005); Fintrac (2001); Personal interview with the company CEO in 2007.
As in the case of GlobalGAP certification, the movement toward organic and/or fair trade certification has generally been facilitated by significant donor support. Although, it is difficult to determine precisely the volume of organic and fair traded certified products exported by Uganda, UEPB statistics indicate that the two leading companies exported 300MT in 2006. Figures from the National Organic Agriculture Movement of Uganda (NOGAMU) suggest a significant increase in exports of dried and fresh organic fruit in recent years, from 820 MT in 2005–2006 to 2,252 MT in 2007 (Forss et at 2008).

According to UEPB data, of the 28 companies that can be considered regular fresh produce exporters, very few are pursuing opportunities outside of EU markets, with longer-term ambitions to supply the more demanding supermarket supply chains. There are, however, some notable exceptions. The Middle East accounts for nearly 30 percent of sales for one of the leading exporters of organic products (see, e.g., Box 8). Another exporter has exited the EU market and now focuses its business on the South African market. Two other companies have begun to develop trade within East Africa.

Several companies have recently stopped exporting fruit and vegetables. Predominantly, these firms have been driven out of the market by general financial problems that have rendered horticultural exports unprofitable. It is not evident that overseas market and/or regulatory conditions have played any significant role.31

30 The major exception to this is producers of chilies/hot peppers.

31 These insights on commercial strategies are based on a survey of companies carried out in early 2008.
Box 8

CHANGING PRODUCT FOCI: THE CASE OF UGANDA’S PIONEER COMPANY IN ORGANIC PRODUCE EXPORTS TO EUROPE

The largest exporter of organic fresh and dried fruit and vegetables in Uganda was established by a Swiss consultant in 1994. The entrepreneur recognized that demand for organic products was growing appreciably in Europe, while relatively few upgrades were required to achieve organic certification for fresh fruit and vegetables in Uganda. In 1998, the entrepreneur entered into a partnership and the company was registered. The new owners decided also to explore opportunities in dried fruit processing as an alternative use for fresh produce that did not meet export quality standards. In 2001, the company became 100 percent organic, with exports of fresh and dried organic products to the European Union reaching nearly 300 MT, of which scotch bonnet formed a large share.

In 2003, a buyer of scotch bonnet pepper in the United Kingdom demanded GlobalGAP certification, providing a period of six months to prove that compliance had been achieved. By that time, scotch bonnet exports represented 50 percent of the company’s turnover, thus losing this market would have had significant financial consequences. With the support of PIP, the company started a two-year program to achieve compliance. However, realizing that compliance of the company’s out-growers could not be achieved in such a short period of time, the company had to make a critical strategic decision: either to lose the market or to change its strategic orientation.

According to the company’s manager, although certain upgrades had already been made, the necessary investments in infrastructure, including water facilities, collection centers and harvesting containers, were too high for the company to bear alone. The donor support it had received was in the form of training and technical assistance and did not fund capital expenditure. Keeping the buyer did not represent a sufficient incentive to compensate for the risks and investments that were needed to achieve compliance with EurepGAP/GlobalGAP. Thus, the company decided to shift its orientation toward exports of organic and fair trade processed and fresh products to less demanding markets.

Although the transition has not been easy, the company has recovered from this market shock through gradual consolidation of opportunities in new markets in the European Union, as well as by diversifying into the United States and Middle East. In 2007, the company’s exports were three times higher than in 2001.

Donor and institutional support has been crucial in sharing the risks associated with incursion into new markets and the expansion of current operations. This support has included assistance with assessing the feasibility of exporting frozen products from local research institutions and from the Export Promotion of Organic Products from Africa (EPOPA) project (see below) in maintaining and expanding organic certification. Further, through the BUDS Technology Acquisition Fund, the company as able to improve its drying technology.

The company faces ongoing challenges in complying with market requirements, including maintenance of organic certification and the implementation of GMP and HACCP-based systems in its processing plant. However, compliance is just one of a set of challenges in meeting the demands of existing and potential high-value markets. Other critical factors include the need to expand its processing capacities to deal with seasonal price fluctuations, increasing local and regional demand for raw materials, high costs of packing materials, and the consolidation of end-market linkages.

Source: Interview with company manager.
One exporting company that was established in 2001, started working with out-growers in the districts of Mpi, and Luwero in 2003. The company began supplying small quantities of hot peppers to a wholesale buyer in Germany and a supplier of small corner shops in the United Kingdom. After ongoing payment problems with its UK customer, the company made a strategic decision in 2004 to withdraw from the EU market and invest time and effort in upgrading its operations and achieving relevant certifications, with a view to eventual market reentry. The company’s decision was motivated by the desire to establish links with more “professional” and reliable buyers serving higher-end market segments.

**Achieving GlobalGAP certification proved to be a difficult task**

In 2004, the company started to work toward GlobalGAP certification Option II for a group of 25 farmers producing hot peppers, avocado, and passion fruit in the Mpi district. The PIP (see below) supported 52 percent of the total costs, including the provision of technical assistance, training to farmers, and implementation of a traceability program. The company was responsible for implementing the recommended upgrades and covering the certification costs. The implementation program started in September 2004 and extended until May 2007. A pre-audit was held in July 2007 to certify an initial group of 10 producers. In spite of these efforts, in March 2009 the group had not yet achieved GlobalGAP certification.

**Working toward organic certification: a more successful effort**

Under the agreement with PIP, and motivated by previous enquiries from potential EU buyers of organic products, in June 2005 the company started to pursue a program of organic certification for two groups of out-growers located in the Luwero district. By 2006, these groups had obtained organic certification through UgoCert, the local certification body. According to the company, a survey undertaken in Luwero indicated that farmers were using traditional production methods, with no use of chemical sprays, and so forth, which made it easier and quicker to achieve certification. The company laid down some minimum requirements for prospective growers, who needed to sign an agreement that they would produce according to the organic standard.

**Facing so many challenges at once!**

The company buys 10 percent of the pineapple produced in Luwero and 40 to 60 percent of the production in Mpi district. Yet, as of August 2007, most of the organic product was still marketed as conventional in Middle Eastern markets. Most recently, the company has entered into a partnership with a newly established exporting company, with existing links to an EU buyer. It is expected that this partnership will open up new opportunities for organic-certified production.

Most recently, the company has had to explore drying technology as a way in which to establish a reliable supply to satisfy European demands. Toward this end, the company has joined Natural Pride Uganda Limited (NAPU), an initiative supported by United Nations Industrial Development Organization (UNIDO) aimed at consolidating export volumes, improving processing technologies and

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**Box 9**

**SUPPLYING LESS DEMANDING MARKETS, WHILE ACHIEVING ORGANIC AND GLOBALGAP CERTIFICATIONS**

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Continued
2.3 Adjusting Procurement Strategies

In Uganda, smallholder farmers account for the bulk of supplies to horticultural exporters. Although most of the larger, regular exporters now own or lease their own farms, most still source heavily from smallholder out-growers, directly and/or through intermediaries. Efforts by some exporters to integrate vertically the bulk of their operations have not proven successful (Box 10). Based on a survey of the leading export companies in early 2008, we estimate that smallholder farmers account for upward of 75 percent of exported produce, with the balance coming from exporter-run farms and a limited number of other medium or larger-scale farms.

There is a lack of reliable data on the number of smallholders who are suppliers of fruit and vegetables to exporters, whether regular or irregular, to the export trade. In 2001, the IDEA project estimated that some 3,000 smallholders were involved (USAID, 2001b). The 23 export firms interviewed by Kleih et al. (2007) reported having 2,145 out-growers in 2005, but a lower number in 2006. Estimates from PIP indicate that around 1,659 smallholders are suppliers to the export companies that the project has supported (PIP, 2008). Sergeant and De Vette (2004) estimated the number at about 2,900. While there may be a considerable amount of double-counting, with farmers selling to multiple exporters, an estimate of 3,000 smallholder farmers is probably realistic taking into account sourcing for both the fresh produce trade and the recently emerging trade in dried fruit. Most of these farmers are very small; a 2008 survey of 18

Source: Wiegratz et al. (2007a); Personal interview with the company CEO.
horticultural exporters that have received support from PIP suggests that 69 percent of the smallholders from which they source have less than one hectare of land, while 89 percent have less than five hectares.\textsuperscript{32} Very few of these farmers have specialized in 

\textsuperscript{32} Personal communications with PIP staff.
export-oriented horticulture, but rather use part of their land to supply exporters and/or processors during part of the year.

Traditionally, the links between Ugandan exporters and farmers have been loose, with few companies having technical support teams or being able and/or willing to provide seed and other inputs on credit (Wiegratz et al., 2007a); Sourcing supplies from locations nearby to Kampala has involved intensive competition, such that companies have generally not been able to win farmer loyalty and thereby control “side selling.” Some exporters have made additional attempts to secure farmer loyalty and/or promote production in more distant locations where buyer competition is less rampant. This presents the key question and challenge for Uganda’s fresh produce export sector: In a commercial environment characterized by lack of trust, poor transparency, and overall “loose” relations between out-growers and buyers, what are the best options in order to take advantage of market opportunities and to leverage the production capabilities of out-growers and institutional support? Some examples of the strategies are highlighted in Boxes 11, 12 and 13. Clearly, the overall low profitability of the business, a lack of specialization in export-oriented production, variable export demands in terms of quantities, and increasing competition among local buyers, represent tremendous challenges to the development of sustained out-grower schemes.

As we highlight previously, one of the tactical options implemented by export firms has been to obtain certification for their own or for out-grower farms. In turn, lead firms have clearly played a key role in driving processes of producer upgrading (see Box 11). In the case of out-growers, some of the core activities performed by the lead firm have included promoting the formation of groups with a legal structure, developing closer relations with suppliers to increase oversight of production, and/or harvesting activities, centralizing procedures, performing initial internal inspections, and maintaining required documentation. In some cases, the lead firm has also provided quality seeds and other agricultural inputs, and undertaken pesticide storage and coordination of application. Changes in production practices and product specifications are communicated to farmers through group training, usually with the support of external agents such as donors, government officials, and consultants.

In the development of effective links with out-growers, the traditional role of the “lead” farmer acquires significant importance. Thus, where more successful examples of out-grower schemes are observed in Uganda, a “lead” farmer assumes important functions in the supply chain, for example, serving as an aggregation point for the consolidation of export volumes and acting as a channel for coordination of production activities between individual out-growers and the exporter. Usually, the export company’s staff and/or “lead” farmers undertake supervision to ensure that prescribed practices are followed and records maintained.
Box 11
CHANGING GEOGRAPHIC SCOPE TO REDUCE DOMESTIC COMPETITION AND ENSURE A CONTINUOUS SUPPLY

Although some of the most established exporting companies in Uganda have been pursuing GlobalGAP certification, the second largest export company has been concentrating its efforts on dealing with the more basic constraints that limit market participation, namely consolidating export volumes and ensuring availability of air cargo space. The company entered the horticulture export business in the mid-1990s and quickly established a leading position in the sector. Initially, the export portfolio of the company comprised only mangoes and chilies, but today the company exports a wide variety of products, with hot peppers, okra, and plantains accounting for over 80 percent of its trade in 2007. As in the case of other firms, there is some degree of specialization in the procurement of particular products. For example, the company’s own farm production focuses on okra, while larger and small out-growers provide the other crops. Relations with out-growers tend to be loose.

In order to deal with increased competition among exporters in procuring fresh fruit and vegetables and to address the concerns of one of its buyers with respect to pesticide residues, the company has recently been trying to develop an out-grower scheme. This has involved the introduction of hot pepper into a new region that is distant from Kampala where competition between exporters to secure supplies is less fierce and farmers have been motivated to switch away from hot pepper production due to negative past experiences. In this new area, the company has supported former tobacco producers to transition to hot pepper, including provision of financial incentives, seeds and other inputs, and training. Members of company field staff supervise out-grower production and oversee pesticide application. Company staff and out-grower farmers have received training with support from PIP.

