Report on the Field Mission and the Validation Workshop Mission for the Formulation of a Project on

"Strengthening the Phytosanitary Capacity of the Floriculture Sector in Uganda"

Commissioned by

the Standards and Trade Development Facility (STDF)

of

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Department of Crop Protection (DCP)

Ministry of Agriculture, Animal Industry and Fisheries (MAAIF)

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Abbreviations and acronyms

Annexes

ABBREVIATIONS AND ACRONYMS

ADC	Agribusiness Development Centre
APEP	Agricultural Productivity Enhancement Programme
ASPS	Agriculture Sector Programme Support
BAC	Bukalasa Agricultural College
BSMD	Business Services Marketing Development
CAA	Civil Aviation Authority
CABHORT	Capacity Building for Effective Phytosanitary Checks and Systems to Enhance Market Access of Kenya's Horticultural Produce
CAEC	Continuing Agricultural Education Centre (of MU)
CBI	Centre for Promotion of Exports from Developing Countries
COMESA	Common Market for Eastern and Southern Africa
COPE	Centre of Phytosanitary Excellence
DANIDA	Danish International Development Assistance
DCP	Department of Crop Protection (of MAAIF)
DFID	Department for International Development (UK)
DTIS	Diagnostic Trade Integration Studies
EAC	East African Community
EC	European Commission
EU	European Union
EUREPGAP	Euro-Retailers Produce Working Group Good Agricultural Practices
FAO	Food and Agriculture Organisation of the United Nations
FHL	Fresh Handling Ltd
GAP	Good Agricultural Practices
GLOBALGAP	Global Good Agricultural Practice (A key reference / certification scheme for GAP. in the global market place, formerly EUREPGAP)
GoU	Government of Uganda
IAPSC	African Union's Inter African Phytosanitary Council
IDEA	Investment in Developing Export Agriculture Project
IF	Integrated Framework
ILO	International Labour Organisation
IPM	Integrated Pest Management
IPPC	International Plant Protection Convention
KEPHIS	Kenya Plant Health Inspectorate Service
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MMU	Mountain of the Moon University
MPS	"Milieu Project Sierteelt" (*Environmental Project Ornamentals)*
MTTI	Ministry of Tourism, Trade and Industry
MU	Makerere University
NARO	National Agricultural Research Organisation
NDP	National Development Plan
NPPO	National Plant Protection Organisation
NPPS	Netherlands Plant Protection Service
PCE	Phytosanitary Capacity Evaluation
PEAP	Poverty Eradication Action Plan
PMA	Plan for the Modernisation of Agriculture
PPG	Project Preparation Grant
PRA	Pest Risk Analysis
QUISP	Quality Infrastructure and Standards Programme
SIDA	Swedish International Development Cooperation Agency

SPS	Sanitary and Phytosanitary
STDF	Standards and Trade Development Facility
TBT	Technical Barriers to Trade
ToR	Terms of Reference
UCoP	Uganda Code of Practice
UFA	Uganda Floricultural Association
UFEA	Uganda Flower Exporters Association
UIA	Uganda Investment Authority
UK	United Kingdom
UNIDO	United Nation Industrial Development Organisation
USAID	United States Agency for International Development
VWA	Food and Consumer Product Safety Authority (the Netherlands)
WB	World Bank
WSSD	World Summit on Sustainable Development
WTO	World Trade Organisation
WUR	Wageningen University and Research Centre

1 Introduction

1.1 Purpose and terms of reference of the formulation

The flower industry in Uganda is hampered by interceptions due to quarantine pests of cut flowers (mainly roses) and propagation material imported into the Netherlands. The Secretariat of the Standards and Trade Development Facility (STDF) of the World Trade Organisation (WTO) approved a proposal for a Project Preparation Grant (PPG) at the request of the Department of Crop Protection (DCP) of the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) to formulate a project proposal with a provisional work title "Strengthening the Capacity for Phytosanitary Controls of Floriculture Sector in Uganda".

The terms of reference (ToR) of the formulation describes the objectives, the expected results, the tasks of the consultant and the expected reporting outputs of the formulation (see annex 1). The purpose of the Project Preparation Grant (PPG) is to analyse the plant health and phytosanitary situation in the flower sector of Uganda and assess approaches to alleviate constraints. More specifically to analyse:

- phytosanitary constraints in the flower sector and current practices for pest management, and
- specifically the phytosanitary capacity in relation to diagnostic and inspection services.

Based on the assessment to:

- explore options to overcome these constraints with the view to enhance market access;
- make recommendations on aspects related to the implementation of an effective pest surveillance system; and
- formulate project proposal that takes into consideration the feedback obtained from relevant stakeholders.

Finally a consultation has to be conducted at national level on the future implementation modalities of the resultant project. The final proposal has to be drafted according to a pre-set STDF Project Grant Application Form.

1.2 Approach and period

Through visits and interviews to different stakeholders in the flower value chain the Head of Phytosanitary Inspection and Quarantine of DCP and the consultant:

- identified the above problem(s) in detail, both technically and institutionally, along the whole flower value chain and its stakeholders (public and private); and
- based on these identified problems realistic objectives, related outputs and activities were formulated.

To achieve the above it was necessary that the different key stakeholders (public and private) expressed their views on the technical and institutional nature of the problem(s) and options for solutions and their role in it. The consultation included as well linkages and

complementarities of past and on-going (donor) projects related to Sanitary and Phytosanitary (SPS) and crop protection in flowers.

The Head of Phytosanitary Inspection and Quarantine in concert with the STDF Secretariat prepared the ToR for the project formulation, while the consultant was informed about the assignment around the 1st of February 2011, with a starting date of the contract being the 7th of February 2011 and a termination date the 6th of August 2011.

During the few days before the field mission the consultant, in addition to some logistics in relation to the travel, searched and consulted as much as possible relevant documentation on SPS in floriculture in Uganda and on past projects. Additionally some appointments were made in the Netherlands. The Uganda field mission of the consultant covered the period 15th of February – 1st of March 2011, during which a few organisations in Nairobi were visited on the 28th of February 2011. A second mission was fielded to implement the Validation Workshop on the 16th of June 2011. This mission covered the period 14th – 18th of June 2011.

For the full schedule of the field missions the reader is referred to annex 2, while annex 3 provides an overview of persons met, categorised in stakeholder groups, being (i) associations, (ii) Government,(iii) private, (iv) projects, and (v) others and donors. The contact details are given as well.

As indicated in the above, the first field mission included Nairobi, Kenya, where two organisations, CABI Africa and the Kenya Plant Health Inspectorate Service (KEPHIS) were visited. These organisations are expected to become involved in the implementation of the foreseen project.

Timing first field mission
It has to be observed that that the timing of the first field mission was not optimal as on the 18th of February general elections were held in Uganda. A very limited number of stakeholders was available for interviews on the days before the elections and on the day itself, while straight after the elections it was a weekend, without possibilities to meet stakeholders. On 22nd of February local elections were held. The evening before it was announced that election day was a public holiday. Due to these circumstances less visits than wished could be made during the first field mission. Consequently it hindered a proper analysis of the issues and consequently developing fully a first draft of project ideas before the end of the field mission. During this first field mission it was not feasible to prepare a proper first project proposal to be discussed during the Validation Workshop. A rough first draft “pre-proposal” was formulated.

Draft pre-proposal
A draft project pre-proposal was prepared and presented and discussed during the debriefing meeting on the 25th of February. The agenda for the de-briefing meeting is presented in annex 4.1, while annex 4.2 provides the participants of the meeting. The comments and additions made by the participants were included in the draft pre-proposal. Later while at home-base the consultant received some more additions and comments from DCP staff, mainly on the chapters *Introduction* and *Main findings*, but hardly on *Proposed project objectives and interventions*. These additions and comments were included in the pre-proposal. The final draft of the pre-proposal is presented in annex 4.3. The Mission Report and the first draft of the full project proposal, using the STDF format, were written at home-base. Through e-mail DCP staff provided a few first comments.

As indicated in the above, the full development of the first draft of the proposal needed much more time than available during the mission, also partly due to the earlier described factors.

Therefore the validation workshop was not implemented during the first mission. Three options to implement the validation workshop were proposed to the STDF Secretariat:

(i) The validation through e-mail with the main stakeholders;
(ii) DCP implements the validation workshop, while the comments will be transmitted to the consultant for inclusion in the proposal; or
(iii) The consultant will chair the validation workshop in Uganda, which means an additional very short mission of about four days, including travel. Such an arrangement was included in one of the previous versions of the ToR and suggested in his comments by Jos van Meggelen (senior advisor international cooperation of the new Food Safety Authority of the Netherlands). The remaining of the budget easily allowed for the latter option. The Commissioner DCP, MAAIF, Mr. Komayombi Bulegeya, was strongly in favour of this option.

The STDF Secretariat approved the last option. The Validation Workshop was held on the 16th of June 2011, for which the consultant made a very short second mission to Uganda from the14 th – 18th of June 2011.

Validation Workshop
The workshop was prepared by DCP in concert with the consultant. Annex 5.1 provides the programme, annex 5.2 reflects the list of participants and annex 5.3 the summaries of the group presentations on the feedback assignment. Chapter 4.4 provides more details on the workshop.

1.3 Composition of the team

The formulation team was a composed of:

- Tumuboine Ephrance, Head Phytosantary and Quarantine, DPC, MAAIF, and
- Hubertus A.I. Stoetzer, Consultant Integrated Pest Management, The Netherlands.

Acknowledgement
The Mission is particularly grateful to Komayombi Bulegeya, Commissioner DCP, MAAIF for his valuable information, support and assistance. Additionally, the Mission is indebted to the different persons interviewed in the flower chain who received the Mission and patiently answered all the questions and the participants of the De-briefing meeting and the Validation Workshop.

1.4 Information sources

In addition to the interviews, in various ways information was collected, being in the form of documents, publications, websites and databases. These are given under the chapter 4 of this report, References. Information and documentation of past and ongoing projects and activities related to SPS were not always easy to get. Some relevant databases are not available to the public, while documentation of some past and public funded projects are not fully available on websites and their former coordinators or leaders cannot always be traced anymore. Anyhow, most of the projects and information sources focus on food safety within SPS. The pure phytosanitary topics within SPS are under exposed, with a possible exception of for example of issues around fruit flies. Consequently the information is sometimes incomplete or conflicting. Triangulation of data was used as much as possible, but not always feasible.

2 Description of the floriculture sector

2.1 Floriculture sector overview

The Government of Uganda (GoU) has promoted flower production since the early 1990s as a non-traditional export commodity and as part of export diversification and later under the National Trade Sector Development Plan (2008/09 – 2012/13). The Uganda floriculture sector has grown from a one hectare farm in 1992 to 25 farms exporting cut roses or propagation material covering about 190 ha by early 2009. The flower-sector faced its ups and downs. Export in volume and earnings rose over the last eight years, but faced, for example, a drastic decline in the period 2005 – 2006 (23% in value and 9% in volume). This decline was partly attributed to power shortages, storm damages on several farms and problems around quality control and freedom of pests as required for export. In the period 2007 – 2008 the export of roses increased 6% by value and 7% by volume and to decrease again respectively to 9% and 11% in 2008 – 2009 (see table 1). In the years 2007 – 2009 the export revenue of roses amounts about US$ 30 million per year. Comparing roses with the traditional export crops (coffee, cotton, tobacco and tea), the export revenue of cut roses was US$ 23 million in 2007, while these crops totalled US$ 399 million. Cotton accounted for US$ 20 million in that year.

Interceptions due to non compliance by the presence of quarantine pests[1] *Spodoptera littoralis* and *Helicoverpa armigera* accounted for about 17% of the export yearly during 2007 - 2009, thus resulting in an estimated loss of US$ 4.3 million. For a further discussion on the interceptions of exported cut roses due to quarantine organisms, see chapter 3.5 of this field mission report.

During these years, on average the companies faced a loss, due to interceptions of roughly US$ 225,000 per company per year. Flower farms spend approximately US$ 10,000 per year for controlling pests.

Over the years the non compliance of rose consignments imported in the EU have led to an increased percentage of sampling from 10%, to 50% to 100% of the consignments imported in the EU[2]. This led to an increase of inspection charges. However, due to lower numbers of interceptions in 2009 and 2010, the EU decided on a reduced check level, which was set on 25% for roses from Uganda for the period 01.01.2011 – 01.01.2012.

In 2009, 19 of these earlier mentioned 25 flower farms were involved in roses and six in cuttings and potted plants. Since that time the number of flower farms dropped to 21 with about 150 ha in 2010 (17 in cut flowers export and five in propagation material export). The companies are mainly located in the central region around the Lake Victoria Basin, while a few are located in South-Western Uganda, particularly Ntungamo District and Easter Uganda in Kapchorwa District. The export of flowers is dominated by larger firms, of which many have a foreign investment component.

The floriculture industry is centred around two product groups, being roses (about 70%) and Chrysanthemum cuttings, (about 25%). The percentages are based on 2009 figures. The rose production consists of the small headed sweetheart roses, adapted to the Uganda

[1] The word pest is used in the “FAO-sense”, being all organisms that can inflict damage to plants (bacteria, fungi, insects, mites, nematodes, viruses, weeds, etc.).
[2] The Dossier to Support Reduced Inspection Frequency of the Netherlands Plant Protection Service (NPPS) indicates a maximum of about 35% of the Ugandan cut roses consignments being inspected in the Netherlands in 2009.

climate of the altitudes around Lake Victoria. Another type is the intermediate rose with bigger heads.

In the following table 1 data are presented of exports by Fresh Handling Ltd. (FHL) and the Uganda Flower Exporters Association (UFEA) over financial years 2008 – 2010. In 2009 the sector employed over 6,000 of which the majority (80%) are women. UFEA estimates that approximately six persons are dependent on the income of labourers in the flower sector. Thus in total some 42,000 persons are directly or indirectly depending for their livelihoods on the floriculture sector.

Year	**2008**	**2009**	**2010**
Cut roses (tons)	5,547	5,049	3,947
Cuttings (tons)	1,252	1,410	1,414
Total (tons)	6,799	6,459	5,361

Table 1. Volume of flower exports from Uganda over 2008 - 2010

Only 10% of the flower export from Uganda were sold through the auctions of FloraHolland in the Netherlands. The remaining 90% of the flowers were under the direct sales to companies in the Netherlands.

All the members of the Uganda Flower Exporters Association (UFEA) are registered with the private standard "Milieu Project Sierteelt" ("*Environmental Project Ornamentals")* (MPS[3]), the Uganda Code of Practice (UCoP). One of the types of these flower-related protocols, MPS-GAP (=good agricultural practices) has been benchmarked to GLOBALGAP. It focuses mainly on fertilizer use, crop protection, energy, water, waste management and labour conditions. In 2010 11 farms were MPS-GAP certified, while six farms were MPS-ABC certified, the latter is a certification that deals mainly with the judicious use of pesticides.