Source: Personal interviews with company staff.

2.4 Standards Compliance as an Overstated Element of the Industry’s Competitiveness

After almost two decades of horticultural export development in Uganda, the sector still relies on basic production factors, favorable agronomic conditions, ample land, and relatively cheap labor as its main source of competitive advantage. However, experience has shown that such production factors are not sufficient to succeed in horticultural exports. Seasonality is a major issue, particularly in vegetable production, affecting both overall quality and production volumes. Fragmentation of production, due to the geographically scattered and poorly coordinated participation of small farmers, enhances risk and the attendant costs. Additionally, uneven product quality and significant post-harvest losses, due to poor harvesting practices, packing, and logistics, bring about considerable inefficiencies in procurement (see Box).
Box 12
ACHIEVING GLOBALGAP AND ORGANIC CERTIFICATION TO OPEN OPPORTUNITIES IN HIGHER SEGMENTS OF THE EU MARKET: THE KEY ROLE OF THE LEAD FIRM

The challenges faced by smaller firms in developing a coordinated response to market opportunities for horticultural exports are well exemplified by the case of a relatively well-organized company with an established market trajectory. The company started its export business in 1996. Initial experiences with exports to the European Union were marked by some financial losses due to “untrustworthy” buyers. However, believing in the opportunities provided by horticulture exports, the firm persisted. Currently, about 90 percent of the company’s exports consist of hot peppers. The company has consolidated linkages with two European buyers, supplying hot peppers in specific time “windows” when volumes from other competitors are low, covering around five months each year.

In the late 1990s, with financial intermediation by the IDEA project, the firm approached financial institutions for a loan to expand production and upgrade infrastructure, but with no success. This has served to limits the scope for expansion.

Although the company has not faced acute pressure from its buyers to upgrade operations, the firm embarked on a program to certify a group of 20 out-growers under GlobalGAP option 2, and another 10 farmers for organic production. Both initiatives received the support of the PIP program over the period 2004 to 2007. In 2005, the company established its own farm near to its out-grower. The firm has coordinated the organization and registration of farmer groups and provides seeds and cash advances.

With regards to GlobalGAP certification, the company established a basic structure that acts as a packinghouse and gathering place for farmer training sessions. Some innovations and cost-effective ways to fulfill GAP requirements, in terms of sanitation, water containers and disposal of pesticide containers, were also introduced. The lead farmer controls the storage of pesticides and authorizes applications. A pre-audit was undertaken in June 2006. Final certification to GlobalGAP Option 2 was granted in September 2008.

In pursuit of organic certification, farmer training was undertaken and an Internal Control System (ICS) was established. It became evident, however, that the costs of achieving certification were significant, in part reflecting the long transition period; in contrast to many other horticultural crops in Uganda the use of pesticides is a common practice. Agronomic problems were also experienced in the control of pests and diseases in the absence of non-chemical technological options. Thus, the decision was taken to pursue certification to GlobalGAP as an alternative.

An on-going problem for the exporter is the lack of incentives for out-growers to follow recommended practices on a regular basis. At times, the exporter does not purchase the product and they are forced to find alternative markets that have no requirement for GlobalGAP. Further, there are questions over whether the exporter will be able to achieve the economies of scale needed to cover the recurrent costs of certification without continuous donor support. More broadly, will this certification facilitate access to more discerning markets, while other supply chain weaknesses persist?
Although many exporters see increasingly stringent standards in export markets as a threat, the sustainability of the sector lies in finding sources of real competitive advantages and solving the primary bottlenecks to improved competitiveness. Table 8 illustrates the perceptions of a group of exporters regarding the main factors affecting their participation in EU markets. Lack of reliable and competitive export logistics and increased price competition from other countries are highlighted as the main constraining factors. Similarly, among the set of risks faced by Ugandan exporters, the reliability of cargo, including flight cancellations, delays, and late arrivals and airlines taking less than agreed-upon volumes, is at the top of the list. Wiegratz et al. (2007b) noted that “a number of exporters have accordingly fallen out of the market because of the financial implications of such incidences.”

Box 13
ADDRESSING BASIC BOTTLENECKS IN PASSION FRUIT PRODUCTION

Passion fruit was cultivated on a relatively significant scale in Central Uganda during the 1990s as part of export diversification initiatives, and most recently in the Eastern and Western Highlands. Yet, yields have remained very low, production has never exceeded a few hundred tons, and exports have generally consisted of very small annual quantities. Biotic and management-related factors have contributed. Disease problems are particularly critical, predominantly because production has been dominated by a single variety (Kawanda Hybrid) that is susceptible to prevalent disease and pests. Low soil fertility, unpredictable rainfall, and poor agronomic and post-harvest practices are also factors contributing to low levels of productivity.

Several initiatives aimed at reducing disease problems have been undertaken since the mid-1990s, mainly by NARO and the IDEA project, through the introduction of improved germ plasma, screening of local passion fruit types for disease tolerance, dissemination of clean planting material to farmers, etc. The impact of these efforts, particularly with respect to the control of viruses, has been minimal, predominantly due to the lack of epidemiological data to formulate appropriate management strategies and poor identification of casual agents and sources of tolerance.

Most recently, a research program has been initiated at Makerere University, in collaboration with other national and regional research institutions, to map viral disease incidence and severity, identify and characterize viral pathogens and characterize and screen local passion fruit germ plasma for sources of host tolerance. This program has been supported by the Rockefeller Foundation, World Bank, International Foundation for Science, SIDA and NORAD. It is expected that the results of this program will provide clear insights of strategic management options to produce and expand passion fruit production and exports. Passion fruit is one of the crops prioritized under current research program of the East Africa IPM/CRSP initiative funded by USAID.

Source: Karungi (2007); IPM CRSP (2005).
The lack of GlobalGAP and Hazard Analysis and Critical Control Point (HACCP) certification were also highlighted in the survey as key constraining factors. This seems to reflect poor understanding of the importance of these standards in the context of Uganda’s fresh produce exports and the market segments served, on the part of a number of exporters. At the same time, some exporters evidently perceive opportunities to increase margins and escape from speculative markets through serving higher segments of the EU market.

Although recent efforts have been made by some Ugandan firms to improve supply chain coordination and performance in international markets, progress has been uneven. Overall, the industry has been unable to overcome the key competitive disadvantages that it faces. The low profitability of the business has been a serious constraint to investments and innovation, although it should be recognized that many companies have made attendant adjustments in recent years. Indeed, the industry has not had to act alone in these efforts. In recent years, a set of donor and GoU initiatives has supported the industry in overcoming the challenges of compliance and competitiveness. The contribution of these initiatives will be analyzed in the next section.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Low/Very Low Importance (%)</th>
<th>Medium Importance (%)</th>
<th>High/Very High Importance (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price competition from other countries</td>
<td>27</td>
<td>0</td>
<td>73</td>
</tr>
<tr>
<td>Higher quality product from other countries</td>
<td>64</td>
<td>0</td>
<td>36</td>
</tr>
<tr>
<td>Difficulties in meeting the requirements in terms of varieties and grades</td>
<td>55</td>
<td>18</td>
<td>27</td>
</tr>
<tr>
<td>Difficulties in meeting the requirements set in terms of pesticide residues, traceability and food safety</td>
<td>50</td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td>Lack reliable and cost competitive export logistics</td>
<td>0</td>
<td>10</td>
<td>90</td>
</tr>
<tr>
<td>Limited own capacity to sustain a reliable supply</td>
<td>56</td>
<td>9</td>
<td>36</td>
</tr>
<tr>
<td>Weak domestic production base</td>
<td>18</td>
<td>55</td>
<td>27</td>
</tr>
<tr>
<td>Lack of market information, and business contacts</td>
<td>36</td>
<td>28</td>
<td>36</td>
</tr>
<tr>
<td>Lack of GLOBALGAP certification</td>
<td>27</td>
<td>9</td>
<td>64</td>
</tr>
<tr>
<td>Lack of HACCP certification</td>
<td>27</td>
<td>18</td>
<td>55</td>
</tr>
<tr>
<td>No organized body/cooperative to assist farmers/exporters</td>
<td>55</td>
<td>18</td>
<td>27</td>
</tr>
</tbody>
</table>

Source: Author survey of Ugandan exporters.
CHAPTER 3 Development Community and GoU
Response to Compliance Challenges

3.1 Overview of Recent Interventions in the Fruit and Vegetable Sector in Uganda

An array of government/donor initiatives targeting identified constraints to Uganda’s sustained participation in international horticulture trade has emerged in recent years. Although it is not easy to draw a fine line between recent initiatives targeting overall aspects of industry competitiveness and those specifically promoting compliance with market requirements, on which we focus here, an attempt to do so is made in Figure 9.

The GoU, with the support of major donors, has led initiatives targeting overall aspects of competitiveness, including improved infrastructure and institutional capacity building in the public and private sectors to provide finance, technical advice, and other services to commercial and export sectors. As an example, the Plan for Modernization of Agriculture (PMA) is making investments in district roads and rural electrification and the provision of agriculture extension services through

FIGURE 9. Framework of recent interventions in the Uganda horticulture sector
the creation of the National Agriculture Advisory Services (NAADS).

Other recent interventions are more directly targeted at aspects of sectoral competitiveness. For example, promoting expansion of production and commodity diversification (e.g., IDEA Phase II), distribution of clean seeds and planting materials (e.g., UEPB, IDEA Phase II), undertaking research for controlling pest and disease problems (e.g., NARO/University of Illinois), promoting farmer organizations as the foundation for smallholder participation in domestic and/or export markets (e.g., NAADS, VredesEilanden Country Offices VECO), promoting cohesion among industry actors by strengthening industry associations (e.g., PIP, the Danish International Development Agency (DANIDA), IDEA) and improving end-market linkages (e.g., CBI, UEPB, IDEA Phase II, UNIDO).

Another set of recent initiatives specifically targets aspects of compliance, in domestic, regional, and/or international markets, and for fresh and/or dried horticultural products. The aspects of compliance addressed by these initiatives include the promotion of basic quality improvements, facilitating the adoption of good agricultural and/or manufacturing practices (GAP/GMP), and facilitating farm and/or enterprise certification with respect to organic and/or fair trade. Table 9 summarizes the aspects of compliance promoted by these different interventions.

**TABLE 9. Aspects of compliance promoted by different interventions directed at compliance with market/buyer requirements**

<table>
<thead>
<tr>
<th>Intervention/Program</th>
<th>Quality/Consistency</th>
<th>Safety</th>
<th>Record Keeping</th>
<th>Traceability</th>
<th>Assured Compliance/Certification</th>
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<tbody>
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<td>✓</td>
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<td>NAADS</td>
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<td>✓</td>
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<tr>
<td>IDEA Phase II</td>
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<tr>
<td>BUDS</td>
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</tbody>
</table>
There have been dual motivations for these interventions related to standards compliance. On the one hand, there has been a general perception that even the limited (yet fragile) gains from earlier initiatives in the sector could be at risk with emerging market and regulatory standards serving to block Ugandan company/farmer continued participation in external markets. On the other hand, there is contention that the application of certain voluntary standards, including organic and fair trade, provides a window of opportunity for Ugandan horticultural exports to be differentiated in overseas markets and thus escape from their low profit and vulnerable competitive position. Regardless of the motivating objective, it is recognized that achieving the needed upgrades in systems and practices is likely to prove challenging given the shallow technical and institutional foundations of the industry.

The interventions made and supported by donors and the GoU have sought to enhance both external and internal industry capacities (Table 10) and to defray many of the adjustment costs incurred by Ugandan firms and farmers (Table 11). There have been a significant number of interventions, yet seemingly only modest coordination among them. As will be illustrated below, the overall combined impact from these interventions can also be characterized as modest.

Efforts to augment the set of internal industry resources have been undertaken both at the collective and individual firm level. At the collective level, initiatives have focused on strengthening industry apex organizations and the interface between the public and private sector (e.g., PIP, EPOPA, FAO), promotion of quality and/or safety through industry-level training and/or the establishment of codes of practice and integrated crop production protocols (e.g., PIP, IDEA), and promoting innovative processing technologies to enhance overall quality (e.g., UNIDO, DANIDA).

The main entry point of other interventions has been through lead firms. Support has involved direct technical assistance and training of the company’s staff and/or out-growers, in some cases with financial support for investments in equipment and improved infrastructure and certification costs. In recent years, interventions at the company level have generally targeted niche EU markets, especially for organics and dried fruits.34 Donors/programs supporting upgrades in these areas include DANIDA, UNIDO, BUDS,35 and EPOPA.

Table 11 illustrates the typology of cost elements defrayed by the interventions. It should be noted that not every company targeted by a particular intervention necessarily received the same level and type of support; programs such as PIP and IDEA provided customized support to lead firms on the basis of a defined needs assessment and action plan. The target of assistance, objectives, and approaches of some of these initiatives is discussed in detail below.

34 Under the Uganda National Export Strategy (NES) 2008–2012, the fruit and vegetable sector was prioritized, and specifically those activities involving value addition.

35 The Business Uganda Development Scheme, Enterprise Development Support (BUDS-EDS) program was a cost-share grant project that was funded by the European Union and implemented and managed by the Private Sector Foundation Uganda (PSFU). The support was not sector-specific, but targeted to individual SMEs.
### TABLE 10. Main entry points and instruments used by support programs promoting compliance with market/buyer requirements

<table>
<thead>
<tr>
<th>Intervention</th>
<th>External Capacities (Public/Private Sectors)</th>
<th>Internal Capacities of the Industry</th>
<th>Collective Level</th>
<th>Individual Level</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PIP</strong></td>
<td>Strengthening regulatory/institutional framework (Pesticides)</td>
<td><strong>Training</strong></td>
<td><strong>Training</strong></td>
<td><strong>Training</strong></td>
</tr>
<tr>
<td></td>
<td>Crop protocols/ Laboratory capabilities</td>
<td><strong>Task force</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SEP (2000–2003)</strong></td>
<td>District seed nurseries</td>
<td><strong>Training</strong></td>
<td><strong>Training</strong></td>
<td></td>
</tr>
<tr>
<td><strong>SEP (2004+)</strong></td>
<td></td>
<td><strong>Training</strong></td>
<td></td>
<td><strong>Provision of quality seeds</strong></td>
</tr>
<tr>
<td><strong>IDEA–Phase II</strong></td>
<td>Strengthening regulatory framework (Pesticides)</td>
<td><strong>Code of practice</strong> Strengthening apex organizations</td>
<td><strong>Training</strong></td>
<td><strong>Training</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Infrastructure</strong></td>
<td><strong>Training</strong></td>
<td><strong>Improved infrastructure</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Technical Assistance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Infrastructure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NAADS</strong></td>
<td>Supporting collective marketing initiatives</td>
<td><strong>Innovation technology</strong></td>
<td><strong>Training</strong></td>
<td><strong>Training</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Innovation technology</strong></td>
<td><strong>Training</strong></td>
<td></td>
</tr>
<tr>
<td><strong>UNIDO</strong></td>
<td></td>
<td><strong>Training</strong></td>
<td><strong>Training</strong></td>
<td><strong>Training</strong></td>
</tr>
<tr>
<td></td>
<td>Task force</td>
<td><strong>Training</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FAO</strong></td>
<td></td>
<td><strong>Training</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DANIDA</strong></td>
<td></td>
<td><strong>Innovation technology</strong></td>
<td><strong>Training</strong></td>
<td><strong>Training</strong></td>
</tr>
<tr>
<td><strong>BUDS</strong></td>
<td></td>
<td><strong>Technology acquisition</strong></td>
<td><strong>Training</strong></td>
<td><strong>Training</strong></td>
</tr>
<tr>
<td><strong>EPOPA</strong></td>
<td>Strengthening capacities of certification bodies/ Regional standardization process</td>
<td><strong>Strengthening apex organizations</strong></td>
<td><strong>Support for internal control systems</strong></td>
<td><strong>Training</strong></td>
</tr>
</tbody>
</table>
### TABLE 11. Typology of cost elements covered or shared by interventions

<table>
<thead>
<tr>
<th>Cost Item</th>
<th>Quality and Consistency</th>
<th>Safety and Traceability</th>
<th>Safety Pesticides/Environmental Concerns</th>
<th>Quality and Safety</th>
<th>Demonstrate Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human capital capacity building</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Materials and aids</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training of group leaders/trainers</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Training of farmers</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training of firms</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring/supervisory</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Testing/analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pesticide residue</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certification</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-audit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audit</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial certification</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Renewal of certification</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infrastructure/physical upgrading</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Equipment</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Machinery</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QMS/HACCP development</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Documentation/traceability/record keeping</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information updates</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coordination/linkage with buyers</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Internal control system (ICS)</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3.2 Strengthening Industry Capacities to Comply with Quality, Safety, and Traceability Requirements

The broad themes of interventions directed at the fresh produce export sector in Uganda have included training in integrated pest management (IPM) systems, safe use of pesticides, hygiene in production and harvesting, traceability systems, and certification of production practices. Indirect objectives of the support have included the establishment and/or strengthening of farmer groups and developing and enhancing vertical linkages between lead firms and producers. The project summarized above can be characterized in terms of specific blends of these interventions.

Initiatives targeting internal company and out-grower capacities to comply

Several isolated initiatives have sought to facilitate improved farmer and/or company compliance with emerging standards. In relation to the fresh produce sector, the initiatives led by the GoU through the Strategic Export Program (SEP) and the Export Production Villages (EPV) program, and by the COLEACP through the PIP have been the most prominent in terms of the scope and magnitude of their efforts. Both initiatives have used exporting companies as the entry point to promote industry compliance.

In recent years, the GoU has supported horticultural exports through several initiatives. Starting in 2001, general support for quality enhancement, sectoral coordination, and infrastructure investment was provided to the sector under the Strategy Export Program (SEP), an ambitious plan to boost NTAE more generally (Box 14). A mid-term evaluation of the program in 2004, however, pointed to the limited effectiveness of the interventions that had been made, with support for too many commodities and a range of disconnected initiatives (GoU, 2004). At the same time, there was a concern that these interventions did not address emerging food safety and other requirements that were posing increasing challenges to the sector. The evaluation also noted a disconnection between the program’s support for individual companies and its interventions at the farmer and community levels.

In 2004, the broader SEP was restructured. In relation to horticulture, the new focus was to become compliant with GlobalGAP via support under an Export Production Villages (EPV) program (Box 15). The aim of the EPV was to improve the skills and capacities of organized farmers to supply export markets. From 2004 to 2006, a total of 23 export villages (covering 1,314 farmers) were trained on different aspects of compliance with the GlobalGAP protocol, and on the importance of group cohesion. Training was delivered by multidisciplinary teams from different public institutions, including the Ministry of Agriculture, Animal Industries and Fisheries (MAAIF); Ministry of Tourism, Trade and Industry; National Environmental Management Authority (NEMA), NARO, Uganda National Bureau of Standards (UNBS) and Ministry of Labor, and the private sector. In so doing, the EPV brought together the capacities of the different public institutions supporting the sector and promoting cohesion and common targets. Typically, the training was conducted over a three-day period and held on a lead farmer’s premises.
The interpretation of the challenges facing horticultural exports from Uganda, however, failed to recognize that the fish sector had been deemed to be in violation of EU regulatory requirements, while GlobalGAP is a private standard being applied by European retailers to whom very little of Uganda’s fresh produce trade is directed. Nevertheless, this alleged threat of market exclusion acted to motivate increased attention and resources to improve production practices in horticulture.

The EPV envisaged establishing an inspection program and traceability system, and working toward GlobalGAP certification for each export village. Resource constraints, however, soon served to limit the scope of the EPV such that none of these aspirations were materialized (see below) and even farmer training had to be curtailed toward the end of 2006.

Activities implemented at the field level were part of a wider framework through which the government planned to play a role in assuring compliance of Ugandan horticultural exports with GlobalGAP and official EU requirements by aligning national regulations and overseeing their enforcement through continued training and follow-up needed until the export villages would be ready to be certified. The Department of Crop Protection of MAAIF emphasized the urgency of broad GlobalGAP certification, claiming that the failure to do so could well result in the type of trade restrictions imposed by the European Union on Ugandan exports of Nile perch in the late 1990s. This interpretation of the challenges facing horticultural exports from Uganda, however, failed to recognize that the fish sector had been deemed to be in violation of EU regulatory requirements, while GlobalGAP is a private standard being applied by European retailers to whom very little of Uganda’s fresh produce trade is directed. Nevertheless, this alleged threat of market exclusion acted to motivate increased attention and resources to improve production practices in horticulture.

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Box 14
A PRODUCE-ORIENTED APPROACH TO IMPROVE INDUSTRY COMPETITIVENESS AND IMPROVE QUALITY AND CONSISTENCY: THE STRATEGIC EXPORT PROGRAM (SEP)

At the end of the 1990s, the GoU developed the Program for the Modernization of Agriculture (PMA) and the Strategic Export Program (SEP) as the key policy programs to enhance productivity and rural incomes. Whereas the PMA was expected to boost agriculture productivity across sectors, the SEP was addressed the specific concerns of the export sector, including horticulture. By March 2003, about US$660,000 had been delivered to support program activities. Direct support of an estimated US$165,000 was provided to 18 horticultural export companies and to HORTEXA, which was mainly used for the construction of basic post-harvest infrastructure and the acquisition of equipment (packing sheds and collection centers, charcoal coolers, solar driers), organic certification of a group of 26 out-growers, and the rehabilitation of the Mubuku Irrigation Scheme. Initiatives led by NARO for improving the quality of planting materials included training 315 farmers in nursery management, raising 35,000 stock seedlings, and establishing four mother gardens for passion fruit, avocado, and mango. The project was implemented under the concept of production villages or production clusters in an effort to support farmer’s cohesion and facilitate their links to exporters by reducing transaction costs.

Source: GoU (2004).
The overall goal of the Export Village Program (EPV) was to improve marketing linkages and access to farmers for organized groups of farmers targeting the EU market. A key focus, therefore, was compliance with EU regulatory and commercial requirements, although in practice this was generally interpreted as GlobalGAP certification.

The EPV was focused on the concept of an “export village,” consisting of a group of 5 to 100 small-scale farmers that marketed collectively through a “lead firm.” This was seen as an effective way to achieve economies of scale, reduce product quality losses, improve market coordination, and reduce transaction costs. The lead firm, usually a well-established farmer or an exporter, coordinated producers within a radius of 5 to 20 km and provided planting materials, some extension knowledge, and advice on market requirements with respect to food safety and quality. In certain cases, the lead firm also provided packinghouse facilities and refrigerated trucks for transporting produce, and employed workers to handle fresh produce at various levels of the food chain. The primary contribution of the EPV was to provide farmer training and to support the establishment of a broader system of traceability within the horticultural export sector.