2.2 Key stakeholders floriculture sector

2.2.1 **Introduction**

The development of Uganda's floriculture sector involves a range of stakeholders each with a unique series of interests. All of the stakeholders have an interest in the sector and the expansion of the increase of exports. In line with the earlier mentioned National Trade Sector Development Plan the sector plays a role in the Government's aim to increase the volume and diversification of the agro exports. As mentioned before, the sector provides employment to roughly 6,000 labourers, while another 36,000 persons are depending on these labourers. Thus, the floriculture sector is supporting poverty alleviation in the area around Entebbe & Kampala. This was in accordance with the Government's Poverty Eradication Plan (PEAP) till 2008, signaling poverty eradication as the fundamental goal of the Government. Afterwards the National Development Plan 2010/11 – 2014/15 (NDP) was developed based on the lessons learned from PEAP. Under the NDP poverty eradication receives continued attention. Employment generation is considered necessary condition for poverty eradication and obviously the flower companies contribute to this condition.

[3] Originally developed in The Netherlands in 1993. Meanwhile it comprises four types of certificates MPS-ABC, MPS-GAP, MPS Socially Qualified and MPS-Quality.

In the following the major stakeholders who could be relevant to the proposed project are described and a small number of projects as well.

2.2.2 **Floriculture associations**

Uganda Flower Exporters Association (UFEA)
Uganda Flower Exporters Association (UFEA) was established in 1995 and presently consists of 17 flower exporters and 5 exporters of cuttings, two flower exporters are not a member. With assistance from the Investment in Developing Export Agriculture Project (IDEA), the individual exporters formed an organised body that is recognised nationally and internationally. The objective of UFEA is that it represents all the floricultural producers and gives the floriculture industry strength in negotiations with other bodies, like donors and the Government. UFEA maintains close contact with its paying members. Presently the membership fee is US$ 3,500 per year.

UFEA provides flower market overviews, was involved in training activities, largely under the umbrella of different donor projects. UFEA was involved in implementing the course on Applied Tropical Floriculture and issued the certificates for that course. The development was one of the activities of the USAID funded IDEA project (see under projects). Initially with Continuing Agricultural Education Centre (CAEC) as the key partner, later from 2009 a new practical short course was created and implemented under the project Capacity Building in the Floriculture sub-sector in Uganda. UFEA was also involved in a project of the Centre for Promotion of Exports from Developing Countries (CBI) in the Netherlands in which study groups were formed, training was provided and a study tour was organised.

UFEA initiated research activities, supported by the IDEA, Agricultural Productivity Enhancement Programme (APEP) and a project implemented by United Nations Industrial Development Organisation (UNIDO), such as on-farm trials of different flowers varieties, different types of substrate, the control of red spider mites using natural enemies in conjunction with Real IPM from Kenya. UFEA identified locally available materials suitable as substrates in hydroponics.

Given the small size of the industry and its financial weak backbone UFEA depended quite heavily on donors for support. Presently those donor funds tend to dry out, the yearly fees of member companies may not be sufficient to sustain the association. It was observed that UFEA's website is not fully up-to-date e.g. with an new annual reports and new training or other activities.

For the foreseen project UFEA should be considered as a key player for implementation and coordination between the flower companies and DCP. The majority of the flower growers are a member and thus the association is crucial in linking the public and the private sector.

Uganda Floricultural Association (UFA)
Contrary to UFEA, the members of the Uganda Floricultural Association (UFA) are mainly small-scale flower producers (without plastic or screen houses) and dealers who supply to the local market and the flower shops with all kinds of flowers. In 1992 the association was formed with some 20 members with the main objective to promote the floricultural industry in Uganda and to improve the living standards of floricultural growers. UFA pays mainly attention to out-door-grown species, as much as possible from local origin. In addition to the quality of the out-door grown flowers, the lack of planting materials of these flower species remains a challenge to the full participation of smallholder farmers in export sector. UFA aims

to provide appropriate planting materials of new and indigenous commercial flower species to the smallholders in order to diversify the market base. UFA uses existing structures to mobilize and sensitize farmers' members. Farmers are organized into groups per district. These are the groups that are used to do the lobby & advocacy at the district and sub-county level. The main activities are:

- Verification and collection of propagation materials of indigenous or rare flowers and plant species with commercial potential.
- Introduction of planting material for new and commercial species.
- Training farmers in production of the introduced commercial species and the local collections.
- Promotion of new commercial species.

UFA runs a flower shop in Kampala, where the produce is collected and which serves as a (simple) distribution centre. Presently there are about 120 fully registered members of whom about 75% are women.

With support of a World Conference on Sustainable Development (WSSD) project, funded by the Netherlands Government, UFA identified various local flowers for commercial use, these include; Mobydick, Tuberoses, Arabicum and Eryngium. These are grown in areas of Mpigi, Masaka, Mukono, Karamoja, Wakiso and some parts of western Uganda. Presently UFA is embarking on a commercial trial export of a consignment of Tuberoses to obtain insights on the quality aspects as well as getting feedback from potential buyers in Europe.

In case the trial exports succeed, UFA would become a stakeholder in the foreseen project, but at the moment this is not yet clear.

2.2.3 **Government organisations**

The Department of Crop Protection (DCP)
This Department of MAAIF is responsible for formulating and enforcing regulations related to seeds, agro-chemicals and the management of phytosanitary risks. It seeks to undertake surveillance and diagnosis of crop pests and diseases and to work with other national and international agencies to control the outbreak of migratory plant pests and epidemic diseases. DCP carries out inspections of imports and exports of planting materials and plant based products, mostly checking for pests and diseases. The diagnosis of pre-export interceptions or of specimen of which the phytosanitary inspectors are not certain have to be done at the MAAIF laboratories of the Namalere post-entry quarantine facilities. These specimen can as well be diagnosed at the Kawanda Agricultural Research Institute of the National Agricultural Research Organisation (NARO). The insect museum and herbarium are located at the NARO research station but are supposed to be transferred to the Namalere the post-entry quarantine facilities. These post entry facilities have laboratories, but not all are equipped sufficiently to diagnose properly quarantine organisms.

The Department issues phytosanitary certificates when these are required for exports. Crop protection officers are located at MAAIF headquarters, at zonal stations, and at an increasing number of border/entry posts, including Entebbe International Airport. The Department is the so-called competent authority responsible for the inspection and regulation of agricultural commodities for local and international markets. A Plant Protection and Health Bill that updates legislation according to new views of the International Plant Protection Convention (IPPC) is still waiting approval by Parliament. This Bill designates the DCP as the National

Crop Protection Organisation (NPPO). The Control of Agricultural Chemicals Act 2006 separates the regulation of pesticides and fertilisers in order to ensure pesticide related food safety along the food chain. The drafted regulations are with the solicitor general.

The implementation of the phytosanitary inspections is constrained due to insufficient capacities and facilities. Presently at DCP head quarters, Entebbe, four staff members are involved in quarantine issues, while two inspectors are based at the airport, where all the flowers are exported. The phytosanitary head quarter staff and the airport inspectors issue phytosanitary certificates. The number of airport inspectors should be increased to four, making a 24-hours airport service feasible.

In total there are 28 border posts with 20 inspectors under MAAIF. Of these 17 are recently appointed, leaving three border posts with experienced inspectors. The other border posts are staffed by delegated officers from local government.

The facilities, like as simple diagnostic laboratory at the airport and basic equipment needed to support the issuing of a proper export phytosanitary certificates are lacking. Additionally pest data sheets for reference and other reference materials are largely lacking. Simple diagnostic equipment and tools are basic materials for an Agricultural Inspector.

A manual for operational procedures exists, but it appears to be rather general, it needs to be updated and refined in order to provide detailed information to the inspector on what grounds consignments have to be rejected. Enough copies of such an operational manual should be made available.

The diagnostic laboratories to back-up the inspectors at the airport are hampered by lack of specialists and lack of equipment for proper diagnostic services[4]. One Entomologist is doing his utmost to implement diagnostic services in the field of entomology. Some simple equipment, including insect cages are lacking. The diagnostic laboratories for nematology, bacteriology and virology are not fully equipped, vacancies exist for the specialist to head those laboratories.

The efficiency of the whole phytosanitary system for export of cut roses needs to be strengthened as shown by the interceptions of consignments of roses by the European Union over the last couple of years.

A part of the phytosanitary system would be a surveillance and monitoring system, primarily for quarantine organisms, but it could be extended to other flower pests of economical importance. Such a system would be supportive to implement an Integrated Pest Management (IPM) approach. It has to be observed that the mandate of DCP is wider than that of some other national plant protection organisations. Some of these organisations have a mandate to deal with quarantine organisms and pests of national importance. DCP has as well a role in general crop protection and advisory at farm level.

Ideally, about once per three months, DCP staff should visit flower growers to get acquainted with the flower grower's problems and to survey their problems, particularly the quarantine pests. However, based on the interviews with managers of flower farms, quarterly visits seem hardly to happen. This is due to staff, financial and transport constraints in MAAIF and therefore an effort is made to visit the flower farms once a year with an aim to improve the frequency in the near future. These visits need to be conducted by well trained inspectors. A database or access to (and understand) databases with the import requirements from

[4] Actually the diagnostic support is also lacking for the National Agricultural Advisory Services and plant health clinics.

importing countries is needed. An updated list of all the flower pests in Uganda would be helpful as well.

DCP has a checklist for the inspection of the earlier mentioned private standard MPS. The trained staff for those inspections are not anymore employed by MAAIF. An attempt will be made to employ new staff for these activities.

Makerere University (MU), Horticultural Department / Continuing Agricultural Education Centre (CAEC)
Makerere University is the leading institution of higher education in agriculture and agro industry. The key role of the Faculty of Agriculture is developing human capacity in the agricultural sector. The University offers a BSc Horticulture, including a specialisation in Floriculture and an MSc Crop Science. Staff of the Horticultural Department was involved in training activities related to flowers.

Actually the Continuing Agricultural Education Centre (CAEC) is one of the eight Departments under the faculty of Agriculture of MU. It was created in 1993 with joint funding from the World Bank (WB) and GoU[5]. CAEC organized a public - private sector linked training in Applied Tropical Floriculture for UFEA. Originally Agribusiness Development Centre / Investment for Development in Export Agriculture (ADC/IDEA) funded the training but this programme wound up, however, a new partnership with the Agricultural Productivity Enhancement Programme (APEP) enabled the continuation of the training. It is not clear when this Applied Tropical Floriculture course discontinued. Anyhow, as a follow-up a new floriculture short course was later developed by the project Capacity Building in the Floriculture sub-sector in Uganda. In 2009 Bukalasa Agricultural College (BAC), Mountains of the Moon University (MMU) and MU in concert with UFEA conducted for the first time this new short practical training course in floriculture. This course geared to all employees in flower farms / companies, ranging from directors, supervisors, sprayers, flower processors and crop maintenance personnel. Participants received an UFEA certificate after completion of the course.

Bukalasa Agricultural College (BAC)
Bukalasa Agricultural College was founded in 1920 as a Cotton Breeding Centre and since then, partly via mergers with other institutes, developed into the current institute that provides agricultural education in a broad range of fields. The college received substantial funding from the Danish government for rehabilitation of the facilities en reviewing the curricula. Since 2000, the college offers a two-year Diploma and Certificate course in Crop Production and Management. Under the project Capacity Building in the Floriculture Sector in Uganda a diploma course and certificate course in floriculture were developed and implemented since 2007. In 2009 BAC, Mountains of the Moon University (MMU) and MU in concert with UFEA conducted for the first time this new short practical training course in floriculture. This course was a kind of follow-up of the above mentioned Applied Tropical Floriculture Course.

National Agricultural Research Organisations (NARO)
National Agricultural Research Organisation (NARO) is the apex body for guidance and coordination of all agricultural research activities in the national agricultural research system in Uganda. NARO is a public institution established by an act of Parliament, which was enacted on 21st November 2005. NARO's mandate is to undertake, promote and coordinate

[5] Under the Agricultural Research and Training Project (ARTP) through the National Agricultural Research Organization (NARO).

research in crops, livestock, fish and forestry. In addition, it is to ensure that the research findings are disseminated and continuously applied by clients or farmers. Kawanda Agricultural Research Centre undertakes most of the horticultural research.

Despite its importance to the Ugandan economy, NARO focuses a relatively small amount of its research to horticulture, while floriculture is almost neglected. However, farmer associations such as the Uganda Flower Exporters Association (UFEA) have developed some research capacity mostly with donor support.

Although NARO has possibilities to be involved in diagnostics, it appears that the capacity to provide diagnostic services is limited. It is not the core function of NARO. So the role NARO could play in supporting DCP in this field is rather limited.

2.2.4 **Private sector**

Fresh Handling Ltd (FHL)
Fresh Handling Ltd. (FHL) has been in existence since 1999, when it was formed by flower and vegetable growers in conjunction with the Uganda Flower Exporters Association (UFEA) and other horticultural exporters. FHL received grants from the USAID-IDEA project. Basically the company is owned by the shareholder growers. The company offers cold storage (5000 MT capacity), palletising, and airport handling services, including consolidation, chartering, handling, documentation, storage, market clearance, and delivery into the main European airports of London, Brussels, and Amsterdam, of which the latter takes about 98%. The facility has enabled exporters to consolidate and finance their own freight, which in turn has led to a reduction in airfreight rates.

The Fresh Handling Ltd aims to maximize the effectiveness of the cold chain from the point of delivery at the airport to the point of loading onto the aircraft. Meanwhile it ensures that the quality of the products is maintained in their part of the chain by careful handling, temperature control, palletising and transportation. FHL offers handling and cold store facilities to anyone wishing to avail themselves of such airport facilities. The company which is ISO 9001:2000 certified ensures total quality management based on international standards for all exports shipped abroad. The company has exported over 60,000 tons of flowers and cuttings worth over US$110 million.

There is an still an ownership issue as the Civil Aviation Authority (CAA) has not yet handed over the cold store and handling facilities to FHL, which CAA was supposed to do under the IDEA project agreement.

Individual flower growers
During the first field mission a couple of flower growers were visited (see annexes 2 and 3). The quantity of produce exported by the different companies, based on the production in 2009 and 2010 is given in tables 2 and 3. Table 2 provides the details for cut flowers (roses), while table 3 for propagation material. The companies marked bold were visited during the field mission.

Shippers	**Total 2009**	**Total 2010**
Flowers	Qty (kgs)	Qty (kgs)
African Agro Ind Ltd	125.897	92.759
Aurum Roses Ltd	457.098	402.738
Eruma Roses Ltd	28.092	30.186

Shippers	Total 2009	Total 2010
Flowers	Qty (kgs)	Qty (kgs)
Chrysanthemums Ltd	41.822	996
Jambo Roses Ltd	493.874	381.912
Kajjansi Flowers Ltd	184.104	154.068
Magic Flowers Ltd	10.711	0
Mairye Estates Ltd	715.319	312.095
Melissa Flowers Ltd	501.757	461.420
Oasis Nurseries Ltd	102.306	56.371
Perfect Flowers Ltd	27701	12.518
Pearl Flowers Ltd	369.100	297.871
Sharlom Flowers Ltd		6.617
Rosebud Ltd	1.299.668	1.259.898
Sai Farms Ltd	13.813	0
Uganda Hortech Ltd	135.794	168.386
Ugaruss	27	0
Ugarose Flowers	402.452	295.139
Venus Flowers Ltd	81.624	13.921
Victoria Flowers Ltd	57.462	0
Total Flowers	**5.048.621**	**3.946.895**

Table 2. Cut flower exports over the years 2009 and 2010 by company.