The performance of the export villages that were established was highly variable. The evaluation of the EVP undertaken in 2007 observed that

- Groups that were led by serious exporters continued to run. A serious exporter is one who lays strategies to export all year round by having farmers in different parts of the country who provide a continuous supply.
- Lack of transparency in payments made by exporters was the cause of significant numbers of farmers pulling out of the export village scheme.
- Frequent meetings with the exporter and clarity in the deductions that it made, as well as honesty between farmer group members were key in keeping groups together. It is also critical that support to groups be of equal benefit to all members.
- Farmer groups should not be forced to form but rather support should be given for groups to form of their own volition.

These findings highlighted the importance of a reliable market for the produce from export villages and trust and transparency in relations with exporters as critical factors.

Source: Personal communications with MAAIF staff.

The PIP, a program of support to the horticulture sector that is funded by the European Commission, has been active in a number of African, Caribbean, and Pacific (ACP) countries. While substantially focused on ensuring the compliance of exporters and their suppliers with EU regulations relating to pesticides, the PIP program has also supported many companies in their attempts to comply with private standards, especially in relation to food safety. The PIP program began working in Uganda in 2003, initially to address a set of problematic
areas related to the regulation and use of pesticides that had been identified in a UEPB needs assessment (PIP, 2006).

Although the PIP program in Uganda has also supported some broader capacity-building and sectoral coordination efforts (see below), the core of the program has fallen under its Good Company Practice component. Work in this area began in 2004. This is a demand-driven process by which export companies request assistance and subsequently a need assessment is carried out and a firm-specific action plan is developed. In Uganda, needs assessments and the preparation of action plans were initially done by international consultants, but later through local consultants trained by the program.

Although the action plans were customized to each recipient firm, the activities usually covered different levels of training and technical assistance in areas related to food hygiene, traceability, and IPM systems. In some cases, support was provided for certification to GlobalGAP and/or organic certification. The program worked through matching grants, with the beneficiary company assuming about 40 percent of the financial costs of implementing the plan.37 Depending on the agreement established, the components supported by the program covered the cost of training and technical assistance, traceability software, laboratory analysis, and the establishment of demonstration plots for IPM. A company’s financial commitment mainly included the costs associated with the logistics of training and the implementation of recommended practices. The PIP program generally does not support investments in infrastructure and logistics associated with internal company training events or for their out-growers.

In Uganda, PIP has worked with 23 companies with links to approximately 1,659 producers. By 2007, 16 Memoranda of Understanding (MoU) were still active, of which only around 10 could be considered completed in April 2008, when the first phase of the program was concluded (PIP, 2008). Table 12 summarizes the broader themes of assistance that was provided. The project supported companies in their attempts to shift market orientation and/or comply with market requirements by achieving certification with respect to GlobalGAP Option 1 (2 companies), GlobalGAP Option 2 (7 companies), organic (1 company), and fair trade (1 company). A further 12 companies receiving support from PIP were directed at markets for noncertified products in the European Union.

Aggregate PIP support to Ugandan companies totaled about €776,000, suggesting an average of €35,000 per company.38 A key

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37 According to the final evaluation of the PIP program:
The companies working with small producers were a priority target of the program. Thus, all of the actions in favor of the small producers benefited from more favorable cost-sharing rules for the companies, their minimum contribution was, in this case, brought down from 40–50 percent to 20 percent. Gergely et al (2008) Pages 34–35. Yet, during the interviews, it was not clear whether the PIP program applied this rule among the companies in Uganda working with out-growers.

38 This figure is a rough average, as not all companies were subject to the same level of support.
characteristics of the program was its cost-sharing basis; progress in the implementation of action plans was highly dependent on the capacities of the companies to undertake the investments required. For example, a training session could not be delivered if the company did not provide transport and food to the out-growers that were attending. This is a major factor explaining the quite significant variation in the progress of action plans across the 23 companies that received support.

Efficacy of compliance-related interventions
The aggregate impact of the various interventions geared directly toward enhancing the food safety and other management capacities of Ugandan exporters and farmers can be characterized as both mixed and below initial expectations. The qualitative evidence points to enhanced awareness of the need for improved food safety and hygiene and understanding of pertinent approaches to production and sourcing, yet only preliminary progress in the implementation of needed investments and management system upgrades. This improved awareness would appear to have occurred much more widely at the level of exporting companies than among farmers, which remember are predominantly small-scale.

Based upon interviews with company and government representatives and available documentation, it is possible to discern a number of broad findings and lessons from attempts to enhance capacity for assured compliance in the Ugandan horticultural export sector. We detail each of these in turn below.

• Misapplication of the Export Village Concept: Most interlocutors believe that the export village concept has some utility in Uganda and could be a suitable framework for training, infrastructure development, and other support activity. However, as applied, the training program did not yield tangible or sustained results. Rather than a one-off and short training program in each village, the scheme should have involved a system of more frequent and better focused modules dealing with a range of very specific topics. The training might have been accompanied by complementary investments, such as investments in low-cost storage facilities (i.e., charcoal-based cooling sheds).

• “Train the Trainers” Approach Proved Ineffective: The initial implementation approach of the PIP was to provide collective training to company staff on the assumption that these staff would then act as “trainers” at the company level and for the company’s out-growers. A PIP consultant would accompany the company staff in the initial training

<table>
<thead>
<tr>
<th>Activity</th>
<th>Number of Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic</td>
<td>21</td>
</tr>
<tr>
<td>HACCP</td>
<td>16</td>
</tr>
<tr>
<td>General technical support</td>
<td>16</td>
</tr>
<tr>
<td>Pesticide analysis</td>
<td>10</td>
</tr>
<tr>
<td>Microbiological analysis</td>
<td>10</td>
</tr>
<tr>
<td>Soil analysis</td>
<td>1</td>
</tr>
<tr>
<td>Pre-audit</td>
<td>8</td>
</tr>
<tr>
<td>Pre-audit: GlobalGAP Option 1</td>
<td>2</td>
</tr>
<tr>
<td>Pre-audit: GlobalGAP Option 2</td>
<td>7</td>
</tr>
<tr>
<td>Pre-audit: Organic</td>
<td>1</td>
</tr>
</tbody>
</table>
sessions they provided, but it was assumed that the company would then develop a comprehensive plan to train other company staff, field operators, and out-growers. Yet this approach proved to have limited application in the Ugandan context, reflecting in part the prevailing administrative and managerial structure of most of the companies involved in horticultural exports: staff shortages and lack of staff specialization in supply chain functions. Thus, although 103 participants from 21 companies took part in the collective training provided by PIP, and over 200 company staff took part in sessions aimed at “training the trainers,” most of the training to farmers and company staff continued to be provided by external consultants. Companies were unable to provide follow-up/reinforcement training to farmers, both because they lacked the staff and because of the typically high turnover among company out-growers.

- **Closing the “Knowledge Gap” Proved to Be Necessary, But Not Sufficient:** A critical assumption in the PIP program was that, if technical assistance and training could be provided to exporting companies in order to fill critical informational and technical gaps, then these companies would be able to apply this enhanced knowledge and implement upgrades in their management systems, physical infrastructure, and supply chain relationships, resulting in increased compliance and broader competitiveness. Although there is certainly evidence that important “knowledge gaps” have been bridged, it is not evident that this has been translated into appreciable investment and system modernization. Other core ingredients have been missing. For many companies, there has been a lack of clear incentives to undertake the pertinent investments. These companies have not been pressured by their existing buyers to undertake upgrades, while the prospects for them to supply more discerning buyers appears remote given ongoing struggles in their existing business. Even where there has been some push for upgrades, at the extreme including requests for certification against GlobalGAP, many companies have simply lacked the financial resources and breadth of managerial capability to make the needed investments and to translate these investments into enhanced business performance.

- **Efforts Involving a “Great Leap Forward” Will Have High Failure Rates:** In many instances, donor assistance sought to defray the costs of certain upgrades by both lead firms and producers, including the steps toward achieving GlobalGAP certification. However, most exporters have found themselves having to make huge leaps in capacity in order to achieve prevailing benchmarks in more exacting markets, essentially transforming their entire businesses, when there are few tangible assurances that the pertinent investments will result in new or more remunerative trading opportunities. Programmatic subsidies can help to offset some of the initial upgrading costs, yet the firm is left with the recurrent costs of running a more complex business and supply chain operation. For most of the incumbent players in Uganda’s horticultural industry, this “new” latter business model may be inappropriate and unsustainable, except with
sustained donor and/or governmental support (Box 16). The “Great Leap Forward” approach is even less likely to be successful at the farmer level. Few Ugandan smallholders have had any extended experience growing fruit and vegetables in a dedicated way for exports. Even smaller numbers have benefitted from sustained interaction with individual exporters and programs to enhance productivity and/or product quality, and to implement new agricultural practices. Incremental advances can be achieved over time. Yet, the notion of rapid and transformational movement toward GlobalGAP certification is misplaced. Compliance can be achieved with sustained assistance (Box 17), but even in these instances of “success,” achievements are typically a “hard slog.”

- “Compliance” is a “Fleeting Mirage” Where Fundamental Supply Chain Weaknesses Persist: Efforts to promote GAP and associated systems of record keeping and traceability are more likely to be successful where farmers have reliable market outlets, where the basic agronomic challenges for the focal crop(s) have been well addressed and where other factors provide strong incentives for farmers to adjust practices and make investments as per the recommendations or urgings of buyers and/or government officials. Thus, development assistance interventions focused on standards compliance and related upgrading are likely to have greater and more sustainable impact when applied in contexts where many other technical and supply chain problems have been resolved and where there are clear market signals that compliance is demanded. In circumstances where more fundamental constraints are still unsolved, or where only weak or fragile supply chain relationships exist, efforts to build awareness and capacity for standards management must go hand in hand with complementary measures. In the Ugandan context, it is not evident that this has been the case.

Evidence of industry learning and reported benefits from interventions

In January 2008, a survey was undertaken of Ugandan horticultural exporters that solicited information on their objectives in sourcing technical assistance toward assured compliance, the extent to which they had actually gained awareness and implemented recommended upgrade programs, and the perceived benefits associated with the steps that they had taken in this regard. With respect to objectives in seeking donor support, all companies emphasized their interest in increasing company and staff awareness about food safety and traceability. Around 90 percent indicated that an objective had been to improve hygiene in post-harvest and transport operations (including implementation of HACCP), improved traceability and record-keeping systems, and reduced quality problems during production. Further, around 78 percent referred to the need to strengthen awareness of safe use of pesticides and IPM. Only 43 percent indicated that their objective had been to achieve GlobalGAP certification on their own farm and/or by their out-growers. Over two-thirds saw such improvements as part of their strategy to obtain new buyers in overseas markets.

The survey has an element of bias in the information it provides on impacts of donor support
Box 16
“BIG LEAPS” ALONG THE SPECTRUM OF BUYER REQUIREMENTS HAVE A HIGH RISK OF FAILURE

The request to comply with EU MRLs
As a result of a pesticide residue detected by one company’s main EU buyer in 2005, the company agreed to take corrective actions, including keeping paper-based records and increasing the company’s oversight of production. The company decided, however, to move even farther toward EurepGAP/GlobalGAP Option 2 certification. The program of upgrades was expected to increase buyer confidence in the exporter, translating into higher prices and a greater market share. With support from PIP, the company embarked on this initiative in August 2006.

The company’s starting point
The company had been established in 2003. Around 30 percent of its exports were produced on a nonirrigated farm, with the remainder procured from four middle-size farmers and about 25 smallholders, who also sold to other exporters. Hot peppers accounted for 90 percent of its sales. The company’s staff consisted of 5 full-time workers and 10 temporary field workers. It did not have a packinghouse, sourcing from farmers through commissioned agents that delivered produce and kept basic records. At times, quality losses could reach 20 percent of procured produce.