Shippers	Total 2009	Total 2010
Cuttings	Qty (kgs)	Qty (kgs)
Fiduga Ltd	426.157	475.521
Royal Van Zanten	231.140	208.043
Wagagai Ltd	438.320	449.448
Wagagai P/Plants	176.240	136.720
Xclusive Cuttings Ltd	120.653	127.796
JP Cuttings Ltd	17.289	16.050
Total Cutts	**1.409.799**	**1.413.578**

Table 3. Exports of flower cuttings over the years 2009 and 2010 by company.

Without going into various company details some of the remarks, related to the plant health and other relevant issues, as expressed by representatives of the companies, are given in the following:

General and suitability of rose production

- The company does not make a profit on cut roses, but continues to produce roses for export as it provides a job for our labourers.
- The area around Entebbe, although suitable for small headed sweetheart roses, is not suitable for the production of the long stemmed roses that are much more attractive for European markets and fetch higher prices in those markets than the smaller ones. Actually, at the onset of developing the rose industry in Uganda around Entebbe, the various production and marketing criteria were not considered carefully enough.
- The area around Entebbe is very suitable for the production of chrysanthemum cuttings, actually much more suitable for this product than for the roses.
- Royalties on rose cultivars are too high for companies in Uganda.

Training

- Training courses given by UFEA and others were very useful.
- Particularly the training on chemicals provided good information.
- Training given by BAC was for our staff too basic and too general.

- Very specialised training is needed focussing on specific practical issues of flower production and its pest management.
- Training on quarantine pests is needed.
- Training on biological control and its implementation is needed.
- MAAIF should be involved in training on flower production systems, pests and their management and phytosanitary issues.
- The company solves all problems with their own experts, no training is needed.

Inspections
- Inspections at the airport should be increased in quantity and quality, particularly in the *Spodoptera*-risky seasons.
- In Uganda inspections are free of charge for the companies, while MAAIF has a shortage of money and not enough inspectors.
- In the Netherlands inspections are charged based on the number of stems, first generally per imported consignment, that may not be inspected and second per consignment that is inspected.
- The charges of inspection in the Netherlands increased recently by three fold.

UFEA
- "Role of UFEA?"
- Presently UFEA does not attract donor grants, so the association has to survive on contributions by the member companies.
- UFEA has to economise on its expenditures.
- UFEA needs to develop a vision and a business plan.

IPM & technical support
- Some companies expecting more technical support from DCP as presently they hire expertise from Kenya or the Netherlands.
- Some companies try to implement fully IPM.
- Some of the problems in implementing IPM are that (i) pheromone traps cannot be imported from Kenya (or elsewhere) as MAAIF does not allows it, (ii) the same applies to some biological control agents, or (iii) the chrysanthemum cuttings should be completely clean.
- IPM in chrysanthemum is difficult as the cuttings have to be 100% clean, maybe in the future?
- One of the chrysanthemum farms tries IPM by using new pesticides.
- Some companies have difficulties to implement IPM, also depending on the quality of the plastic houses.
- It was observed by the representatives of different flower companies that DCP inspectors visit "once in a while", or "rarely", or "we did not see anybody the last year", or "almost never", or "never" the company.
- Inspectors should regularly visit flower farms and assist in pest management.
- The inspectors should have an office and simple facilities at the airport.
- Once in a while an officer of the Ministry of Labour checks on labour conditions.
- MAAIF should support the import of special pesticides.
- MAAIF allows exemptions for the import of non-registered pesticides specifically intended for use in the flower farms.
- Testing for micro-elements in the soil or plants is done in the Netherlands as both Uganda and Kenya do not have those testing facilities.
- Results of soil samples: results from samples dispatched to the laboratory in the Netherlands are received in about one or two days, from the laboratory in Namalere, we received no results so far and continue to wait for the results.

- Various pest management problems are indicated, but the different companies have different orders of priorities. Problems, without an order of importance, are: spider mites, *Helicoverpa, Spodoptera*, mealy bugs
- The population dynamics of *Helicoverpa* sp. and *Spodoptera* sp. depend on the seasons, particularly these are abundant after the rains.
- Screening of the plastic houses with netting would probably beneficial for the control of these insects, but not done presently.
- Timber houses should be transformed into permanent constructions of real screen houses.
- *Spodoptera* is endemic in Southern Europe, so what is the issue as a quarantine pest in Europe?
- MPS is helpful to force the company to diminish use of pesticides.
- Scouting for moths is done in the greenhouse and in the grading hall, later at the airport there is hardly a serious inspection.
- DCP organised meetings on *Spodoptera*.

Mountains of the Moon University (MMU)
The Mountains of the Moon University (MMU) is a private university and obtained its license in 2005, being the first University in Uganda with a license. MMU offers BSc courses in Horticulture, and under the project Capacity Building in the Floriculture Sector in Uganda a diploma course and certificate course in floriculture were developed and implemented since 2007. In 2009 BAC, MMU and MU, in concert with UFEA, conducted for the first time this new short practical training course in floriculture. After completion of the course the participants received an UFEA certificate.

2.2.5 **Projects**

Over the years various projects have been implemented directly or indirectly supporting the flower sector in Uganda with or without a component on plant health. The mission is not aware of any project in this field that presently is implemented or will be implemented in the near future. An exception is the SPS policy component under the Quality Infrastructure and Standards Programme (QUISP). In the following the most recent and relevant projects are described first. In the second part a couple of projects are mentioned that were implemented a number of years ago.

Project operational at present

Quality Infrastructure and Standards Programme (QUISP)
The Ministry of Tourism, Trade and Industry (MTTI) with support from the Swedish International Development Cooperation Agency (SIDA) implements a five year comprehensive programme, the Quality Infrastructure and Standards Programme (QUISP). The programme seeks to develop a market-driven, holistic and coordinated institutional framework for the Ugandan Quality Infrastructure and Standards; which supports trade, industry, health, safety, consumer protection and a sustainable environment while at the same time promoting use of best practices in the production and service sectors. Two of the various outputs of the programme are a National SPS Policy and the enactment of relevant legislation. The SPS Policy is in place, but the enactment of the legalization has to wait to be in line with other relevant components of QUISP.

DCP was involved in the development of the SPS Policy and will implement the phytosanitary part of the Policy. Actually the foreseen phytosanitary floriculture project could partly act as a kind of pilot for the implementation of the phytosanitary component of the SPS Policy.

Projects recently terminated

Capacity Building in the Floriculture Sub-Sector in Uganda
The project on Capacity Building Floriculture Uganda aimed at strengthening the capacity for education, research and training in the floriculture sector in Uganda. The project was funded by the Netherlands government through NUFFIC (Netherlands Organisation for International Cooperation in Higher Education). The project was implemented in the period 2006 – 2010.The Ugandan partners were:

- Bukalasa Agricultural College (BAC), Wobulenzi;
- Mountains of the Moon University (MMU), Fort Portal; and
- Uganda Flower Exporters Association (UFEA), Kampala

The main Dutch partners were:

- Practical Training Centre, PTC+, Ede; and
- Wageningen University and Research Centre (WUR).

Major activities of this capacity building project were:

(i) curriculum development for Diploma course floriculture and implementation by BAC and MMU;
(ii) the same for a Certificate course floriculture;
(iii) short practical courses in floriculture based on the preceding successful Applied Tropical Floriculture Course of UFEA; and
(iv) development of training courses for small scale farmers and entrepreneurs in the flower sector.

The graduates from these Diploma and Certificate courses are employed by flower companies and they are highly appreciated for their job performance. The views of the representatives of flower companies on the short courses varied. For some of the flower specialists these short courses were too general, while for others it was interesting. Basically the courses (or modules of the courses) related to pest management were very useful for understanding the general principles on crop protection, Integrated Pest Management (IPM), and safe handling of pesticides, but not specific enough for the very detailed pest problems of flowers, their recognition, scouting and control within an IPM approach.

WSSD Partnership Programme in East Africa
The Uganda component of the WSSD Partnership Programme in East Africa consisted of six components related to vegetables, fruits and flowers. The Uganda part of the programme started slowly in 2005 and was concluded in 2009: The following components were related to floriculture:

- Local Market Survey: (i) to identify possible products that can be commercially produced in Uganda for local and export markets, (ii) to identify potential buyers for Uganda's flowers produced by smallholders, and (iii) create added value.

- Training programme for flower industry on compliance with MPS GAP regulations: (i) A quality management system was set-up and implemented in 18 flower farms through staff training in MPS GAP and chemical management, and (ii) Implementation of an effective phytosanitary and chemical inspection. This component was linked to UFEA members and DCP.
- Appropriate planting material for flower production by smallholders: (i) verification and collection of materials of indigenous, wild and/or rare flowers and plant species for commercial potential, (ii) Introduction of planting material for new commercial flower varieties, (iii) training, and (iv) promotion of new varieties. This component was strongly linked to UFA.

Especially the second component is related to the foreseen phytosanitary flower project. Meanwhile it is understood that presently 11 flower farms are MPS-GAP certified. The MPS-GAP support activities by DCP are hampered by lack of qualified staff in MAAIF as the trained staff resigned from MAAIF. New staff will be employed in the near future, however, the new staff need to be trained on this certification scheme.

An evaluation of this WSSD programme concluded, among others, that insufficient integrated pest management (IPM) poses a problem for many East African flower farms. In all five partnership countries there was, moreover, a lack of industry-driven training institutions. For Uganda it was observed that collaboration within the private sector improved, but public – private sector relations did not improve.

Centre of Phytosanitary Excellence (COPE)
The Centre of Phytosanitary Excellence (COPE) was established to enhance the capacity of national phytosanitary systems to protect national agriculture as well as to increase the ability of African countries to compete in international markets by meeting international phytosanitary standards. The Centre was financed through STDF funds, with contributions of the national Governments from 2008 - 2010. The Centre has been a potential model for achieving coordinated and effective phytosanitary capacity development at a regional level. It has been based on the principle that any capacity development is most effective when it builds on and uses existing capacity. The COPE was developed by a team of experts from several African countries, the African Union's Inter African Phytosanitary Council (IAPSC), the secretariat of the International Plant Protection Convention (IPPC), CABI, and the Netherlands Plant Protection Service (NPPS). The COPE has a secretariat in Nairobi hosted at KEPHIS and the University of Nairobi. Kenya was selected to host the Centre because the IAPSC identified Kenya as a sub-regional centre for phytosanitary capacity building. The Common Market for Eastern and Southern Africa (COMESA) designated Kenya as a sub-regional reference laboratory for plant health; whilst KEPHIS was already undertaking phytosanitary capacity building in response to requests by other countries.

Part of COPE's activities includes the organization of training courses. In order to determine what courses would be required, needs analyses were undertaken. For the identified courses, curricula were then developed. In this case a smaller group of experts was used, with most of the experts coming from within the region. Part of establishing the training unit also required capacity development of the two host organizations, the University of Nairobi and KEPHIS. Four short in-service courses and three academic certificate courses were developed. The Centre also develops tailor made courses specific to customer needs.
The short term in-service courses, which could be relevant to the foreseen phytosanitary flower project, are:

- Certification and import verification procedures for inspectors and technicians;

- Phytosanitary systems improvement and management for phytosanitary managers and senior technical staff;
- Phytosanitary skills enhancement course for subject matter specialists and technicians; and
- Re-orientation phytosanitary course for university lecturers & trainers in institutions of higher learning.

One of the COPE's other activities was the strengthening of pest risk analysis (PRA) in the collaborating countries, in which DCP participated for Uganda.

Projects terminated a couple of years ago

- *Investment in Developing Export Agriculture (IDEA)*. This project was financed by USAID from 1995 - 2004. IDEA tried to commercialise non-traditional agricultural exports in Uganda. Initially flowers (roses) were among the target crops, but later this was narrowed down to a couple of crops excluding flowers. UFEA received two grants for among others: (i) identification of high-performing varieties, (ii) planting of new varieties on about17 ha, (iii) organising open days, (iv) conducting research at a number of farms, (v) creating a manual, and (vi) assisting to secure funding for a new research facility. Additionally support was given to develop a national Code of Practice protocol for floriculture linked to the Dutch MPS scheme. Four farms were working towards compliance. FHL received some support as in the form of technical advice and materials.

- *Agribusiness Development Centre (ADC).*As part of the IDEA project, the ADC was set up to assist agribusiness growers to expand output and marketing of non-traditional agricultural crops. Products include horticulture, floriculture, and fresh produce. In line with IDEA's activities ADC provided assistance to the firms by training their staff, sponsoring overseas visits and providing market research and technical assistance. ADC contributed to increased earnings, by encouraging expansion into small flowers in various ways. The following specific activities were carried out by ADC: (i) analysing world market trends, (ii) identifying and accessing markets, (iii) planning annual national flower conferences, (iv) planning and funding trials of roses, summer flowers and alternative flowers and plants, (v) training, (vi) strengthening the Uganda Flower Exporters Association (UFEA).

- *Agricultural Productivity Enhancement Programme (APEP)*. APEP was one of the major undertakings by USAID/Uganda aimed at expanding rural economic opportunities in the agricultural sector by increasing food and cash crop productivity and marketing. It covered the period 2003 – 2008. As in IDEA. UFEA was supported with more or less the same type of activities as under IDEA. Moreover Real IPM (Kenya) was connected to Uganda flower growers for advice on biological control. Two farms started to mass rear predatory mites.

- *Agriculture Sector Support Programme (ASPS)*. DANIDA financed ASPS from 1999 – 2009. ASPS focused on poverty reduction and food security in a broad agricultural sector approach, providing assistance to a diversified number of activities, including in phase II an Agri-business Development Component that had, among others, the following activities: (i) introducing producers (individuals or groups) to market outlets, (ii) helping to solve technical marketing problems. This included support to MAAIF for seed legislation and testing, phytosanitary laboratory and related capacity, pesticide legislation and variety protection legislation, general agricultural policies, planning

and capacity development. ASPS was a development programme under the Plan for the Modernisation of Agriculture (PMA). As far as could be ascertained no specific activities related to the flower sector.

- *Business Services Marketing Development (BSMD) Project*. From 2002 to 2005 DFID funded this project, implemented by the International Labour Organisation (ILO). It focused on the enhancement of supply chains where rural, small enterprises are providing (or could provide) substantial inputs. By enhancing these supply chains, it was anticipated that major benefits would accrue to those rural enterprises, in terms of increased market access, and the provision of various supporting services. The project conducted several supply chain and related studies. No specific studies on flower related topics were implemented.

- *Phase-out of Methyl Bromide in Cut Flowers.* The project aimed at the complete phase-out of methyl bromide in the cut flower sector by the year 2005. This sector represented 100% of total Methyl Bromide consumption of Uganda. Research was carried out to find alternative methods by the United Nation Industrial Development Organisation (UNIDO) and UFEA. These included use substrates, IPM combined with specific pesticides and steam sterilization (pasteurisation) in combination with IPM. The project was implemented between 2001 and 2005.

2.2.6 **Donors and others**

Embassy of the Kingdom of the Netherlands
The projects that the Netherlands Government co-financed supported the WSSD Partnership Programme in East Africa and the Capacity Building in the Floriculture Sub-Sector in Uganda. Presently the Netherlands does not fund any projects in the flower sub-sector.

With the new Government in the Netherlands new priorities and sectors for Development Cooperation are being assigned to the different priority countries. Presently these are unclear for Uganda, but it is expected that trade and agri-business will be among the priorities. The criteria for new projects are expected to be available somewhere in May / June. If that would be the case the Netherlands Embassy will need to identify new projects along the new policy lines in the remaining short period of 2011. In that case proposals in line with these new priorities may be welcome as it is expected that there will be a shortage of proposals for 2011. This would be an opportunity to apply for co-financing the proposed STDF project on phytosanitary capacity of floriculture sector.

Embassy of Sweden
The QUISP project has an SPS component. See under the discussion of the QUISP project. As the SPS policy under QUISP has been formulated, but it awaits to be implemented, SIDA will not fund any projects in this field.

Kenya Plant Health Inspectorate Service (KEPHIS) (Nairobi)
KEPHIS is the National Plant Protection Organisation for Kenya. It is a State Corporation which is under the auspices of the Ministry of Agriculture and is responsible for coordinating and implementing official controls and inspections for plant variety rights, seed certification, plant health and laboratory services, including analytical chemistry. The plant health controls are implemented by the Phytosanitary Service of KEPHIS.

In 2006 KEPHIS has been recognized by the European Union (EU) as a competent authority for horticultural exports, while its pesticide residue laboratory has already been accredited. KEPHIS has hosted, trained and advised a number of countries in Africa on phytosanitary issues. KEPHIS was one of the lead organizations implementing COPE (see for more details the project description of COPE). The new premises of KEPHIS in Karen, Nairobi, include training facilities.

KEPHIS would be an ideal cooperating partner to implement a part of the capacity building activities for the proposed pytosanitary floriculture project. This could be done under the COPE umbrella. For example Uganda staff could learn inspections hands-on with the KEPHIS inspectors. The same applies for scouting and diagnostics. Such trainings should be farm / practical oriented. Similar types of training were implemented by KEPHIS under the KEPHIS / Netherlands project on Capacity Building for Effective Phytosanitary Checks and Systems to Enhance Market Access of Kenya's Horticultural Produce (CABHORT).

CABI Africa (Nairobi)
CABI Africa is one of 10 CABI centres around the world. CAB International (CABI) is an intergovernmental not-for-profit organization that has been involved in phytosanitary issues throughout its 90 year history. CABI runs a Global Plant Clinic project whose main aim is to train people to run plant health clinics and nurture plant primary healthcare systems that link extension workers to research and other sources of technical expertise, diagnostic services, input suppliers and National Plant Protection Organisations.

CABI Africa was designated as the agency responsible for the practical management of the STDF COPE project. The CABI Africa is located in Nairobi, but it is expected that CABI Africa will have a representative in Uganda in the near future.

International Plant Protection Convention (IPPC)
The IPPC is the international treaty on the prevention of the introduction and spread of pests. The IPPC secretariat is hosted by FAO and is responsible for coordinating activities of the convention, including capacity building of contracting parties. In the COPE project IPPC was responsible for the provision of technical supervisory services.

Netherlands Plant Protection Service (NPPS)
As the Netherlands is the major destination for the produce of the Uganda flower sector the Netherlands Plant Protection Service (NPPS) is an important stakeholder. NPPS notifies DCP on interceptions of agricultural produce exported to the Netherlands or through the Netherlands to the EU. The NPPS has been serving as the National Plant Protection Organization (NPPO) of the Netherlands since the adoption of the International Plant Protection Convention in 1951. NPPS represents the Netherlands in international meetings and agreements concerning phytosanitary issues. These include EU phytosanitary regulations, import requirements of non-EU countries, EPPO- and IPPC-forums. NPPS is, among other activities, involved in the management of international phytosanitary projects and technical assistance to projects on plant health. The Service plays a role in linking international agreements and national phytosanitary procedures. Recently the NPPS became part of the new Food and Consumer Product Safety Authority (VWA) in the Netherlands.

3 Phytosanitary situation

3.1 Introduction SPS

In the global trade of agricultural and food products SPS measures have become increasingly prominent as these can play an important role to access markets of e.g. Europe and the United States and thus influencing trade flows. This applies particularly to food safety and animal health, to a lesser extent plant health of flowers. However, the simple existence of a quarantine organism on an exported crop may lead to a complete prohibition of that consignment to enter that market. This can be prevented by an effective phytosanitary management capacity in the exporting country. In many countries in the South, where this capacity is the full responsibility of the public sector, it tends to be rather weak.

Generally the management of SPS involves a set of basic and more sophisticated technical and administrative functions. These require not only a broad range of knowledge and skills, but as well physical infrastructure, institutional structures and procedures, including functional linkages between public and private sector, and not the least financial resources for its operation. Some of basic SPS functions are set out in Box 1.

- Apply GAP, GMP, HACCP, and QM at farm and enterprise levels
- Develop appropriate legislation and standards
- Register/control feed, agro-chemicals, veterinary drugs, etc.
- Conduct basic research, diagnosis, and analysis
- Accredit laboratories/veterinarians/other third party entities for official duties
- Develop/apply quarantine procedures, including for emergency situations
- Carry out epidemiological surveillance and information management
- Inspect/license food establishments
- Develop/maintain pest or disease-free areas
- Test products for residues, contaminants and microbiological content
- Verify/certify biological materials (seeds; embryos, semen)
- Verify/certify imported/exported products related to established risks
- Establish/maintain identity of products (for example traceability)
- Report possible hazards to treaty/trading partners
- Notify WTO/trading partners on new SPS measures
- Participate in international standard-setting processes

Box 1: Some basic and general SPS management functions[6]

It is clear that not all these functions are relevant to phytosanitary measures in the flowers. In the following some of the functions will be highlighted not only based on meetings during the field missions, but also on earlier SPS Evaluations in Uganda (see under 3.2).

[6] Source: Jaffee, S., T. Deeb, T O'brien, Y. Strachan and R. Kiggundu, 2006. Uganda: Standards and Trade. Experience, Capacities and Priorities (Paper prepared as part of the Diagnostic Trade Integration Study) WB/USAID.

To assess the plant health capacity in a country the International Plant Protection Convention (IPPC) uses the Phytosanitary Capacity Evaluation (PCE) Tool, which enables quantitative assessments of the capacity and identifies priorities for capacity building. The results of the PCE may be potential sensitive, therefore these reports are mostly confidential. It appears to be a rather technical approach. The WB used the so-called pyramid or hierarchy framework ("Hierarchy of trade-related SPS management functions"). This approach tends to look at SPS capacity from a broader perspective, including e.g. a soft elements like awareness among stakeholders and recognition of challenges.

3.2 SPS Evaluations in Uganda

In 2005 and 2006, the PCE Tool was applied in Kenya, Tanzania and Uganda. Under the Integrated Framework (IF), the WB also carried out background studies on SPS in Tanzania and Uganda as part of the Diagnostic Trade Integration Studies. In the latter the SPS capacity was again assessed, not using PCE, but the above mentioned hierarchy framework. In the document of the Diagnostic Trade Integration Studies it is mentioned that "Uganda has apparently implemented the IPPC's PCE, yet the conclusions and priorities remain unclear" (World Bank, 2006).

As a component of its co-ordination mandate, the STDF held a series of workshops as part of the Regional Reviews of Aid for Trade in September 2007. These workshops were part of a larger project aiming to strengthen the link between the supply and receipt of SPS-related technical co-operation in three pilot regions: Central America, the East African Community (EAC)[7] and a sub-group of ASEAN countries. The East African STDF workshop was held in Dar es Salaam, Tanzania (in collaboration with the African Development Bank). Each workshop was based around an overview of existing SPS capacity evaluations and an inventory of SPS-related technical co-operation provided to each region in the period 2001-2006. The relevant reports are reflected in the references (chapter 5), while in the following the main issues on SPS capacity in Uganda will be reviewed based on (i) the available documentation, and (ii) the information gathered in the meetings of the field missions, debriefing meeting and Validation Workshop (see for the schedule annex 2, and the list of persons met annex 3).

3.3 Plant health situation

The awareness of decision-makers and politicians on the importance of SPS, if it existed, was mostly related to food safety and related direct and urgent problems with exports. The awareness created around these issues did mostly neither result in legislative or institutional reforms nor additional resources. In general the capacity in the public sector on pest management and phytosanitary issues was rather limited and therefore it was, or still is, difficult for the government to play the role it would wish to play or should play. The aforementioned capacity relates to number of staff an number of trained specialists in specific disciplines, which will be shortly described in the following parts. The turnover of staff in the public sector does not assist to strengthen the involvement of the public sector in the plant health arena.

[7] The research was concentrated on Kenya, Tanzania and Uganda.

There are a number of other issues and challenges related to plant health and phytosanitary inspections. Some apply to the flower sector; others have a more generic character. The subdivision of categories used in the following is largely based on the PCE tools, and is, partly arbitrary with overlapping issues;

(i) Phytosanitary legislation,
(ii) Plant health human resources including pest diagnostic capabilities,
(iii) Facilities, equipment and references for pest diagnosis,
(iv) Institutionalised pest surveillance system,
(v) Pest risk analysis,
(vi) Pest free areas and locations of production,
(vii) Inspection systems at point of entry and exit,
(viii) Export certification and related facilities, and
(ix) Institutional arrangements of plant health systems.

(i) Phytosanitary legislation

Generally the DCP of MAAIF is responsible the (plant) pest control, including the formulation and enforcement of phytosanitary regulations and those around pesticides. A Plant Protection and Health Bill that updates legislation according to new views of the International Plant Protection Convention (IPPC) is still waiting approval by Parliament. This Bill designates the DCP as the National Crop Protection Organisation (NPPO). The Control of Agricultural Chemicals Act 2006 separates the regulation of pesticides and fertilisers in order to ensure pesticide related food safety along the food chain. Probably due to lack of priority setting it appeared difficult to revise the legislative framework and its institutional structures, while it is probably the most critical. However, the regulations are already drafted and await for the signature by the Minister. The new National SPS Implementation Plan for 2011/12 – 2015/16 is expected to create a conducive environment for implementation of phytosanitary measures. The SPS plan was created under the responsibility of MTTI, with DCP involved for phytosanitary issues, while DCP will be responsible for the implementation of that part of the Policy.

(ii) Plant health human resources including pest diagnostic capabilities

As mentioned earlier, the staff turnover is an issue, due to the fact that e.g. professional staff at NAROis better paid than those at MAAIF. The partly new staff at various points in the plant health system, lack for a large part capacities on various plant health issues. These include the capability to identify some of the quarantine pests or stages of the pests. Particularly they appear to be unable to identify *Spodoptera* sp. at the larval (caterpillar) or the egg stage, as these are the development stages intercepted in Europe. These stages are not very active and thus not easy to observe.

Additionally not enough specialists are around in the different disciplines of plant protection (Bacteriology, Nematology, Pathology, Virology and Weed Science) in the Post Entry Quarantine Station in Namalere to be able officially to confirm diagnoses of pests intercepted at entry or exit points of the country. The staff at the Post Entry Quarantine Laboratory have access to an Insect Museum at the Herbarium at the National Agricultural Research Laboratories, Kwanda, about two km from the Post Entry Quarantine Laboratory. Actually, as the interceptions of notifications are on insect pests a number of entomologists with recognised authority on a number of insect families should be available for the confirmation of identifications. Only one entomologist is available with quite a number of other duties than diagnostics.

(iii) Facilities, equipment and references for pest diagnosis

An official list of prevalent pests and their distribution maps does exist, but it needs an update urgently, while for the floriculture sector a specific list of flower pests would be handy.

Presently the diagnostic facilities are insufficient, as the new Post Entry Quarantine Station in Namalere is not fully operational (this in addition to the above mentioned lack of specialists). Pest hand books are in short supply as well. This does not only have consequences for the diagnostic support of entry and exit phytosanitary inspections, but as well as a back-up system for the Plant Clinics that function in three districts. As long as these laboratories are not yet fully operational, the back-up systems for the entire Phytosanitary systems, will remain weak. The regional plant quarantine diagnostic laboratories are either not fully operational or are lacking.

(iv) Institutionalised pest surveillance system

A number of plant pests such as fruit fly diminish agricultural production and hamper export possibilities. *Spodoptera littoralis* is an example of a Q-organism in the flower sector that caused notifications in the European Union. While the National Agricultural Research Organisation (NARO) has a national surveillance system for fruit flies, there is not yet a fully fledged monitoring and surveillance programme operating to monitor in an early stage of production the pest problem(s) and to back-up the export inspections. As mentioned earlier the pest list needs updating to include distribution maps. The implications for this is that pest-free areas of production cannot be designated (see also below under point vi).

(v) Pest risk analysis

Some pest risk analyses (PRA) for commodities imported into the country were carried out partially and poorly documented. For some export crops pest risk analyses were compiled, like for banana and passion fruit imported into the United States. The pest risk analysis on commodities seems to be hampered by new disease and pest outbreaks due to tropical climatic factors, changing the pest scene rapidly and also scanty information about various pests and diseases. In DCP a PRA team exists and is being expanded, also linked to the activities of COPE. For PRA information gathering the team needs to travel to different libraries in the country.

(vi) Pest free areas and locations of production

Eradication of the harmful organism is a first objective of a Plant Health Act. For *Spodoptera* sp. this is not realistic as the pest is widely around, being a host in many plant species, including a widespread crop like cotton. The pest free areas and pest free sites of production need to establish buffer zones around them, in order to keep them indeed pest free. If this is done for export crops like flowers, it could be helpful in some instances, but a proper monitoring and surveillance system, that is very expensive for the country, has to be in place first. However, based on the previous, these pest free zones may not be practical due to common pest, tropical weather and limited resources within Uganda. A policy of reducing the thread for export crops like cut roses seems a more sensible approach.

(vii) Inspection systems at point of entry and exit

The implementation of the phytosanitary inspections is limited due to constraints in capacities and facilities. No simple laboratory exists at the airport where the plant inspectors (or Agricultural Inspectors) can verify the nature of observed organisms in the consignments. A supportive operational manual with procedures of plant health inspections exist, but may need an update and refinement to make it easy to be used by the plant inspectors. Enough copies should be available. Basic / simple diagnostic laboratory equipment and pest data sheets for reference are largely lacking. The reference material, simple equipment and tools are basic materials for the Agricultural Inspector. This is all needed to inspect plant material properly. These observations appear to be relevant for all entry / exit points, including the airport.

(viii) Export certification and related facilities

As mentioned in the previous point, the facilities and basic equipment needed to support the issuing of a proper export phytosanitary certificate is lacking. A manual for operational procedures exists, but it appears to be rather general, it needs to be detailed to provide a clue to the inspector on what grounds the consignment has to be rejected and consequently refusing the issue of a phytosanitary certificate. The manual should contain as well, in a simplified way through a commodity approach (like cut flowers), the phytosanitary requirements of the EU (Directive 2000/29/EC) obviously in a translated format of a set of simple instructions.