Challenges of compliance
The assessment of gaps in the company’s traceability and food safety system with regard to compliance with official and GlobalGAP standards indicated that there was a need for (1) a traceability system along the company’s procurement system; (2) company policies regarding field hygiene, water environment and soil analysis, risk assessment, health and safety, and harvesting and post-harvest handling procedures for its own farm and its out-growers; (3) infrastructure upgrades; and (4) registration of the out-grower farmer group as a legal entity with a constituted executive.

Addressing the challenges
The company received support from PIP to defray the costs associated with training of company staff and/or farmers, technical assistance on establishing a traceability system and provision of traceability software, technical assistance for the establishment of a HACCP-based food safety system, and pesticide analysis. Specific responsibilities of the company included allocation of staff to attend training, coordination and financial support for training logistics, and implementation of recommended practices (including building a packinghouse, store rooms for chemicals, washing facilities, and field toilets). Investments in infrastructure were estimated at about US$17,000 and would take 20 months.

Progress and challenges
As of August of 2007, a weeklong training event and a needs assessment of the company’s food safety system had been undertaken. Steps had not been taken to implement the traceability system or to improve infrastructure at the firm or farm level.

The weak financial and managerial capabilities of the company and its poor backward integration in the supply chains certainly have limited its ability to overcome so many challenges at once. At the same time, the necessary investments could impede its cash flow and jeopardize profitability.

Source: Personal communications with company CEO.
The cooperative is located in Kasese District of Western Uganda, about 420 km from Kampala. Specifically, it is situated in the Mobuku Irrigation Settlement Scheme, which was established by the government in the 1960s. The cooperative started in the 1970s when farmers that settled in the area decided to organize themselves.

The IDEA project started to become involved with the cooperative in the mid-1990s, introducing high-value crops with export potential. Numerous crop trials were undertaken including asparagus, French beans, and various Asian vegetables. Hot peppers were found to be suitable for the export market and the IDEA project and other donors supported investments in post-harvest infrastructure and training in aspects of production and IPM. The IDEA project also facilitated a link with a Dutch buyer, which has been maintained. By 2003, the cooperative had consolidated its position as a leading hot pepper exporter, with exports of nearly 200 MT.

Filling the gap in the provision of services to the group

In 2004, with the end of the IDEA project, the European buyer linked the farmers to CordAid, who facilitated funds to expand high-value crop production, mainly hot peppers, passion fruit, and vanilla for export, and most recently moringa seeds for regional markets. To channel this support, a collaborative initiative was put in place under the Kasese Smallholder Income and Investment Program (KSIIP), involving two specialist horticultural consulting firms, the EU buyer and seven smallholder grower associations, six of which specialized in vanilla and one in hot peppers and passion fruit. The five-year project was expected to generate $6.7 million in extra high-value exports.

Under the program, the local consulting firm was not only involved in the provision of technical advice and training to farmers but also assumed crucial processing and marketing functions. An interesting characteristic of the program is its business model, under which the project must generate sufficient funds to pay for the technical assistance and other services provided by the consulting firm. Thus, it was expected that the grant and loan provided by the donor, nearly €0.25 million, would support initial project activities, including the costs of technical assistance, but that in the medium-term, 80 percent of technical assistance costs would be funded through income-generating activities.

Through the program an array of assistance has been provided to hot pepper farmers, including the financing of a tractor and of a revolving fund for farmer inputs, repairing the association’s cold truck to reduce post-harvest losses, and providing training to farmers. In 2004, the association exported about 211 MT of hot pepper, an increase of 10 percent over the previous year.

In 2005, with the support of the PIP program the association embarked on GlobalGAP certification. However, several problems delayed its achievement, in particular an outbreak of bacterial wilt in 2006 and 2007, which practically eradicated production. Farmers had received training in IPM systems through the IDEA project, but these principles and practices had been poorly applied. A

Continued
contingency plan was developed with assistance from one of the consulting firms to grow on new land and to undertake trials for possible strategies to control the disease. Other problems at this time were high post-harvest losses and difficulties ensuring availability of cargo space. Early in 2008, about 32 farmers belonging to the association achieved GlobalGAP Option 2 certification on new land that entered production in November 2007. Although exports have started to recover, they have not yet returned to 2005 levels.

**Ongoing challenges**
The cooperative faces significant ongoing technical and financial challenges, including starting the repayment of loan obligations, the maintenance of GlobalGAP certification, and ensuring the sustainability of the services provided by the consulting firm once the KSIIP program finishes in 2009. To date, 131 hot pepper producers have benefited from continuous institutional support over more than a decade. Yet only a subgroup of 32 of these farmers has obtained GlobalGAP certification. This raises questions not only about the cost effectiveness of these interventions, but also about how GlobalGAP certification is to be extended to more members of the cooperative without a further tranche of donor support.

Source: KSIIP Quarterly Bulletins (July-September 2007 to April-June 2008); AMA and Fintrac (2004); Personal communication with AMA director.

on awareness and achievement of capacity enhancement because the respondent firms self-assessed their achievements. Nevertheless, the responses do provide some interesting observations in terms of overall patterns across firms (Table 14). Management and application of pesticides, record keeping, and HACCP principles were some of the areas where higher levels of awareness creation with the export firms themselves were reported. With respect to out-growers, higher levels of awareness were reported in the areas of general food safety, hygiene, and pesticide use. Lesser gains were reported with respect to record keeping. With respect to implementation of recommended practices, the greatest gains were in the areas of pesticide use and management, and overall safety. Advances with respect to infrastructural investments, for example, in packinghouses, collection centers, field toilets, and pesticide stores, were reported to have been less significant. Among out-growers, implementation of record keeping was considered to have been limited.

There is a general perception among the exporters surveyed that the costs of upgrading infrastructure and equipment and implementing traceability systems are prohibitive. Yet, there is no apparent distinction between investments necessary for achieving compliance with regulatory and/or commercial requirements in higher-end export markets and the very basic needs (e.g., basic packing facilities and computers) in order to participate in less exacting but highly competitive international markets in a sustained manner. As the horticultural export sector in Uganda has suffered a chronic lack of investment over long periods, the industry has been ill-equipped to undertake additional challenges, in particular, those related with “big leaps” along the spectrum of buyer requirements, such as achievement of GlobalGAP certification.
All respondents to the survey agreed that support programs had contributed to improving their understanding of the scope and limitations of working with out-growers to supply stricter markets. Other perceived benefits extend from understanding of the company’s potential and limitations, to participating in high-end market, to the need for improved relations with out-growers, and so on (Figure 10). Relatively few of the exporters that responded to the survey, however, perceived that the support they had received had contributed to enhanced exports, higher and/or more stable prices, and such. The respondents were asked about their future strategies if company-specific support, notably by donors, were to be reduced or withdrawn. Although most firms expected to remain focused on supplying the wholesale market for ethnic foods in Europe under this eventuality, at the same time almost all indicated that they would maintain the objective of reaching the “elusive state” of GlobalGAP certification (Table 14). For whatever reasons, this certification has come to symbolize for many Ugandan exporters a fundamental benchmark for improving their standing in a competitive international market. Whether such certification would be truly beneficial to their near term business prospects and whether the costs of investment and certification processes would exceed near and longer-term benefits is not very evident.

A comprehensive assessment of the level of adoption of the recommended practices for food safety management in the surveyed export firms and their out-growers and traceability along their supply chains is beyond the scope of the current study. However, from the information we are able to glean from the survey responses, paired with the fact that half of the protocols supported by PIP were not finalized, it is reasonable to conclude that, while a significant level of awareness has been created within the export firms, impacts on actual practices, and especially where these are reliant on substantive financial investments, have been quite limited. At the same time, we can regard interventions such as EPV and PIP to have been necessary first steps on the industry’s steep learning curve. Apparently, considerably more support would be needed if further steps are to be made.

**Initiatives strengthening industry capacities at the collective level**

Initiatives aimed at supporting industry compliance through augmentation of capacities at the collective level have included the strengthening of industry associations and platforms for public-private sector dialogue and collaboration. There has been little focus on promoting collective action among farmers, this having been considered the role of exporters as lead firms in a very “top down” model of value chain upgrading. Overall, relatively little success has been achieved at this level, although some recent initiatives may still hold promise.

In relation to industry associations, HORTEXA continued to function through the mid-2000s following the end of the IDEA project, obtaining support from various donors to run a small secretariat office and to participate in pertinent policy discussions. Yet, HORTEXA
TABLE 13. Respondent perceptions of where awareness and implementation had been achieved

<table>
<thead>
<tr>
<th>Awareness</th>
<th>Implementation</th>
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<tbody>
<tr>
<td>Firm Staff</td>
<td>Farmers</td>
</tr>
<tr>
<td>Greater Gains Achieved</td>
<td>Lesser Gains Achieved</td>
</tr>
<tr>
<td>Risks associated with proper use, handling, and storage of pesticides</td>
<td>Risk associated with poor hygiene practices</td>
</tr>
<tr>
<td>Risks associated with proper use, handling, and storage of pesticides</td>
<td></td>
</tr>
<tr>
<td>Importance of keeping records of production practices and harvested product</td>
<td></td>
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<tr>
<td>Importance of HACCP principles</td>
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</tbody>
</table>

Source: Survey of horticultural exporters.

has not been effective in resolving on-going industry constraints or coordinating industry relations and activities with government and/or donors. Reflecting frustrations at HOREX’s functionality among some exporters, an alternative entity was established in 2003, the Association of Fresh Produce Exporting Companies (AFPEC). However, this was unable to raise operating funds from its members or donors and was short lived. More recently, government and donor efforts led to the creation of an umbrella organization, the Horticulture Promotion Organization of Uganda (HPOU), which has sought to
FIGURE 10. Perceived benefits of interventions improving traceability and food safety

- Increased selling prices/more stable prices
- Increased export volumes
- Improved confidence encouraged company to increase orders from existing out-growers
- Improved confidence encouraged company to increase number of out-growers
- Improved confidence led company to wider product range
- Reduction of product rejections due to quality problems
- Identification of previously unknown hygiene problems in your supply chain/formed relations with new or additional buyers/increased reputation of company among buyers
- Improved company supply base due to better relations with out-growers/improved loyalty of out-growers supplying the company
- Improved understanding of the company's potential and limitation for supplying the EU market segments
- Improving understanding of scope and limitations of sourcing from smallholders to service strict export markets/avoided potential loss of market access

Source: Survey of horticultural exporters.

HORTEXA as yet another competitor in the provision of services to the sector.

While HORTEXA and AFPEC unsuccessfully sought to coordinate efforts within the private sector, parallel efforts have been made to foster improved public-private sector dialogue under the rubric of a National Task Force. This task force has been supported by PIP and was initially coordinated by MAAIF. Thus, the so-called EurepGAP Task Force was born in 2003, with the objective of coordinating Uganda’s response to the challenge of emerging food safety and traceability requirements in the...
EU market. Yet, the task force evolved less as a vehicle for public-private interaction and more as a means for government to communicate specific initiatives it was planning in order to enforce GlobalGAP adoption through mandatory requirements and product inspection.

The task force was never really operational as a coordinating body and its activities were marked by complaints by the private sector on the control wielded by government and on the perceived unjustified measures proposed by MAAIF. In 2006, PIP and other donors supported the reorganization of the task force under the coordination of the recently established HPOU. This time the establishment of guidelines for GAP was seen as the mechanism to set up a quality control system for the industry.