Presently two inspectors are involved in issuing phytosanitary certificates at the airport, while other phytosanitary certificates are issued by inspectors based at DCP in MAAIF Headquarters. It would be essential to enable 24-hours service at the airport by the inspectors, probably needing four instead of two inspectors.

It appears that at the Entebbe airport no flower consignments have been rejected and thus did not receive a phytosanitary certificate over the last couple of years. However, consignments of cut roses have been intercepted by the EU in the same period. A series of reasons can cause this discrepancy between the rejection of consignments at the export and import side, as described in the above and the following paragraphs.

In order to monitor (quarantine) pest problems at the beginning of the flower chain, at least once per three months, DCP staff should visit flower growers to get acquainted with the flower grower's problems and link up with the pest specialists of the flower farms. However, based on the interviews with managers of flower farms, quarterly visits seem hardly to happen. This is due to financial, transport and capacity constraints and therefore an effort is made to visit the flower farms once a year or more often, after new staff has been employed by MAAIF. These visits need to be conducted by well trained inspectors. The earlier mentioned pest lists and database or access to (and understand) databases with the import requirements would be supportive to the surveillance activities (see also above point on EU phytosanitary requirements).

(ix) Institutional arrangements of plant health systems

Generally, at the political level, the awareness of the importance of SPS was rather low. However problems around food safety and the private standards for the export of horticultural crops and flowers have served to raise the awareness. It is expected that the National SPS Policy Implementation Plan will result in an improved support for phytosanitary issues, including the institutional setting.

To comply with phytosanitary export requirements of flowers both the public and the private sector have to play their roles as it is in both their interest that the flowers are accepted without hindrance in the importing countries. It should be easy as the flower chain is rather short, while in general the producer is the exporter as well. The number of flower companies is limited, while there is a supportive association, UFEA. The tasks of the public and private sector avoiding duplication have to be identified. Over time a cost recovery system needs to be developed in order to make plant health activities sustainable.

It has to be observed that there should be a differentiation between two groups of harmful organisms. If an organism is not listed on the national quarantine list, governmental intervention should not be possible only in exceptional cases. However, there is a governmental responsibility for harmful organisms on that appear on an export quarantine list. It would be logical that NPPO takes the decision on the phytosanitary measures to be taken. Inspection on the implementation of appropriate pest management measures of quarantine pests by the farms is a responsibility of the government, thus NPPO. This is the view for NPPO's with a limited mandate. However, NPPO's with a wider mandate will be

responsible to monitor not only quarantine pests, but all pest problems and provide advice on these. DCP has a wide mandate.

The last decade various efforts have been made to enhance capacity related to plant health. These activities included up-dating of legislative frameworks, improvement of laboratory facilities, appointing some new staff and training of staff. It appears that these efforts were often driven in conjunction with donor activities, while it is not evident that the efforts followed a planned strategy to improve the institutional setting, capacity and facilities according the certain sequence and to achieve a certain set of goals. It is expected that the National SPS Implementation Plan will cater to fill up these lacuna's.

3.4 Pest management and pesticide use

The flower farms are different in their approaches to pest management. Some of the bigger ones have specialists and scouts around, while in other farms pest management is the responsibility of the farm manager. Eleven farms comply to the private standard MPS-GAP and six to MPS-ABC. This implies that for the latter ones pesticides are judiciously used, while for the first ones a larger number of criteria have been fulfilled including some strategies of pest management that are in the direction of IPM. It was observed by different stakeholders that IPM implementation needed to be strengthened. One of the visited companies tried to use biological control and multiply some of the beneficials. Importing beneficial from Kenya is not allowed, the same applies for pheromones.

Implementation of IPM is no guarantee that quarantine pests are absent in consignments of exported cut flowers. While IPM can be considered as a kind of fluid pest management approach aiming to use all kinds of pest management approaches with pesticides as a last resort. The pesticides used as an emergency in IPM should comply to various criteria such as (i) low occupational health risks, thus a low acute toxicity, (ii) not harmful for the environment in general, (iii) not harmful for aquatic life (fish, crustaceae, etc), and (iv) not harmful for beneficals. So called broad spectrum pesticides, mostly the out of patent ones, do not comply to these criteria. These "old" pesticides are mostly the cheapest ones, therefore widely available (and registered) in countries in the South.

Over the last years, due to changes in the process of registration of pesticides in the EU, quite a number of these "old" pesticides had to disappear from the market, or will be phased out soon. It would be worthwhile for the Ugandan authorities to have a look at the delisted pesticides in the EU and compare the conditions in Uganda and consider whether the EU criteria for delisting pesticides would be useful for inclusion in the evaluation criteria. Additionally there would be scope to move to an arrangement of collaboration with pesticide regulation authorities in Kenya and Tanzania to register chemicals which have undergone supervised tests in only one of the three countries. Another issue is the phasing out of use of methyl bromide as Uganda has agreed under the Montreal Protocol (see project Phase-out of Methyl Bromide in Cut Flowers in 2.2.5). Some farms have adopted a steam sterilization technique, while others adopted hydroponic techniques where flowers are planted in a medium not requiring soil fumigation/sterilization.

Ugandan flower producers utilize several specialized agro-chemicals which are not used in the country. Ordinarily this would be problematic as these chemicals need to be registered in the country and this requires some three years of testing by NARO before such registration can take place in Uganda. However, some accommodations have been made by MAAIF, allowing use of selected agro-chemicals for two years (for 'testing purposes') prior to their

formal registration. Selective chemical are required when producers want to implement an IPM approach.

On average the cost of controlling pests in each flower farm is estimated at about US$ 10,000. Thus for all the 17 UFEA rose producing farms this would total to about US$ 170,000. Improved pest management approaches should result in reduced cost of pest control. How much the reduced cost would be is difficult to indicate. The indirect cost reduction through the intrinsic gain in environmental quality and thus diminished environmental cost, is not known.

Part of an IPM approach is proper scouting for pests, for which the scouts need to know the different stadia and symptoms of various pests. Regular monitoring of pests should be done by all flower farms, particularly for quarantine pests, depending on the threshold levels for the pest(s), it should be followed by appropriate control. For firstly the quarantine pests and secondly other pests DCP should play a supervisory and advisory role. One of the visited flower companies uses crop protection advisors from abroad.

3.5 Observations on export of cut roses and interceptions

Over the years the non compliance of rose consignments imported in the EU have led to an increased percentage of sampling in the EU from 10%, to 50% to 100%. This led to an increased inspection charges. The Dossier to Support Reduced Inspection Frequency of the Netherlands Plant Protection Service (NPPS), however, indicates a maximum of about 35% of the Ugandan cut roses consignments being inspected in the Netherlands in 2009. Anyhow, due to lower number of interceptions in 2009 and 2010, the EU decided on a reduced check level, which is set on 25% for roses from Uganda for the period 01.01.2011 – 01.01.2012. The lower check level results in lower inspection costs for the exporting companies.

Export revenues amount to about US$ 30 million per year for the years for 2007 – 2009. Interceptions due to non compliance by the presence of *Spodoptera littoralis* and *Helicoverpa armigera* would account for about 17% yearly, thus resulting in an estimated yearly loss of about US$ 4.25 million.

Interception records from different sources provide different number of rejections. At DCP the hard copies of interception notifications by NPPS were compared with those of Europhyt database for the period of 2008 – 2010. The interception quantities in Europhyt are lower. Unfortunately, in the hard copies in DCP files the notifications for 2009 were missing. Actually in the year 2010 only approximately 4.5% of the exported roses was intercepted all due to *S. littoralis.* Based on the export figures for 2010 (see table 1) it is estimated that in 2010 a loss of about US$ 1.1 million was incurred by the Uganda floriculture sector due to non compliance in the EU.

In the years 2007 - 2008 interceptions of cut roses were mainly due to *Helicoverpa armigera* and to a lesser extend to *Spodoptera littoralis* or *Spodotera sp.* It should be realised that other *Spodoptera* species are recorded in East Africa, such as *S. litura, S. eridania* and *S. frugiperda. S. littoralis*, the cotton leaf worm, has a host range of at least 87 species over 40 plant families, thus surviving on other host plants. The population dynamics over the seasons shows higher populations in the rainy season, putting roses at a higher risk to be infested. As this species is widespread in East Africa, it was the cause of interceptions in the EU for cut roses from countries like Kenya and Ethiopia.

Meanwhile the status of *H. armigera* has been deregulated only for cut flowers in the EU. The reasons for the deregulation were that the interceptions of *H. armigera* in cut flowers were mostly in the egg stage. As this stage does not have the capability of moving and the fact that cut flowers are an end product, the risk of these eggs (and possibly the larvae) of entering the European production areas with other host plants was considered to be almost zero. Therefore *H. armigera* was deregulated for the cut flowers only, and not for other products, like vegetables, entering the EU.

It was observed from the records of NPPS that a couple of interceptions of flowers from Uganda were due to incomplete or “fake” phytosanitary certificates.

DCP does not keep a data base of the certificates issued and the quantity and characteristics of the consignments and afterwards the notifications on the interceptions in the EU and the reasons.

4 Conclusions and recommended outline proposed project

4.1 Introduction

The report of the fieldwork builds upon previous efforts, particularly on the STDF research work in the SPS area, including Diagnostic Trade Integration Studies (DTIS) developed under the Integrated Framework (IF) and capacity evaluation tools as presented in the SPS Balance Sheet for Uganda (see also 3.2). The Balance Sheet, in particular the phytosanitary issues related to floriculture in Uganda, supplemented with information and observations of the fieldwork, various references, the debriefing meeting and the Validation Workshop with various stakeholders that was held on 16 June 2011, provided the basis for the grant proposal for submission to STDF to strengthen the phytosanitary capacity of the floriculture sector in Uganda.

The very first outline of the proposal was developed in a so-called pre-proposal, presented during the de-briefing meeting and adjusted a couple of times afterwards based on inputs by e-mail from DCP staff (see Annex 4.3). Based on this pre-proposal a first draft of the project proposal was drafted according to the application form lay-out of STDF. This one was mailed to DCP for feedback. A summary was presented on the Validation Workshop. Based on the feedback and further observations made by DCP the proposal was further adapted.

4.2 Rationale and justification of proposed project

Over the last couple of years, the flower sector in Uganda lost between 4 – 17 % of the exported cut flowers, mainly sweetheart roses, due to interceptions of flower consignments in the Netherlands, the main importing country. The interceptions were caused by the presence of harmful quarantine organisms, which are not allowed to be present on agricultural produce imported in the EU. These losses represented a value between US$$ 4.3 million and US$ 1.1 million per year.

The sector employs about 6,000 labourers, of whom approximately 80% are women. UFEA estimates that about six persons are depending on the income of one labourer in the flower companies. It means that in total about 42,000 persons are directly or indirectly dependent on employment in the floriculture sector. Therefore the sector is very important in its contribution to poverty alleviation and food security of its employees, their families and other dependents. Consequently it is in line with the Government's poverty eradication plans of the National Development Plan 2010/11 – 2014/15 (NDP).

A strong floriculture sector assists to diversify agricultural exports and may increase the volume of the export, which is in line with the National Trade Sector Development Plan for 2008/09 – 2012/13.

Over the years the floriculture sector, particularly UFEA, received quite some donor support, sometimes partly related to plant health problems. The support was aiming at the development and strengthening of the floriculture sector, at segments of its value chain and market access. The various projects had some synergy in the sense that each project took another critical issue in the floriculture sector or were building on previous activities, as was done with various floriculture short courses. As described under chapter 2.2.5 the support

included (i) training on MPS certification scheme for DCP staff, (ii) various types of short courses / study tours on plant health systems for MAAIF staff, (iii) various short courses on floriculture for farm managers, crop specialists and crop protection specialist of flower farms, partly through or in cooperation with UFEA, (iv) diploma and certificate courses in floriculture, (v) support on implementation of IPM and biological control to some companies through UFEA, (vi) research support to UFEA on practical aspects of floriculture, (vii) various types of investment and technical support to FHL, (viii) support to phytosanitary and diagnostic laboratories and construction, (ix) up-dating of legislative frameworks.

The support to the flower sector resulted in a relatively strong, but small, sector, even surviving to some extend the economic recession of the last couple of years, while it should be observed that the sweetheart roses are not the most preferred ones in the EU and thus not fetching the highest prices.

The various efforts to enhance capacity related to plant health appear to have been partly driven by donor activities. It is not evident that the attempts followed a planned strategy to improve the institutional setting, capacity and facilities according to a kind of master plan aiming to achieve a certain set of goals in a certain sequence. However, it is expected that the National SPS Plan will improve this situation in the near future. The turnover of DCP staff was not supportive to fully achieve the foreseen capacity development goals.

In relation to plant health and phytosanitary issues, a couple of these need attention and should be improved in which the proposed project would be instrumental. These are, as mentioned in the previous chapters:

- Decision makers are not yet fully aware of the importance of phytosanitary problems, although through the development and foreseen implementation of the National SPS Plan this issue receives or will receive attention.
- The new DCP staff lack for a part the specific capacity to do their job properly, particularly related to floriculture. For example, all DCP staff, who were trained in MPS certification, left the service.
- DCP does not have the full capacity in technical knowledge and skills on e.g. surveillance and monitoring quarantine pest problems or to monitor and advise flower companies on solutions for pest problems, using an IPM approach.
- No diagnostic specialists are available in the different disciplines of plant protection (bacteriology, entomology, nematology, phytopathology, and virology) to support the plant inspectors at the airport, except for one entomologist, but he is not full time available for diagnostics.
- Diagnostic support laboratories are not fully equipped as required for appropriate diagnostic back-up services.
- Inspection capacity of airport inspectors is constrained due to (i) no office / simple laboratory, (ii) no supporting simple diagnosic tools available,(iii) manuals with protocols for inspectors not fully updated or practical and not (fully) including data on the EU quarantine pests, (iv) no reference handbooks with pictures of the relevant quarantine pests, and (v) only two inspectors available, while a kind of 24-hour service would be advisable, but difficult to implement for two inspectors.
- In some instances quarantine pests are overlooked at the flower farms and at the airport, either because the plant inspectors or the company plant protection specialists do not recognise the egg or larval stages of *Spodoptera* sp. on the cut flowers, or they do not inspect the consignments of flowers in the farm or at the airport. In the latter case the inspectors may just issue a certificate without inspection as some flower consignments arrive very late at the airport, just before the plane needs to be loaded.

- Some flower farms appear regularly to monitor quarantine pests and other pests. Pest scouts, or plant protection specialist or quality officers are implementing the monitoring, while other farms do not have scouts of a crop protection specialist and thus monitoring is not done or does not receive much attention. It can be questioned whether those in charge know and recognise the different development stages of the quarantine pests and whether fixed protocols exist for monitoring.
- No concerted and general recommended approach exists to control the different pests, including quarantine pests, in the flower farms. Some companies hire abroad pest management advisors.

As the private sector is composed of a small in number of flower farms and with an association as UFEA around, it should not be difficult to link in a better way those responsible for plant health in the public sector and the private sector. This under the condition that knowledgeable and skilled staff is available in this field in both sectors.