Along these lines, FAO and UNCTAD supported an expert consultation and some dialogue among stakeholders on the ways that the creation of a national program on GAP, the so-called UgaGAP, could contribute to addressing growing concerns about food quality and safety and to cope with the resulting regulatory requirements and private standards in importing countries. Recommendations of the consultation included the establishment of a National Steering Committee with representation of all stakeholders to lead the process of development of the UgaGAP program. The process is expected to include an important component of stakeholder sensitization regarding the importance of GAP, followed by the process of UgaGAP development, and the development of commensurate standards through consultation.41

In June 2008, two committees were established at the center of the task force, and a working plan was agreed upon for the implementation of a national training program on GAP. The training program would be implemented by FAO in coordination with NOG-AMU and different service providers. It is expected that the lessons learned from IDEA, PIP, and EPV would contribute to refining the training approaches to produce better results. Clearly, the emphasis of the work should move beyond a compliance focus based on prescribed recommendations to instead use training programs as a vehicle to solve current and latent production problems that ultimately translate into quality, safety, and environmental improvements. Thus, GAP programs that are not supported by applied research and that do not have a demonstration effect would likely have limited success.

**Initiatives supporting technical service capacities to facilitate compliance**

Among recent programs, the PIP program has probably had the most impact in strengthening broader service capacities to support the horticultural sector. PIP support has sought to strengthen the capacities of regulatory authorities and a private laboratory, and to

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40 This is well established by the following quotation from MAAIF: “The EU came up with a regulation that food must be traced from the farm of production to the folk. Also commercial standards like Eurep-GAP were coming in to influence sourcing of fresh produce for import into the EU. There were deadlines that by January 1, 2005, buyers would only source from producers whose farms were compliant with the EU regulations” (MAAIF, 2008).

41 See Muwanga (2007) and Muwanga (2008)
train and engage a cadre of local professionals to take on training and advisory services. PIP has sponsored training courses for Ugandan service providers in such fields as IPM, safe use of pesticides, food hygiene, food safety management, and HACCP and quality management (ISO 9000, 2000).

According to the PIP final evaluation, the program trained 29 Ugandan consultants, with 23 of these still active in supporting the horticultural sector. Eleven were regularly used by the PIP for providing support to companies. Several consultants have now developed a regional or broader international clientele. Yet, anecdotal evidence suggests that few Ugandan exporting companies make use of these local service providers through their own resources. That is, a private sector service industry has indeed emerged, but the bulk of its work remains dependent upon financing from donor and government programs. Fees charged under donor-supported contracts are typically double or more those applied when there is a purely commercial fee-for-service relationship.

In the area of conformity assessment, the PIP program supported a private laboratory, Chemiphar, in the accreditation of analyses for organophosphates and organochlorides. The PIP assistance in this front, basically through training, was effective mainly due to the fact that the library acquired adequate equipment, with support from other donors, notably UNIDO (Gergely et al., 2008).

Within the framework of the PIP program, a component was to strengthen the capacities

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**TABLE 14. Firm commercial strategies in absence of donor support**

<table>
<thead>
<tr>
<th>Company</th>
<th>Moving toward EurepGAP/GlobalGAP Certification</th>
<th>Keep Supplying Wholesale and Ethnic Markets in EU</th>
<th>Redirecting Trade by Supplying Less Strict International and/or Regional Markets</th>
<th>Focusing on Alternative Products</th>
<th>Focusing on Organic Production</th>
<th>Focusing on Domestic Fruit/Vegetable Product Markets</th>
<th>Exporting to Neighboring Countries</th>
<th>Alternative Business Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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</table>

Source: Survey of horticultural exporters.
of the public sector with respect to the ratification, registration, and control of pesticides. In Uganda, around 12 inspectors of the Department of Crop Protection of MAAIF were trained. Yet, according to the final evaluation of the program, the results have been mixed. As of June 2008, no database of approved pesticides had been created. Budgetary constraints on the part of MAAIF have limited the implementation of other initiatives. However, in spite of the poor results achieved, this is a public good that would bring benefits for the industry as a whole, improving Uganda’s reputation and credibility in international markets and therefore arguably deserving further attention from the donor community.

3.3 Initiatives Supporting Market Differentiation: Organic and Value Addition through Processing

Supporting the achievement of organic certification

As we detail above, a group of companies have been shifting their market orientation as a way of escaping from unprofitable markets and/or exploring potential opportunities in differentiated “niche” segments of the EU market through organic certification. Donor and government support in this area has come mainly in the form of training, technical assistance for the establishment and revision of company internal control systems, and financial support to defray the costs of certification. Several donors have been supporting individual companies in this effort, including PIP, Shell Foundation, DANIDA, SEP, EPOPA, and the German Development Service (DED). A number of NGOs have also been active in this area. Once a company is certified, further financial support from donors helps the company to maintain the certification and/or to expand operations by increasing the number of farmers that are certified. For example, the first company in the Ugandan horticulture sector to achieve certification, in the mid-1990s, has received support to maintain and expand operations from PIP, SEP, and, most recently, Box 18 describes the characteristics of the EPOPA Program.

Much of EPOPA’s support is directed through individual companies that have a demonstrated ability to export. In horticulture, most of the projects have been relatively small and centered principally on the certification of pineapple production for export. Companies such as BioUganda, BioFresh, Amfri, Sulma Foods, and RECO have benefited from EPOPA’s support for staff training, development and revision of internal control systems, participation in organic trade shows, provision of market information, support for organization of out-growers, costs of certification, establishment of infrastructure for processing products, and value addition (EPOPA, 2007)

Key to the EPOPA project is linking small farmers to the lead exporters with which it works. The approach it uses is described in Box 19. EPOPA partners with firms that are willing to accept the requirements of the program in terms of transparency, cost sharing, and responsibility; the exporter undertakes to purchase the crop under contract with farmers and is also responsible for field organization related to the internal control system and more broadly to provide support to the farmers.
The Export Promotion of Organic Products from Africa (EPOPA) program funded by Swedish International Development Cooperation Agency (Sida) aims to increase the volume and value of organic agricultural products exports, thereby increasing the income for rural communities and exposing the country’s agriculture sector to sustainable farming techniques. It works in a number of countries in sub-Saharan Africa.

The project started operations in Uganda in 1995. In the first phase, the project supported export firms in setting up procurement systems for certified organic cotton, sesame, and coffee. In the second phase, while EPOPA continued to work extensively with established lead firms but across a wider range of agricultural products, support was extended to cover institution-building activities, including overall industry training, regional standardization processes, establishing a local certification body, and consolidation of industry networks (Forss and Lundström, 2004).

In the capacity-building component, EPOPA has supported the development of the National Organic Movement of Uganda (NOGAMU), established in 2001 through the initiative of a small number of lead firms. Most of the support for NOGAMU’s activities has come from donors, in particular HIVOS. Membership dues support only six percent of NOGAMU’s current budget (Forss et al., 2008).

In the area of certification, EPOPA supported the development of UgoCert and has also supported the development of regional organic standards. It is expected that UgoCert will reduce the current costs of certification within Uganda. At the current time, however, much of the business that UgoCert attracts is donor funded. It is evident that the national certification body is far from being commercially viable in the absence of donors.

Although private and donor efforts to establish a platform for advocacy and provision of services to the organic sector have been quite successful, these efforts demonstrate that long-term donor investments are needed before independent institutions can become sustainable. By 2007, the organic sector in Uganda was estimated to have output valued at US$15 million and involve over 100,000 certified farmers (Forss et al., 2008). Yet donors need to consider what size the sector must reach before NOGAMU is likely to become self-sustainable, along with refining expectations of the role of the institution should the sector consolidate, as is expected.

In most cases, EPOPA defrays the costs associated with training of company staff and farmers, the establishment/revision of the ICS, and the initial costs of certification. Most of the investments each lead firm incurs are related to additional staff and mobilization/transportation to undertake farmer registration and annual auditing visits. Rarely, the firm also pays for the costs of certification, notably where it cannot secure support to renew the certification of farmer groups.
This is a major factor explaining why efforts to promote organic certification have been considerably more successful than efforts toward GlobalGAP certification.

A widespread procurement strategy of exporters is to establish a base of organically certified suppliers that is more than sufficient to meet the current demands of their European buyers, in order to overcome problems with seasonality and growing competition from local/regional markets and to reduce dependency on individual producers. At the same time, many exporters expect export market demand to rise in the future. This strategy has higher costs in order to comply with the quality and production specifications required by the company (Bolwing & Odeke, 2007).

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**Box 19**

**EPOPA APPROACH TO CERTIFICATION OF FARMER GROUPS**

The EPOPA project supports export firms that have export experience, have worked or are willing to work with smallholders, and are willing to shift to producing and/or marketing organic products. The approach implemented by the program includes the following steps:

An initial process of group farmer sensitization about the organic certification processes, marketing requirements, and quality issues.

- The registration of farmers, undertaken by the company’s field officers. During this time, the field officer is required to make a personal visit to each farm so that an assessment of the production systems, previous farming practices and risks that may compromise the integrity of the organic project can be identified. These conditions are evaluated by the field staff together with the farmer. The information collected is compiled in a farmer registration form.

- Contracting the farmer following registration. A contract is drawn up between the farmer and the lead firm, primarily to define responsibilities and to maintain integrity within the organic system. Once the farmer has been contracted, there is no need to renew a contract, unless it is stated in the contract that it is for a certain time period.

- Training of out-growers. Training involves principles of organic farming, production, Internal Organic Standards, and other related topics. Further, quality issues and social responsibility to guard the integrity of the organic project are always key aspects for which farmers receive training.

been facilitated by the fact that donors defray the costs of certification, while exporters anticipate that recertification costs will fall in the future due to the establishment of a local certification body. Taking a longer-term perspective, however, such an approach to sourcing does not provide a good basis for the ongoing consolidation and upgrading of production practices and supply chain improvements. With pineapple, for example, production volumes typically surpass export demand during the main season, driving down prices and forcing producers to sell on noncertified local markets; yet during the dry season, exporters are unable to source the product volumes required. As a result, there are instances of producers abandoning organic pineapple production for more lucrative crops, causing turnover in the supply base of exporters.

Perhaps the biggest challenge facing exports of organic fruit and vegetables, however, is to ensure that shifts in market orientation are accompanied by improvements in farming methods and the achievement of longer-term productivity gains. Most of the growth in organic pineapple production has come from expanded areas; there is little evidence of appreciable gains in yields, reductions in the incidence of pests and diseases, and/or improvements in quality. Thus, Bolwing and Odeke (2007) report that pineapple out-growers have higher revenues from pineapple sales than conventional producers, mainly due to expanded production capacity. Similar observations have been made for producers of other crops that are linked to the exporter RECO (Forss et al., 2008). In many cases, farmers implement few appreciable changes to their production practices on becoming organically certified, given that they were already making little or no use of agro-chemicals. There is very little evidence of the adoption of improved organic farming techniques that can boost yields and improve quality. Indeed, organic certification is widely seen as a “free ride,” providing a premium for what Ugandan farmers “do anyway,” rather than establishing a rewards system that delivers environmental outcomes in a manner that enhances efficiency and promotes commercially sustainable methods. A shift in “culture” is certainly needed in this regard, although this will require the emergent sector to consolidate opportunities in international markets and for commensurate institutional responses, for example, in terms of research and development.

Supporting upgrades and market compliance in the dried fruit industry

Although Uganda has been supplying dried fruit to EU markets since the early 1990s, the sector remains small, with just two companies accounting for the bulk of exports. Yet, in an attempt to overcome Uganda’s limited competitive advantages in agro-processing, recent company strategies have centered on exporting organic dried fruits, particularly pineapple and banana. Similarly, a set of donor

44 Although exports of dried fruit have increased, the growth of the sector has not been dramatic; we estimate that exports are currently around 300 MT, which compares to 90 MT in 2002 (Agona, 2002). The export trade is erratic, with very few companies trading product on a continuous basis.