A project tackling some of the key phytosanitary issues of the flower sector would have an indirect effect on phytosanitary inspections of other products. An awareness raising for plant health and phytosanitary issues would have also an effect beyond the floriculture sector. The implementation of IPM approaches in flower farms can be to some extent be translated and adapted to pest management in vegetables. With support from FAO and MAAIF the vegetable sector looked into possibilities to embrace private certification systems like GLOBALGAP in which IPM is an essential component. The foreseen project could act as a kind of pilot for the implementation of phytosanitary topics in the National SPS Policy.

4.3 Outline of the proposed project draft as based on the first Field Mission

Based on the earlier described plant health and phytosanitary issues and the priority recommendations for strengthening the phytosanitary services in the floriculture sector, a first draft of the STDF Project Grant Application Form was prepared. This draft was presented during the Validation Workshop on 16 June 2011. In the proposal stakeholders from the private and the public sector are expected to play their role. In summary the key issues that the proposed project needs to address are the following:

a) pest scouting at the flower farms;
b) pest control in line with IPM at the flower farms;
c) support the flower companies in their MPS GAP certification;
d) strengthen inspection at the airport/exit point; and
e) inspection and diagnostic capability.

The Validation Workshop provided some new insights on phytosanitary key issues. Consequently the project design had to be adapted at some points. The Validation workshop is described in 4.4.

4.3.1 **Immediate objectives**

The immediate objectives of the project are:

1. To reduce the percentage of notifications of interceptions for flowers exported to the EU.

2. To develop and implement a surveillance and monitoring for export relevant quarantine organisms in flowers.
3. To develop and implement improved pest management strategies in flowers.
4. To disseminate project results to stakeholders in other sectors of horticulture.

Immediate objectives 2 and 3 are supportive to the achievement of objective 1.

4.3.2 **Outputs**

The following outputs are expected from the above immediate objectives:

1. Reduced percentage of non-compliant phytosantary certificates are issued by DCP for flowers exported to Europe.
    1.1 Strengthened phytosanitary capacity of staff in the plant health system of the floriculture sector and improved phytosanitary procedures in order to be able to cope with the phytosanitary requirements of the EU and other flower importing countries.
    1.2 Simple laboratory facilities at airport and laboratories at Post Entry Quarantine Station are operational and have the capacity to cope with the phytosanitary requirements of the EU and other flower importing countries.
2. A surveillance and monitoring system is developed and effectively in operation for quarantine organisms in flowers.
3. Improved pest management strategies have been developed by a couple of flower companies in concert with DCP and the strategies are used by the companies.
4. The approaches and results of the project have been disseminated to stakeholders in other sectors of export horticulture.

4.3.3 **Activities**

1.1.1 Initiation workshop. Two days technical training workshop for participants representing key stakeholders (DCP staff, inspectors, UFEA representative(s), crop protection specialists / scouts from flower companies, with inputs from two specialised consultants on: (i) EU phytosanitary issues, developments and import procedures, (ii) Developments in export certification systems. Proceedings of workshop made available.

Participants:	Approximately 20, such as flower farms scouts, crop protection specialists staff members of DCP, representatives of other relevant stakeholders and “4 new IPM flower specialists” (see activity 1.1.3).
Duration:	2 days
By:	Experts from DCP, in concert with UFEA and CABI Africa, KEPHIS and/or NPPS
Location:	Entebbe

1.1.2 DCP / MAAIF recruitment of DCP staff (inspectors and diagnostic specialists) to be deployed at DCP and Post Entry Quarantine station.

1.1.3 One DCP staff member and three crop protection experts from flower farms selected in order to specialise in plant health of floriculture and on IPM approaches. They should participate in all relevant training and implementation activities of the project. In the following called “new IPM flower specialists” (nIPMfs).

1.1.4 Study tour of delegates in or relevant to the flower sector to Kenya and the Netherlands to study (i) the phytosanitary import inspection systems of both countries, (ii) the use of IPM and biological control in flowers, and (iii) use of surveillance and monitoring systems. Report should include lessons learned for application in Uganda and an action plan.
Participants: 12: six to eight from MAAIF (DCP), UFEA, one or two growers and four nIPMfs
Duration: 10 days
By: Expert from KEPHIS, RealIPM and NPPS
Location: Kenya and the Netherlands

1.1.5 Specialised and detailed hands-on training for plant inspectors and other phytosanitary staff of DCP on plant quarantine, phytosanitary inspections, pest and disease detection, phytosanitary certificates. Ten participants, to be implemented by / through COPE at KEPHIS, Nairobi.
Participants: six to eight from MAAIF (DCP) and 4 nIPMfs
Duration: 1or 2 weeks
By: KEPHIS through COPE
Location: Kenya

1.2.1 Technical assistance by KEPHIS or NPPS (five man days) on practical aspects of implementation of phytosanitary services, including set-up of simple facilities at the airport, streamlining the phytosanitary export inspection procedures, the issue of phytosanitary certificates at Entebbe Airport, the ways and means to enhance the efficiency in cooperation between phytosanitary inspectors, export companies and Fresh Handling Ltd.

1.2.2 Develop further the existing operational manual for phytosanitary inspection, test it and make it available for airport inspectors. By DCP staff.

1.2.3 Set up of a small office and laboratory at the airport (preferably at premises of Fresh Handling Ltd) with basic tools, equipment and reference material for use by inspectors.

1.2.4 Specialised staff training for diagnostic specialists on diagnostics in two to three essential disciplines, being entomology, bacteriology and phytopathology, e.g. by / through COPE by experts from KEPHIS and/or NPPS (possibly at National Museum of Kenya, Nairobi, as it has a well-equipped entomological laboratory) or at another appropriate location. The training for each discipline should be different.
Participants: three MAAIF (DCP)
Duration: 1 week (separate per discipline)
By: KEPHIS through COPE, or NPPS, or organisation in UK
Location: Kenya, Netherlands and/or UK

1.2.5 Improve laboratory facilities with essential equipment for the disciplines Entomology, Bacteriology and Phytopathology at the Post Entry Quarantine Station, Namalere.

1.2.6 Flexible fast operational technical support on problems that will need attention and / or unclear identifications of quarantine pests by experts who have a functional laboratory available to use. Experts as needed. Maximum five expert days.

2.1 Specialised training on pest surveillance systems and monitoring; field recognition of different flower pests, scouting techniques, design and analysis techniques and how to implement, including roles of public specialists and those of the private sector, such as the scouts in the flower farms.
Participants: 14 participants: 8 flower farms scouts, crop protection specialists and two staff members of DCP and 4 new IPM flower specialists
Duration: 1 week
By: Expert from KEPHIS or NPPS
Location: Entebbe

2.2 After, or as part of the training under activity 2.1, based on the knowledge obtained from the training, together with the same specialist implementing the training, develop further a detailed and practical surveillance and monitoring system for certain priority pest(s) of flowers, like *Spodoptera*, its data recording, pest identifications in the field, while involving both inspectors and company scouts. (3 expert days).

2.3 Pilot implementation of pest surveillance and monitoring at a couple of flower farms. Based on experiences refine the system with assistance of expert advice as needed. (maximum 5 expert days.

2.4 Implementation of surveillance and monitoring programme by inspectors and scouts.

2.5 Together with an IT expert, develop and maintain a central database with phytosanitary data and information on pest and disease populations and their developments in the greenhouses. (7 expert days).

3.1 Specialised technical training on IPM and biological control for some selected flower pests, including *Spodoptera,* and use of selective pesticides in IPM and combined with biological control.
Participants: 12 participants: 6 flower farms scouts, crop protection specialists and 2 staff members of DCP and 4 new IPM flower specialists
Duration: 2 weeks
By: Experts from RealIPM or others experts
Location: Kenya

3.2 After the training, together with a technical expert develop IPM approach for pilot farms and its pilot implementation. (5 expert days).

3.3 Exchange visits to flower farms by the pest management specialists and scouts of different flower companies.

3.4 The technical assistance of specialists on IPM, biological control and selective pesticides. A technical advisory mission and / or consultations by email. Maximum 7 expert days.

4.1 Organisation of a final seminar by DCP and UFEA (as a representative of the flower companies) at the end of the project. Inputs by representatives of the main stakeholder and those involved in the project by providing advice or as resource persons. The seminar should also cover a component geared at dissemination of the results to stakeholders in other sectors of export horticulture. The seminar should also aim at awareness raising towards decision makers and/or politicians on the

importance of the flower industry and significance and benefits of a well functioning plant health system and phytosantitary inspections of export flowers.
Participants: 40 participants
Duration: 1 day
By: Project staff
Location: Entebbe / Kampala

4.2 Compile proceedings of the seminar and publish additionally striking results and lessons learnt from the IPM and monitoring and surveillance activity.

4.4 Validation Workshop

4.4.1 **Introduction**

Early May DCP and the consultant agreed on a convenient date for the Validation Workshop. It should be organised after the first two weeks of June in which Uganda celebrates a couple of public holidays. The 16th of June 2011 appeared the most convenient date. DCP invited the stakeholders and took care of the logics for the workshop. Unfortunately, not all the invitees, who confirmed their participation, participated in the workshop. The list of the participants is given in annex 5.2. In concert with DCP, UFEA and the consultant a workshop programme was prepared (see annex 5.1). The consultant prepared a presentation based on the draft project proposal, summarising the proposal as presented in the above chapter 4.3. The participants received a hard copy of the essential parts of the draft project proposal.

The schedule of the consultant's second field mission is included in annex 2.

The workshop followed the programme as given in annex 5.1. At various agenda items of the workshop questions were asked for clarification and issues were discussed for better understanding or for airing views by participants.

In order to get the views of the different stakeholders an assignment was included in the workshop to stimulate discussions among participants and to receive feedback from them. The assignment was composed of three parts, being (i) an individual assignment, followed by (ii) a group assignment and (iii) a presentation of the findings per group. More specifically it was designed as follows.

(i) Individual assignment
On red cards each participant had to:
- write 2 or 3 key issues to be addressed (related to phytosanitary issues and plant health in floriculture) in a new project; and
- to give priorities to these issues (high=1, medium=2, low=3).

On green card(s) each participant had to:
- write proposed solutions on each issue and activities needed to assist in solving the issues.

(ii) group assignment
First three working groups were randomly composed. Each group had to discuss participant's individual cards with issues and solutions, and try to find consensus on:
- key issues to be addressed in a new floriculture plant health /phytosanitary project;
- priorities (high=1, medium=2, low=3) of the key issues;

- proposed solutions and related activities;
- risks involved in the proposed activities; and
- roles of specific stakeholders.

The three groups were requested to present the main findings in a table as given below.

Key issues	Priority: 1=high, 2= medium, 3=low	Solutions	Related activities	Risks
1.				
2.				
3.				
4.				

The participants were also asked to provide specific factual comments related to the draft proposal, either during the workshop or afterwards by e-mail to DCP or the consultant.

4.4.2 **Feedback**

The summaries of the findings by the three groups, more or less according to the above format, are presented in annex 5.3. A couple of new issues arose, which were not or not clearly included in the draft project proposal. These are given in 4.4.3.

In summary the following key issues were identified by the three groups.

General
- Inadequate capacity of inspectors to regulate pest problems;
- Inadequate flow of information between flower farms and DCP;
- Lack of transport; and
- Sustainability after termination of the project.

Phytosanitary issues
- No laboratory and diagnostic tools at the airport;
- Inspections should cover 24-hours service at the airport;
- Poor diagnostic capacity in MAAIF laboratories;
- Manuals need to be updated; and
- Lack of a pest list for flowers.

Surveillance and monitoring
- Inadequate monitoring.

Certification issues
- Lack of MAAIF auditors.

Flower company issues
- Lack of trained entomologists in the flower sector;
- Inadequate knowledge and skills to identify and manage pests in the farms;
- Weak implementation of IPM;
- High costs of interceptions; and

- Growers do not respond to interceptions.

4.4.3 **Topics of feedback needing more attention in the project proposal**

As mentioned before a couple of issues were not mentioned in the earlier draft of the project proposal or were underexposed. These were issues mentioned in the feedback of the three groups(see 4.4.2) or discussed during the workshop, as reflected in the following:

- The number of inspectors at the airport should be increased to allow for a 24-hour service, while these irregular working hours should be facilitated;
- Transport facilities are required for inspectors (note: vehicles are outside the possibilities of the STDF projects);
- Flower farms should recruit qualified staff and train them in order to supervise and implement improved pest management approaches, such as IPM, and, as part of it, to monitor the pests in the flowers;
- Flower farms should be sensitized on problems around chemical control and environmental effects, and additionally on regulations and standards;
- DCP should have auditors, while a list of allowed pesticides in floriculture should be available and regularly updated;
- UFEA should employ a quality controller specialist;
- A pest list specific for flowers should be compiled including related material for diagnosis; and
- The information flow between the different flower farms and between DCP and flower farms needs improvement.

The role of DCP should be the implementation of the project, while UFEA should play its role as coordinator and liaison between DCP and the growers. Additionally UFEA should sensitize in general the rose growers to assist in a number of project activities and to stimulate a small number of growers to participate in pilot activities.

DCP should take the lead in pest surveillance, but with the assistance of the pest management specialists in the rose companies.

In summary it can be concluded that the participants of the validation workshop endorsed largely the draft proposal, but it needs some refinements in line with the above mentioned points.

5 References

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Annexes

Annex 1. Terms of Reference

1. Background

The Uganda flower sector, a non-traditional export commodity, has flourished over the last two decades. Currently, approximately 5,000 tons of cut flowers (mainly sweetheart roses) are exported on a yearly basis to the European Union (mainly The Netherlands). Other products include cuttings which are also exported to the European Union as well as other African countries. It is estimated that the flower industry employs between 5,000 and 6,500 people, of which 80% are women. Annual revenues are estimated at approximately US$ 30 million.

Increasingly, the flower industry in Uganda is hampered by interceptions of flower consignments, notably due to the detection of the pest *Spodoptera Littoralis*. This specific pest is responsible for 17% of intercepted cut flower consignments from Uganda to the Netherlands every year.

In this context, the Department of Crop Protection (DCP) of the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) of Uganda requested support from the STDF to develop a national surveillance programme to monitor and control these pests in order to maintain and further enhance market access.

At its meeting on 22 October 2010, the STDF Working Group approved a project preparation grant to develop a project aiming to strengthen the capacity of the public and private sector in Uganda to manage and control specific pests affecting the export of cut flowers from Uganda to the EU (mainly The Netherlands).

2. Objectives and expected results

This PPG will have the following objectives :

1. Analyse phytosanitary constraints faced by the flower sector as well as current practices for pest management (including use of pesticides) and explore options to overcome these with the view to enhance market access.

2. Analyse the phytosanitary capacity in Uganda (with particular focus on assessment of diagnostic and inspection capabilities) and make recommendations on aspects related to the implementation of an effective pest surveillance system.