45 Uganda faces various competitive disadvantages in international markets for processed fruit and vegetables, including high freight rates, lack of economies of scale, and high input costs, notably for raw fruits and vegetables and packaging materials.
initiatives has been promoting processing as an alternative to supplying domestic and regional markets, as well as a way to reduce post-harvest losses and improve food security.

The major challenge in this sector has been the optimization of drying technologies to improve product quality and achieve operational and scale efficiencies. Thus, initiatives led by UNIDO and DANIDA have focused on promoting technological innovations. Most recently, UNIDO has also been providing support to companies in their marketing efforts via consolidating supplies under an export consortium.

In Uganda, drying technologies to supply export markets were initiated in the early 1990s by a pioneer company, Fruits of the Nile, through the design of an affordable and easy-to-construct solar drier that was distributed to company suppliers. In developing this technology, the company received support from NRI and IDEA. However, high raw material losses and uneven product quality remain persistent problems, with appreciable product rejections serving as a disincentive for farmers to supply the company.

In contrast to the procurement strategy developed by Fruits of the Nile, a group of small companies have centralized the drying process in their own facilities. They have deployed different technologies, including a tunnel drier designed in Denmark, yet they too are experiencing problems with product quality. UNIDO has introduced a hybrid drier, which was initially developed and tested in Burkina Faso and later modified to conditions in Uganda. The technology was initially tested in two companies (Masaka Organic Producers and Tropical Ecological Foods), what UNIDO terms Food Processing Pilot Centers, with very promising results (UNIDO, 2007).

UNIDO’s support to the dried fruit sector has not only targeted the technological gap but also other constraints to export development. Notably, the agency has been supporting the establishment of an export consortium of 10 small companies that is pursuing niche EU markets for high-quality value-added dried products that are to be marketed through the Natural Pride of Uganda (NAPU) label (Box 20). There are, however, concerns about the sustainability of this initiative. The high cost of the technology that is employed would certainly be unaffordable for the companies without donor support. Similarly, these firms would struggle to find the

46 Currently the company does not process any fruit on its own, but procures all its supply from “lead” farmers that the company supports by providing inputs for the construction of solar dryers and through training. The company deducts the costs of the solar drier from future payments for product supplied. Apart from exporting dried fruits, Fruits of the Nile is currently also involved in the importation and distribution of solar drying equipment.

47 Personal communications with General Director of the Company.
Natural Pride of Uganda (NAPU) was born out of the companies that were supported under the pilot phase of the Food Component of UNIDO’s Uganda Integrated Program. This program started in March 1999 and provided support to small-scale producers and processors in the areas of technology adoption, raw material supply, marketing, quality control, and so on. Support was provided both to individual enterprises and to public and private sector institutions, for example, to establish local product standards.

UNIDO’s support for NAPU started as a partnership. There were four original founding companies: Envalert, Rural Community in Development (RUCID), IKN, and Masaka Organic Producers. These four members encouraged others companies to join the consortium. Today, NAPU has 10 members, 4 of which are NGOs that are managing fruit-drying projects with the support of donors.

The objectives of NAPU are to:

- Add value to farmer products and harmonize quality for companies under NAPU as a strategy to get a premium price on the market.
- Access new markets and enhance marketing opportunities for the member companies by jointly raising market required volumes.
- Support member companies to achieve organic certification.
- Build capacity of farmers in organic production, quality control and record keeping, and linking them to processing plants.
- Establish a control system that ensures high quality production and quality assurance.
- Increase household incomes of farmers through market support and giving them employment opportunities.
- Establish small to medium scale fruit drying centers.
- Support in the sharing of knowledge, skills and expertise in fruit processing.

**On-going challenges**

Only three of the members of NAPU had some experience in exports, and only two had experience in supplying organically certified products. Most of the companies are implementing processing at a very small scale. According to NAPU, the largest volume exported by any of the NAPU members in 2007 was about 5 MT.

Each company is responsible for developing relationships with their out-growers by providing training and implementing a basic record-keeping system and an ICS. To date, over 700 farmers have been registered by these companies. The companies should be in position to finance the acquisition of the drying technology and the overall operation costs, including those related to processing, oversight of out-growers, and procurement of raw material. Exports activities are currently performed by the individual companies, but it is expected that this function will be through NAPU in the future.

UNIDO has provided support in a number of areas:

- Facilitating access to proper technologies by providing seven hybrid dryers to companies as pilots on a cost-sharing basis
- Providing technical support for installation, management, and maintenance of hybrid dryers
• Providing training to the companies on a Code of Practice for Fruit Processing, GMP, and HACCP
• Advising in the areas of food safety and quality standards
• Providing financial support for the costs of running the NAPU secretariat
• Support in the construction of a central packinghouse
• Promoting end-market linkages

Other donors have provided assistance to this initiative. For example, the Agricultural Sector Programme Support (ASPS) project of DANIDA has supported training, loan guarantees, micro-leasing, and the development of bankable business plans. The Centre for Development and Enterprise (CEDE)/ProInvest has provided farmer and enterprise training. The African Development Foundation (ADF) has funded organic certification of farmers, training and the purchase of equipment for one company. NAADS provides ongoing training of farmers.

Some gains, but enormous challenges remain
As an increasing number of companies “try their luck” at exports of dried fruit, the sector is becoming increasingly fragmented. This risks jeopardizing Uganda’s reputation at the very time it is establishing a market position. NAPU’s aim is to bring together the substantive actors and promote overall quality and safety improvements. It has evidently made some progress in this regard, but faces ongoing challenges. According to NAPU staff some of the achievements of the consortium include improved cohesion among members, opening of some EU markets, development of minimum standards to be followed by NAPU members, recruitment of new members into the consortium, intercompany skills development and initial steps toward organic certification by registering farmers and establishing ICSs. However, enormous challenges remain, related to:

• The costs associated with obtaining organic certification
• Development of a comprehensive marketing system
• Lack of finance within the companies for the acquisition of raw material from farmers
• Limited processing capacity in relation to the available supply of raw materials
• High initial investment capital required for the fruit drying technology and working capital
• Expensive packing materials
• Underdevelopment of local markets
• Lack of funds to facilitate NAPU activities and operational costs

Source: Personal communication with NAPU staff.

resources necessary to achieve initial organic certification, let alone recertification.  UNIDO has already invested around US$500,000 in this initiative, while NGOs are playing a further supporting role by providing training to farmers and coordinating processing and marketing activities, yet even with the best commitment of the companies and the donors, this is an enterprise that will need considerably more support into the future.

In parallel to UNIDO’s support to the dried fruit sector, has looked to value addition for pine-apples, apple bananas, and mangoes by introducing solar-drying technologies through lead farmers, both to satisfy local and niche export

50 At the same time, the lack of managerial skills in this industry is a difficult bottleneck to overcome; indeed, two of the pilot centers initially established by UNIDO have faced considerable management problems.
The World Bank, University of Guelph, and the University of Makerere

markets (NAADS, 2004). Other donors are also supporting initiatives on this front.

Other initiatives have focused on the production of juice and other forms of fruit processing for local and export markets. For example, NAADS is supporting initiatives in Kabale to promote temperate fruits to substitute imports from South Africa. It has also established a partnership with Jakana Fresh Foods and Bella International that aims to expand fruit production to supply processing plants that are expected to be built in Soroti and Jinja Districts. NARO and the International Center for Agro-Forestry (ICRAF) are working on improved adaptable varieties to support developments in the processing sector. The Government of Netherlands, through the Programme for Cooperation with Emerging Markets (PSOM), has supported a partnership between a European company and Nabutele Farmers Center Logistics to implement a fruit-processing project in the Jinja District, with total project investments estimated at £830,000. As with dried fruit, the key driving force behind the evolution of fruit processing is the GoU and donors (see Box 21).

Clearly, emergent sectors such as fruit drying would greatly benefit from cohesion and coordination among donors, government, and the private sector on the approach that would best ensure sustained participation in international markets. The recently launched Uganda National Export Strategy (NES), which will be implemented over the period 2008 to 2012, represents an attempt to move in this direction. Indeed, the NES has prioritized fruit processing as one of the sectors to be supported, given its perceived potential to generate employment and the number of stakeholders currently involved in fruit production. The strategy includes the development of capacities to sustain a supply of processed fruits to export markets by forming and widening production clusters, implementing a producer–processor linkage program, scaling up drying technologies, and establishing processing incubation pilot centers in fruit-producing areas (GOU, 2007).

Scope for value-addition and differentiation

The strategic orientation toward organic production, fruit drying, and other forms of processing certainly presents potentially lucrative opportunities to Ugandan exporters, yet the challenges ahead are significant. As in the case of the fresh produce sector, a better understanding of long-term industry and firm strategies and commensurate investments is needed in order to find the most effective way in which to secure a sustainable position in niche European markets.

Both the organic and fruit-drying sectors lack well-capitalized companies, which is likely to limit their ability to reach sufficient

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51 For example, a lead farmer for 4,000 pineapple farmers was provided with two solar pineapple driers; it was expected that the farmers would learn and also utilize post-harvest handling facilities at this farm to dry their fruit and pack it for sale to local supermarkets and exporting companies.

52 An ecological fruit-drying factory, the first in Uganda, funded by Australian Development Cooperation and estimated to involve an investment of some £250,000, was recently opened. The plant’s capacity is 1,000 MT per month. The plant will be operated by Horizon 3000, an affiliate organization of the Australian donor, while the NGO Africa 2000 Network (A2N) will operate the factory on behalf of the farmers (Africa 2000 Network–Uganda, 2008).

53 Sergeant estimates that 600–700 full-time jobs were generated by the industry by 2005.
critical mass of business and certification services and to establishing a growing production base. Further, a small number of companies seem to be playing an innovative role that has sector-wide consequences. Yet, without more deep-pocketed investors, the sector will rely highly on donor support to ensure its sustainability. In the context, a promising role for donors and government is to combine market-oriented approaches to support compliance with production approaches that ensure producers are equipped with the knowledge and capacities for productive organic production.

In the organic sector, horticulture has benefited from the momentum created in other sectors, notably cotton, sesame, and coffee. Donor support has contributed to the generation of a scale/scope to attract mainstream buyers. As a consequence, they are likely to remain dependent on donor support to ensure their sustainability. The most notable export successes in these sectors, for example organic fruit exports to Germany, relied upon buyers in European markets that were committed to support development projects. These buyers are the exception rather than the rule, and most exporters will have to target markets where their buyers are looking for increasingly exacting safety and quality standards at competitive prices, with little regard for sourcing from one country rather than another.

Although one or two companies have managed to consolidate a small supply channel for dried fruit to European markets, the volume growth of their exports has been modest. Given the lack of serious investors in this sector/scale to attract mainstream buyers. As a consequence, they are likely to remain dependent on donor support to ensure their sustainability. The most notable export successes in these sectors, for example organic fruit exports to Germany, relied upon buyers in European markets that were committed to support development projects. These buyers are the exception rather than the rule, and most exporters will have to target markets where their buyers are looking for increasingly exacting safety and quality standards at competitive prices, with little regard for sourcing from one country rather than another.

In the organic sector, horticulture has benefited from the momentum created in other sectors, notably cotton, sesame, and coffee. Donor support has contributed to the generation of a critical mass of business and certification services and to establishing a growing production base. Further, a small number of companies seem to be playing an innovative role that has sector-wide consequences. Yet, without more deep-pocketed investors, the sector will rely highly on donor support to ensure its sustainability. In the context, a promising role for donors and government is to combine market-oriented approaches to support compliance with production approaches that ensure producers are equipped with the knowledge and capacities for productive organic production.