3. Formulate project proposal based on the results of the assessment conducted and the feedback obtained.

4. Conduct consultation at national level on the future implementation modalities of the resultant project.

3. Indicative tasks of the Consultant

Over the course of the project preparation period, the consultant will:

- Review existing needs assessments (including the results of the PCE tool which was applied in Uganda) and apply and compare results of a new PCE conducted on the pest diagnostics and inspection aspects of the phytosanitary system. Aspects related to the update of official pest lists should be taken into account.

- Identify potential challenges and threats related to the implementation of the resulting project and the sustainability of its results and propose potential risk mitigation options based on lessons learned from the limited success of previous pest management programs.

- Explore opportunities mainly with regard to possible expansion of pest surveillance programme in the flower sector (mainly *Spodoptera Littoralis*) to other pests.

- Conduct broad consultation at national level including the private sector (producers, handlers, exporters), entomologists and diagnostic specialists from academia and research institutes, existing coordination and export promotions mechanisms (including national SPS/TBT Committee, Export Promotions Board) in order to ensure alignment with national SPS priorities, complementarities, ownership and active involvement of all stakeholders into the surveillance programme.

- Review recent, ongoing or planned technical assistance projects undertaken by international organisations, bilateral donors, NGO and Governmental institutions directly or indirectly related to phytosanitary inspection and explore (i) linkages and complementarities of the resulting projects with other ongoing programmes such as the development of SPS national policy and strategy under the QUISP project; and (ii) possibilities to fund the resulting project

- Consult with technical partners (notably IPPC Secretariat and the Dutch Plant Protection Service) outside of Uganda for input and advice on project formulation. Consultation include undertaking a visit to the Centre of Phytosanitary Excellence (COPE, STDF/PG/171) and CABI in Kenya in order to examine ongoing work on flower pests and the presence of *Spodoptera littoralis* and other related species in the neighbouring countries. During this visit the consultant will explore possible involvement of experts from COPE in the future implementation of the project, notably in terms of the training to be provided.

- Lead the team including staff of DCP for the field visits and prepare a fieldwork report:. The consultant's primary role during the visits will be to collate information needed for the fieldwork report and to collect input on future project scope and activities.

- Facilitate all meetings during the project preparation process: In addition to leading interviews during the missions, the consultant will: (i) design the agendas for the debriefing meeting and the validation workshop; (ii) act as a facilitator for both meetings; and (iii) draft summaries for circulation to participants. The debriefing meeting will be restricted to core stakeholders (maximum 10 participants) to present the findings of the mission as well as the backbone of the project proposal including the objectives and the main activities in order to solicit input.

- Lead the creation of the resulting project proposal: The consultant will take the lead role in designing the resulting project and for writing up the proposal in collaboration with the DCP. This task will include preparing a draft version of the resulting project proposal based on the assessment undertaken during the field missions and the input received during the debriefing meeting. The draft proposal will be presented for comments at the validation workshop. The validation workshop will convene all projects stakeholders (around 30 participants). The consultant will incorporate feedback received, finalize the project proposal and secure approval from MAAIF.

- Secure, in collaboration with the DCP, letters of support to the project from the relevant institutions, as required.

- Explore possible options for implementation of the resulting project in consultation with DCP and possible implementing agencies.

4. Role and responsibility of the beneficiary

The DCP project contact person will be responsible to schedule: (1) the field missions, (2) a debriefing meeting at the end of the field mission and (3) a validation workshop. For the field mission, the DCP project contact person will identify key stakeholders and arrange to meet and visit sites (including flower farms, handling sites, inspection sites, laboratories etc.) and any other stakeholders as the consultant requires. The DCP contact point will ensure that all the relevant stakeholders are informed

and invited to any meeting or workshop being organized, prepare the necessary documentation for the meeting, and arrange for its timely circulation to participants. This task will be undertaken in close collaboration with the consultant.

5. Time Frame and calendar

Project preparation activities will take place over a period of 6 months. The planned starting date for the PPG is scheduled for February, 7th , 2011. The tentative completion date for the project is August st 2011.

5. Remuneration

Remuneration for the services rendered will be on the basis of declaration of expenses up to a maximum of US$ 30,000 and may include the following items:

- Honorarium: a maximum of 20 working days against a daily rate of US$ 600 will be reimbursed on the provision of an invoice. These include 15 days of travel as detailed below and 5 days home station based work.

- Travel expenses related to travel from The Netherlands to Kampala will be reimbursed on the provision of invoices and ticket stubs. Provision is made for one roundtrip ticket with a stopover of two days maximum in Nairobi. The consultant shall make his own flight arrangements (most direct route, economy fare). Terminal expenses will be provided according to standard WTO rates.

- Daily subsistence allowances (DSA) will be provided while on mission in Uganda and Kenya (Nairobi) according to standard WTO rates. It is expected that the consultant conducts one in-country mission of 15 working days, including for a maximum of two working days in Nairobi (Kenya).

- Local expenses for local transport, validation meetings, secretarial support and other miscellaneous expenses where reasonable and appropriate will be reimbursed on the provision of original documents (invoices, vouchers, agreements, order forms, tickets, etc.) up to US$ 700.

- Local expenses for a designated official from DCP up to US$ 500. These include DSA for site visits requiring overnight stay outside of Kampala/Entebbe at UN standard rates applicable in Uganda (covering hotel costs and meals). Site visits to remote areas should be reduced to minimum, as deemed appropriate by the consultant. Other expenses include cost of meals for one DCP official in case of day-long meetings according to the official rate applied by the MAAIF. Payments shall be made directly by the consultant against a receipt to be presented to the STDF Secretariat after the completion of the mission.

6. Duty station and logistics

Logistics for travel, field study work and meetings during the project will primarily be the responsibility of the consultant with support from the DCP.

The consultant will undertake preparatory work for the field study at home station and will organize the filed mission in collaboration with DCP. The consultant will finalize the project proposal at home station.

Project preparation activities will be mainly centred in Kampala, the capital of Uganda, with possible travel to other provinces as required. A field mission in Nairobi, Kenya is also envisaged. Logistical arrangements for this travel will be organized by the consultant, with support from the DCP, as necessary.

7. Outputs and Reporting

The project preparation grant will lead to the following outputs:

1. A technical report describing findings from the field missions and outlining rationale for various project activities and options, as appropriate. An overview of reference documents reviewed, people met and contacted, etc. shall be annexed to the report. The consultant's responsibilities will include revision of the technical document following the field findings validation meeting.

2. Formulation of a project proposal, approved by MAAIF in collaboration with the DCP. This proposal will meet the requirements described in the STDF Application form (including detailed work plan, budget and logical framework) unless advised otherwise by the STDF Secretariat.

Annex 2. WORKING PROGRAMME (I) FIELD MISSION FOR FORMULATION PROJECT PROPOSAL "STRENGTHENING THE PHYTOSANITARY CAPACITY OF THE FLORICULTURE SECTOR IN UGANDA", AND (II) MISSION TO IMPLEMENT VALIDATION WORKSHOP.

date	day	time	activity
02.02.2011	Wed	PM	Ede, The Netherlands; Meeting Mr. Ben van den Brink, Practical Training Centre, PTX+, Project Director of former project Capacity Building Floriculture Uganda
08.02.2011	Tue	PM	Meeting by telephone Mr. Jos van Meggelen, Senior Advisor International Cooperation of the New Food Safety Authority (formerly Netherlands Plant Protection Service), Wageningen, The Netherlands
10.02.2011	Thu	PM	Wageningen, The Netherlands Meeting Mr. Willem Jan de Kogel, PheroBANK, Plant Research International, Wageningen University and Research Centre (WUR)
15.02.2011	Tue	Full day	Travel Bennekom – Schiphol Airport Flight Amsterdam – Entebbe, Uganda Transfer to hotel in Entebbe
16.02.2011[8]	Wed	AM	Meeting at Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), Entebbe: • Ms. Ephrance Tumuboine, Head Phytosanitary Inspection and Quarantine, Department of Crop Protection (DCP) • Mr. Komayombi Bulegeya, Commissioner Department of Crop Protection
		PM	Meeting at MAAIF: • Ms. Ephrance Tumuboine, Head Phytosanitary Inspection and Quarantine, DCP • Mr. Karyijeka F. Robert, Assistant Commissioner, Diagnostics and Epidemiology, DCP, Coordinator Uganda for the Centre of Phytosanitary Excellence(COPE)
17.02.2011	Thu	AM	Travel Entebbe – Kampala. Together with Ephrance Tumuboine: • Short visit Netherlands Embassy • Meeting Harriet Ssali, Chairperson Uganda Flower Association (UFA) and Managing Director JF Floricultural Growers (U) Ltd
		PM	Travel Kampala - Entebbe
18.02.2011[9]	Fri	AM	Together with Ephrance Tumuboine, visit to Fresh Handling Ltd. at Entebbe International Airport, meeting with: • Chris Glaser, General Manager • Fred Mutenyo, Assistant Operations Manager • Mucunguzi Cleopas, Agricultural Inspector, Phytosanitary Inspection and Quarantine, DCP
		PM	Internet search for additional information and documents
19.02.2011	Sat	AM	Reading reports, analysing data and requesting some Embassies for a meeting on projects(by e-mail)
		PM	Discussions with Ephrance Tumuboine on the programme
20.02.2011	Sun		Reading reports and analysing data
21.02.2011	Mon	AM	Meetings and visits to flower companies in the neighbourhood

[8] On the days before the general elections it was hardly possible to make appointments as many people were out of office.
[9] Public holiday: general elections.

date	day	time	activity
			of Entebbe and Kampala, together with Peter Mugisha, DCP: Rosebud Ltd: • Ravi Kumar, Farm Manager, • Dimple Mehta, Administration Manager, • Phillip Musore, Export Manager • Shanmungan,Production and Propagation Manager Xpressions Flowers, African Agro Industries (U) Ltd: • Tushar Vyas, General Manager • Mahendra Godse, Production Manager
		PM	Kajjansi Roses Ltd: • K.K. Rai, GeneralManager Fiduga Ltd: • Jacques Schrier, Managing Director Meeting: • Juliet Musoke, Executive Director Uganda Flower Exporters Association (UFEA) • Jacques Schrier, Chairman UFEA
22.02.2011	Tue	AM	Meeting at flower farm companies in the neighbourhood of Entebbe and Kampala, together with Peter Mugisha, DCP: Melissa Flowers Ltd.: • Toby Maddison, Managing Director • Omulu Charles, Field Manager
		PM	Discussion with Ephrance Tumuboine, no further meetings could be arranged. Compiling and analysing information
23.02.2011[10]	Wed	AM	Travel Entebbe – Namalere, together with Ephrance Tumuboine. Visit to Post Entry Quarantine Station. Meeting with: • Karyijka F. Robert, Assistant Commissioner, Diagnostics and Epidemiology, DCP, • Karyabakora James, Principal Agricultural Inspector, Diagnostics, DCP. Travel Namalere - Kampala
		PM	Meeting with Marieke Jansen,Economic and Fellowships Officer, Embassy of the Kingdom of the Netherlands. Travel Kampala – Namalere.
24.02.2011	Thu	AM	Travel Entebbe – Abangolo, together with Ephrance Tumuboine. Visit to Agricultural Research Institute of Makarere University. Meeting with Robinah Namirembe – Ssonkko, Lecturer Horticultural Science, Makarere University Travel to Kampala. Meeting with John Nakedde< National Programme Manager, Trade, Private Sector & Rural Development. Embassy of Sweden. Travel Kampala Entebbe
		PM	Preperations for debriefing meeting. Prepairing draft summary Project Outline, jointly with Ephrance Tumuboine.
25.02.2011	Fri	AM	Preparing de-briefing meeting, including a power point presentation
		PM	Debriefing meeting (see annex 4 for agenda and annex 5 for attendants), including discussions and suggestions on the raft outline. Re-editing the draft outline. Meeting with Komayombi Bulegeya, Commissioner

[10] Unexpected public holiday: regional elections. One appointment at the Ministry of Tourism, Trade and Industry was cancelled.

date	day	time	activity
			Department of Crop Protection
26.02.2011	Sat	AM	Report drafting, identification of missing information
		PM	Discussions with Ephrance Tumuboine
27.02.2011	Sun	AM	Transfer hotel – airport Entebbe Flight Entebbe – Nairobi Transfer to hotel Nairobi
28.02.2011	Mon	AM	Visit to CABI Africa (ICRAF Complex),meeting with: • Roger Day, Deputy Director, Development • Florence Chege, Projects Officer
		PM	Visit to Kenya Plant Health Inspectorate Service (Kephis), meeting with: • James M. Onsando, Managing Director • Samuel Muchemi, Entomologist • Luiza Munyua, Crop Protection Officer • George Momanyi, Pest Risk Analist
01.03.2011	Tue	Full day	Transfer hotel – Nairobi Airport Flight Nairobi – Amsterdam Travel Schiphol Airport - Bennekom
14.06.2011	Tue	Full day	Travel Bennekom – Schiphol Airport Flight Amsterdam – Entebbe, Uganda Transfer to hotel in Entebbe
15.06.2011	Wed	Full day	Meetings at Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), Entebbe: • Ms. Ephrance Tumuboine, Head Phytosanitary Inspection and Quarantine, Department of Crop Protection (DCP) • Mr. Komayombi Bulegeya, Commissioner Department of Crop Protection • Mr. Karyijeka F. Robert, Assistant Commissioner, Diagnostics and Epidemiology, DCP Preparation of Validation Workshop
16.06.2011	Thu	Full day	Validation Workshop During one of the breaks: discussion with Juliet Musoke, Executive Director Uganda Flower Exporters Association (UFEA)
17.06.2011	Fri	Full day	Meetings at Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), Entebbe: • Ms. Ephrance Tumuboine, Head Phytosanitary Inspection and Quarantine, Department of Crop Protection (DCP) • Mr. Komayombi Bulegeya, Commissioner Department of Crop Protection • Mr. Karyijeka F. Robert, Assistant Commissioner, Diagnostics and Epidemiology, DCP Reporting Transfer hotel – airport Entebbe Flight Entebbe – Amsterdam, The Netherlands
18.06.2011	Sat	AM	Travel Schiphol Airport - Bennekom

Annex 3 List of Persons met during the Mission[11]

Name	Designation / Organisation	Telephone	E-mail
Associations			
Harriet Ssali	Chairperson, Uganda Floricultural Association (UFA)	+256 414 530015 +256 772 450464	ugaflor@africamail.com
Juliet Musoke	Executive Director, Uganda Flower Exporters Association (UFEA)	+256 312 263320 +256 772 906198	ufea@ufea.co.ug
Jacques Schrier	Chairman UFEA	+256 39 2722031 +256 77 1765555	j.schrier@fiduga.com
Government			
Komayombi Bulegeya	Commissioner, Department of Crop Protection (DCP), MAAIF	+256 414 320115 +256 772 421132	ccpmaaif@gmail.com
Karyijeka F. Robert	Assistant Commissioner, Diagnostics and Epidemiology, DCP, MAAIF Coordinator Uganda for Centre of Phytosanitary Excellence (COPE)	+256 414 322458 +256 712 985542	robert.karijeka@gmail.com
Ephrance Tumuboine	Head, Phytosantary Inspection and Quarantine, DCP, MAAIF	+256 414 320801	etumuboine@gmail.com
Peter Nugisha	Agricultural inspector, Phytosantary Inspection and Quarantine, DCP, MAAIF	+256 701 416327 +256 712 556509	komire200378@yahoo.com
Mucunguzi Cleopas	Agricultural Inspector, Phytosantary Inspection and Quarantine, DCP, MAAIF	+256 782 366581	cleopasmuc@gmail.com
Karyabakora James	Principal Agricultural Inspector, Diagnostics, DCP,MAAIF	+256 414 567368 +256 772 669978	korajames2006@yahoo.com
Robinah Namirembe–Ssonkko,	Lecturer Horticultural Science, Makarere University	+256 772 684653	rmirembe@agric.mak.ac.ug vegepatzn@yahoo.com
Jos van Meggelen	Senior Advisor International Cooperation of the New Food Safety Authority (formerly Netherlands Plant Protection Service), Wageningen, The Netherlands	+31 317	

[11] Participants of the de-briefing meeting and of the validation workshop are not given in this list but respectively in annex 4.2 and 5.2.