Although one or two companies have managed to consolidate a small supply channel for dried fruit to European markets, the volume growth of their exports has been modest. Given the lack of serious investors in this sector.
sector, it has been necessary for donors and the government to move from a facilitator role to making direct investments in infrastructure and processing technology, while NGOs are playing a key intermediary role in coordinating production and marketing functions. It is not clear, however, whether the export models that have evolved are truly business-oriented and have scope to be sustainably in the absence of ongoing donor support.

The risk for these emerging sectors is that the diverse set of donor initiatives will contribute to fragmentation rather than cohesion. Given the government’s emphasis on the promotion of value addition in horticulture, the UEPB may serve as a venue to bring donors and key industry actors together to discuss approaches, promote cohesion, and reduce the vulnerabilities associated with reputational risks. In an industry lacking a vibrant private sector, pilot projects that consolidate initiatives into guides on best practice are a virtual prerequisite, before focusing on lead firms that are most capable of commercial success to demonstrate the real potential to the sector as a whole. It would appear that NAPU provides a useful “model” for the piloting of initiatives and the coordination of donor efforts.

Finally, while exports to high-value markets such as the EU remain alluring, and certainly could provide useful opportunities for Ugandan exporters, both in terms of the direct economic returns and as a fulcrum for processes of upgrading, recently the potential for regional exports of horticultural products has gained some attention. The GOU, especially through NAADS, has been most directly involved in support in this area, although some donor-supported activities have targeted upgrades in domestic banana marketing, with some of that product also entering into cross-border trade. Regional horticultural exports predominantly consist of dried/fresh legumes and various types of fruit, including bananas, pineapple, and watermelon, mainly directed at Kenya. Regional fruit exports reached 7,000 MT in 2006, up from only 1,700 MT in 2004, with both of these figures likely to be significant underestimates. Compare this with Uganda’s fresh fruit and vegetable exports to Europe, which have been in the region of 5,000 MT in recent years. While regional trade is highly seasonal and exhibits sharp changes from year-to-year, and suffers from significant bottlenecks due to transportation problems, it quite possibly presents greater potential for trade expansion than the European Union. Therefore, interventions addressing quality and productivity gaps, targeting aggregation of supply, improving transportation efficiency, and enhancing availability of marketing information are important areas where donor/government support may contribute to production and market efficiencies and generate benefits for small-scale farmers taking part, or expected to take part, in regional and domestic markets. However, a clear assessment of bottlenecks and market opportunities in the context of regional and domestic markets should be undertaken in order to gain a better understanding of the scope for interventions and the full potential of the sector to support growth and poverty-reduction objectives.
CONCLUSIONS

Sustained participation in international markets is highly dependent upon the capacities of the industry to overcome competitive and compliance challenges. Moving along the spectrum of buyer/market requirements, higher degrees of internal and external capacities are required. Development efforts to support the creation of those capacities have been made for nearly two decades in the Ugandan horticultural sector, but with very mixed results. During the 1990s, most development assistance was targeted at agronomic field trials, the identification of export market opportunities, matchmaking of exporters and overseas buyers, and putting in place basic support capacities within government and the private sector. There was much trial and error, with many products being found to be unsuitable from an agronomic and/or market perspective. A great deal was learned, but the emergent fresh produce trade lagged, in size and scope, behind expectations. By the early 2000s, Uganda had developed a small fresh produce trade, consisting primarily of lower-value products targeting the ethnic/immigrant market and wholesale vendors in the United Kingdom. Within the wider program of nontraditional export development, this industry was a relative laggard, notably compared with the fishery and floricultural sectors.

The fresh produce industry entered the 2000s with a rather weak foundation and with few cases of overt success. Yet, changes were afoot in international markets, and especially in the core targeted market of Europe where regulatory changes, consumer concerns, and private sector responses were creating an environment in which compliance with food safety and other standards was becoming increasingly critical to market access and competitiveness. The winds of this change were not being fully felt by the Ugandan fresh produce industry, given its predominant focus on the ethnic/wholesale trade and its limited involvement in value chains to major supermarket chains. Thus, Ugandan exporters were experiencing little pressure from their buyers to fundamentally change their practices and/or that of their farmer suppliers.

Yet, from the early 2000s both the donor community and the GoU embraced compliance with private standards such as GlobalGAP as a central focus of their support to the sector. The rationale was seemingly that standards compliance was both necessary to maintain Uganda’s limited toe-hold in the European market and an opportunity for exporters to differentiate themselves in parts of that market, including through the sale of organic, fair-trade, or other certified products. A broad range of interventions sought to raise awareness of standards and to facilitate their adoption via training, and technical and financial assistance, especially to cover certification costs. This assistance was predominantly channeled through “lead firms.” These firms, in turn, were supposed to provide the proper signals, incentives, and support to smallholder farmers to adopt GAP and otherwise be compliant with buyer and/or regulatory requirements.
Some efforts were made to customize interventions to accommodate the preexisting capacities of firms and other basic structural conditions. The available evidence suggests that most firms had very limited capacity to absorb this assistance and, more importantly, to translate it into more competitive and sustainable operations. With limited exceptions, increased awareness and knowledge has not been translated into improved practices along the value chain, predominantly because Ugandan exporters lack the financial resources to invest in improved physical facilities or in sustained upgrading to operating systems and ongoing training of staff. The Ugandan exports sector remains outside of mainstream European fresh produce markets.

Uganda’s horticulture export trade remains fragile, with weaknesses at all levels in the supply chain. One or two small firms have been able to achieve GlobalGAP certification yet will probably require donor financing to at least partially cover the costs of recertification. Likewise, some interesting initiatives have emerged in the organic sector, but most have ongoing donor assistance. The incentives for other exporters to invest in substantive upgrades to their production and/or procurement systems are limited, unless much of the cost is defrayed through sustained technical and/or financial assistance. In many cases, weak market signals and lack of specialization in production for exports provide insufficient motivation for exporters and producers to do things differently in a consistent and sustained manner. Further, export-oriented horticulture is not sufficiently attractive to invite significant new investment, either from domestic or international sources. Evidently, donor and/or government support will remain essential if Uganda is to maintain and/or enhance its foothold in European markets; yet, at the same time we must be realistic about what this support is likely to achieve in the short and medium terms.

Given the industry’s size, profitability, and competitive position in European markets, it is difficult to see how horticultural exports will yield significant gains in terms of rural income and employment. A few thousand smallholders are irregularly involved in supplying this trade. Some recent gains have been made in exports, notably hot peppers, yet overall the industry is probably falling farther behind its main competition from within and outside of Africa. Clearly, the challenge of compliance is just one among a set of challenges faced by this industry. In recent years, the dedicated attention by donors and the government to standards compliance may have overlooked many of the more fundamental matters of management, applied research, technology transfer, and access to finance, which are required to ensure sustainable participation in international markets. Support to maintain and consolidate limited gains in some export sectors and to address underlying industry constraints is needed, but with a focus on approaches that integrate compliance issues within the wider set of production and marketing factors.54

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54 It is apparent that the recently approved Horticulture Development Project, implemented by NaCRII-NARO and funded by the Government of the Netherlands, is attempting to apply some of the lessons learned from previous experiences by, for example, prioritizing the sectors to be supported and addressing issues related to supply chain coordination and quality improvements through a strong research component.

THE WORLD BANK, UNIVERSITY OF GUELPH, AND THE UNIVERSITY OF MAKERERE
A final question regarding support for development of the horticulture sector in Uganda relates to the scope for appreciable contributions to rural development and/or poverty alleviation goals. Donor and/or government support to the participation of a few lead firms in international markets is unlikely to present opportunities for enhanced livelihood to many producers. Indeed, it is probable that the greatest scope for absorbing large numbers of smallholders is with promotion of horticultural production for local and/or regional markets. At the same time, being toward the left of the spectrum in Figure 3, the requirements in terms of assured compliance do not imply significant upgrading of production and/or procurement systems. This suggests, perhaps, a need for donors and the government to rebalance the attention they give to promoting exports to high-end European markets versus domestic and regional markets.
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## ANNEX

### FIGURE 11. SWOT analysis of the Uganda horticulture sector I

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative political and economic stability</td>
<td>The subtropical temperatures prevent profitable production of many products, e.g., temperate vegetables—which very significantly reduces market opportunities</td>
</tr>
<tr>
<td>A distinct subtropical climate</td>
<td>Lack of fruit and vegetables that can be exported competitively has inhibited the buildup of horticultural critical mass</td>
</tr>
<tr>
<td>Good quality of hot peppers</td>
<td>Some of the incentives due to exporters are not promptly recognized by some GoU departments (e.g., value-added tax [VAT] refunds)</td>
</tr>
<tr>
<td>Considerable support from the donor community</td>
<td>Registration of agro-chemicals can be slow—some inputs used by competition cannot be used in Uganda</td>
</tr>
<tr>
<td>Good cooperation between exporters</td>
<td>Relatively small base of commercial farmers</td>
</tr>
<tr>
<td>FHL and the airport cold store have helped maintain the cold chain</td>
<td>Increasing requirement for traceability by the European supermarkets makes it even more difficult for small farmers to participate in horticulture exports</td>
</tr>
<tr>
<td>FHL has negotiated sensible airfreight rates and guaranteed sufficient cargo capacity</td>
<td>Erratic electricity supply</td>
</tr>
<tr>
<td>Cheap labor</td>
<td></td>
</tr>
<tr>
<td>Technical support and inputs available from Kenya</td>
<td></td>
</tr>
<tr>
<td>Cheap and plentiful land</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not specifically defined for horticulture</td>
<td>Not specifically defined for horticulture</td>
</tr>
</tbody>
</table>

FIGURE 12. SWOT analysis of the Uganda horticulture sector II

<table>
<thead>
<tr>
<th><strong>Strengths</strong></th>
<th><strong>Weaknesses</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Organized sector associations</td>
<td>Overall lack of business skills on the side of small-scale farmers.</td>
</tr>
<tr>
<td>Existence of airport cold store</td>
<td>Dominance of subsistence farmers compared to competitors like India with more</td>
</tr>
<tr>
<td>Cheap labor</td>
<td>agricultural commercialization</td>
</tr>
<tr>
<td>Cheap and plentiful land</td>
<td>Poor codes of practice and their enforcement</td>
</tr>
<tr>
<td>High-quality fruits and vegetables</td>
<td>Opportunistic trade between Smallholder Farmers (SHFs), traders and exporters</td>
</tr>
<tr>
<td></td>
<td>Poor post-harvest handling practices (sorting, packing, and loading)</td>
</tr>
<tr>
<td></td>
<td>Lack of value addition, save for a few companies, which, however, largely</td>
</tr>
<tr>
<td></td>
<td>depend on imported pulp and concentrates</td>
</tr>
<tr>
<td></td>
<td>Absence of adequate research to support value addition in the sector.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Opportunities</strong></th>
<th><strong>Threats</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Expanding and growing market opportunities as produ-</td>
<td>Potential use of DDT will affect organic exports and acceptability of</td>
</tr>
<tr>
<td>tion increasingly moves away from Europe to developing</td>
<td>conventional products into the EU market</td>
</tr>
<tr>
<td>countries</td>
<td>Continued power irregularities</td>
</tr>
<tr>
<td>A growing international organic market for fruits</td>
<td>Increasing requirement for traceability by the European supermarkets makes</td>
</tr>
<tr>
<td>and vegetables</td>
<td>it difficult for SHFs to participate in horticulture exports</td>
</tr>
<tr>
<td>A distinct tropical climate with excellent soils</td>
<td>Competition especially from emerging economies of Asia for EU market.</td>
</tr>
<tr>
<td>and climate</td>
<td></td>
</tr>
</tbody>
</table>