Name	Designation / Organisation	Telephone	E-mail
Private sector			
Willem Jan de Kogel	PheroBANK, Plant Research International, Wageningen University and Research Centre (WUR)	+31 317	
Harriet Ssali	Managing Director, JH Floricultural Growers (U) Ltd.	+256 414 530015 +256 772 450464	ugaflor@africamail.com
Chris Glaser	General Manager, Fresh Handling Ltd.	+256 414 321712 +256 772 200499	gm@freshhandling.com
Fred Muenyo	Assistant Operations Manager, Fresh Handling Ltd.	+256 776 200481	operations@freshhandling.com
Jacques Schrier	Managing Director, Fiduga Ltd	+256 39 2722031 +256 77 1765555	j.schrier@fiduga.com
Ravi Kumar	Farm Manager, Rosebud Ltd	+256 414 343500 +256 39 2733029 +256 752 711781	ravi.kumar@rosebudlimited.com
Dimple Mehta	Administration Manager, Rosebud Ltd	+256 414 343500 +256 39 2733029 +256 752 711780	dimple.admin@rosebudlimited.com
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Annex 4.1 Agenda debriefing meeting 25 February 2011, 1st draft STDF formulation of Project on "Strengthening the Capacity for Phytosanitary Controls of Floriculture Sector in Uganda"

Venue: Boardroom DCP

1. Opening and introductions

2. Presentation of the first draft out line proposal

3. Comments and discussion on
    - SPS issues
    - Objectives
    - Outputs
    - Activities
    - Stakeholders

4. Further development of proposal

5. Closure

Annex 4.2 Attendants debriefing meeting 25 February 2011, 1st draft STDF formulation of Project on "Strengthening the Capacity for Phytosanitary Controls of Floriculture Sector in Uganda"

Venue: Board Room DCP

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Annex 4.3. PRE-PROPOSAL "STRENGTHENING THE CAPACITY FOR PHYTOSANITARY CONTROL OF FLORICULTURE SECTOR IN UGANDA"

Introduction

On the 25th of February 2011 in a debriefing meeting at the Department of Crop Protection (DCP) of MAAIF a first draft of this pre-proposal was presented and discussed. This pre-proposal is considered the backbone of the project proposal. Based on valuable inputs received during this debriefing meeting (list of participants will be presented in the Field Mission Report) and some observations made during the meetings at CABI Africa and KEPHIS in Nairobi, the first draft of the pre-proposal was adjusted. The resulting draft pre-proposal, including main findings of the mission, is presented in the following. After the mission DCP made some further observations on the draft pre-proposal by e-mail. These are incorporated in this pre-proposal. The Field Mission Report will describe the findings of the mission and provide the rationale for the project outputs and activities. Together with this pre-proposal it will be the basis of the draft project proposal, which needs to be presented in a validation workshop involving all project stakeholders. Finally the project proposal will be drafted following the STDF format and, again, it has to be fully approved by DCP, MAAIF.

The validation workshop was not convened during the field mission in Uganda. Actually the available ten days were too limited to (i) meet all the relevant stakeholders, (ii) have a debriefing meeting on the findings and a backbone pre-proposal, and based on the inputs of this meeting, (iii) produce a proper proposal suitable for presentation in a validation workshop, and (iv) convene the validation workshop. The fact that elections coincided with the mission did not help either. First the national elections were held, for which reason quite a number of people were not available for meetings during the first week of the mission. In the second week local elections were held. Two extra public holidays were announced, one for each Election Day.

Main findings of the mission: Prevailing issues on phytosanitary inspections and plant health in the flower sector

The following description relates to plant health and phytosanitary inspections based on observations during the field mission and various reports as given in the references of the field mission report. It should be noted that the description of the following issues has a preliminary character at this stage.

The awareness of decision-makers and politicians on the importance of SPS, if it exists, is mostly related to food safety and related direct and urgent problems with exports. The awareness created around these issues did mostly neither result in legislative or institutional reforms nor additional resources. In general the capacity in the public sector on pest management and phytosanitary issues is rather limited and therefore it is difficult for the government to play the role it wished to play or should play. The aforementioned capacity relates to number of staff an number of trained specialists in specific disciplines, which will be shortly described in the following parts. The rapid turnover of staff in the public sector does not assist to strengthen the involvement of the public sector in the plant health arena.

There are a number of other issues and challenges related to plant health and phytosanitary inspections. Some are specific for the flower sector; others have a more generic character. The subdivision of categories used in the following is largely based on the Phytosanitary Capacity Evaluation (PCE) tools, and is, partly arbitrary;

(x) Phytosanitary legislation,
(xi) Plant health human resources including pest diagnostic capabilities,
(xii) Facilities, equipment and references for pest diagnosis,
(xiii) Institutionalised pest surveillance system,
(xiv) Pest risk analysis,
(xv) Pest free areas and locations of production,
(xvi) Inspection systems at point of entry and exit,
(xvii) Export certification and related facilities, and

(xviii) Institutional arrangements of plant health systems.

(x) Phytosanitary legislation

Generally the DCP of MAAIF is responsible the (plant) pest control, including the formulation and enforcement of phytosanitary regulations and those around pesticides. A Plant Protection and Health Bill that updates legislation according to new views of the International Plant Protection Convention (IPPC) is still waiting approval by Parliament. This Bill designates the DCP as the National Crop Protection Organisation (NPPO). The Control of Agricultural Chemicals Act 2006 separates the regulation of pesticides and fertilisers in order to ensure pesticide related food safety along the food chain. Probably due to lack of priority setting it appeared difficult to revise the legislative framework and its institutional structures, while it is probably the most critical and in a way, some of the less costly activities are involved. However, the regulations are already drafted and await for the signature by the Minister.

(xi) Plant health human resources including pest diagnostic capabilities

As mentioned earlier, the staff turnover is an issue. The partly new staff at various points in the plant health system, lack for a large part capacities on all kinds of plant health issues. These include the capability to identify some of the quarantine pests. Additionally not enough specialists are around in the different disciplines of plant protection (Bacteriology, Nematology, Pathology, Virology and Weed Science) in the Post Entry Quarantine Station in Namalere to confirm diagnoses of pests intercepted at entry or exit points of the country. The staff at the Post Entry Quarantine Laboratory have access to an Insect Museum at the Herbarium at the National Agricultural Research Laboratories, Kwanda, about two km from the Post Entry Quarantine Laboratory.

(xii) Facilities, equipment and references for pest diagnosis

An official list of prevalent pests and their distribution maps does exist, but it needs an update urgently. Presently the diagnostic facilities are insufficient, as the new Post Entry Quarantine Station in Namalere is not fully operational (this in addition to the above mentioned lack of specialists). Pest hand books are in short supply as well. This does not only have consequences for the diagnostic support of entry and exit phytosanitary inspections, but as well as a back-up system for the Mobile Plant Clinics that function in three districts. As long as these laboratories are not yet fully operational, the back-up systems for the entire Phytosanitary systems, will remain weak. The regional plant quarantine diagnostic laboratories are either not fully operational or are lacking.

(xiii) Institutionalised pest surveillance system

A number of plant pests such as fruit fly diminish agricultural production and hamper export possibilities. *Spodoptera littoralis* is an example in the flower sector that caused notifications in the European Union. While the National Agricultural Research Organisation (NARO) has a national surveillance system for fruit flies, there is not yet a fully fledged monitoring and surveillance programme operating to back-up the export inspections. As mentioned earlier the pest list need updating to include distribution maps. The implications for this is that pest-free areas of production cannot be designated.

(xiv) Pest risk analysis

Some pest risk analyses (PRA) for commodities imported into the country were carried out partially and poorly documented. For some export crops pest risk analyses were compiled, like for banana and passion fruit imported into the United States. The pest risk analysis on commodities seems to be hampered by new disease and pest outbreaks due to tropical climatic factors, changing the pest scene rapidly and also scanty information about various pests and diseases. In DCP a PRA team exists and is being expanded. For PRA information gathering the team needs to travel to different libraries in the country.

(xv) Pest free areas and locations of production

The pest free areas and pest free sites of production need to establish buffer zones around them, in order to keep them indeed pest free. If this is done for export crops like flowers, it could be helpful in some instances, but a proper monitoring and surveillance system, that is very expensive for the country, has to be in place first. However, these pest free zones may not always be practical due to tropical weather and limited resources within Uganda.

(xvi) Inspection systems at point of entry and exit

The implementation of the phytosanitary inspections is limited due to constraints in capacities and facilities. Supportive operational manual with procedures of plant health inspections exist, but may need an update and refinement, while enough copies should be available. Simple diagnostic laboratory equipment and pest data sheets for reference are largely lacking. The simple equipment and tools are basic materials for the Agricultural Inspector, which applies as well to reference material. This is all needed to inspect plant material properly. These observations apply to the airport and its inspections as well.

(xvii) Export certification and related facilities

The facilities and basic equipment needed to support the issuing of a proper export phytosanitary certificate is lacking. A manual for operational procedures exists, but it appears to be rather general, it needs to be detailed to provide a clue to the inspector on what grounds the consignment has to be rejected. Somehow the full credibility of the certificates could be questioned, as shown by the interceptions of consignments of roses by the European Union over the last couple of years. Presently two inspectors are involved in issuing phytosanitary certificates at the airport, while other phytosanitary certificates are issued by inspectors based at DCP in MAAIF Headquarters.

Ideally, once per three months, DCP staff should visit flower growers to get acquainted with the flower grower's problems and to survey their problems. However, based on the interviews with managers of flower farms, quarterly visits seem hardly to happen. This is due to financial constraints and an effort is made to visit the flower farms once a year. These visits need to be conducted by well trained inspectors. A database or access to (and understand) databases with the import requirements is needed as well.

(xviii) Institutional arrangements of plant health systems

Generally, at the political level, the awareness of the importance of SPS was rather low. However the private standards for the export of horticultural crops and flowers have served to raise the awareness. It is not clear whether that has been translated in an improved support for SPS.

To comply with SPS export requirements of flowers both the public and the private sector have to play its role as it is in both their interest that the flowers are accepted without hindrance in the importing countries. It should be easy as the flower chain is rather short; in general the producer is the exporter as well. The tasks of the public and private sector avoiding duplication have to be identified. Over time a cost recovery system needs to be developed in order to make plant health activities sustainable.

The last decade various efforts have been made to enhance capacity related to plant health. These activities included up-dating of legislative frameworks, improvement of laboratory facilities, appointing some new staff and training of staff. It appears that these efforts were driven in conjunction with donor activities, while it is not evident that the efforts followed a planned strategy to improve the institutional setting, capacity and facilities according the certain sequence and to achieve a certain set of goals.

Proposed project objectives and interventions

The proposed project objectives, outcome and activities are based on the above issues, but particularly geared to the flower sector.

Justification

An economic justification needs to be provided in the project proposal, but not all data have been collected to do so. One of the drafts of the Terms of Reference for the project formulation indicates for roses an export revenue of US$ 30 million for 2007 – 2009. Interceptions on *Spodoptera littoralis* and *Helicoverpa armigera* would account for about 17% yearly, thus resulting in an estimated loss of US$ 4.25 million. These figures have to be verified. From the literature (see references) and the interviews it became clear that profits in the rose industry are under pressure, meaning minimal to zero. An estimated labour force of between 5,500 to 6,000 thousand are employed, of which 80% are women (according to the ToR). If the rose industry would collapse due to the additional constraints of rejects of exported consignments, the employment of those labourers is at stake.

Benefits to other horticultural crops
Although the expected outcomes of the proposed project are specifically geared to the flower sector a spill-over effect will take place. For example output 6 (*A professionalized system is operational for phytosanitary inspections of export flowers*) will have directly a positive impact on the phytosanitary inspections of other products, while the same would apply for awareness raising of phytosanitary issues. On the other hand improved implementation of IPM in the flower sector cannot directly translated into approaches for e.g. vegetables.

Goals	The project will contribute to following overall objectives: • The Ugandan floricultural export sector has access to the EU markets without phytosanitary constraints, and thus • Through a stronger floriculture sector the livelihoods of the labourers in the sector will be secured.
Purpose	At the end of the project the public and private partners involved in plant health systems of export floriculture have improved their organizational, institutional and technical capacities and the following immediate objectives will be achieved: • Reduction of phytosanitary risks through (i) development of improved pest control strategies, (ii) a surveillance and monitoring system, and (iii) improved phytosanitary inspections, thus • The challenges linked to prevailing phytosanitary requirements of EU or other markets have been effectively and efficiently addressed.
Outputs	The following results are expected: 1. MAAIF (DCP), UFEA, FHL, and key growers have jointly identified and prioritised strategies to improve the plant health situation in the export-oriented floricultural sector and awareness has been raised among politicians and decision-makers on the significance of operational plant health systems in flowers. 2. A demand-driven and practical training programme has been delivered as a support to the following outputs. 3. Improved and practical pest management systems, based on integrated pest management, for key pests has been developed. 4. One DCP staff member and three plant protection officers from flower farms have specialised skills on IPM in flowers. 5. A practical monitoring and surveillance system is in place for key pests, through a cooperation between export growers and the DCP. 6. A professionalized system is operational for phytosanitary inspections of export flowers.
Activities	The above results require the following main activities.
Activities 1	1.1 Three day technical training workshop for participants representing key stakeholders, with inputs from two specialised consultants on: (i) EU phytosanitary issues, developments and import procedures, (ii) Developments in export certification systems 1.2 Ten days study tour of delegates (6 – 8) from MAAIF (DCP), UFEA, four new flower IPM specialists (see output 4.) and one or two growers to Kenya and the Netherlands to study (i) the phytosanitary import inspection systems of both countries, (ii) the use of IPM and biological control in flowers, and (iii) use of surveillance and monitoring systems. Report should include lessons learned for application in Uganda and an action plan.

	(Remark: an option would be for two to stay on e.g. in Kenya for an hands-on on the job training of three weeks.). 1.3 Feedback by the delegates to other stakeholders in a two day workshop, including discussions on the proposed action plan and agreement on implementation. Assessment of the training needs required for implementation of action plan. Workshop may need an external non-actor facilitator. 1.4 Awareness raising activities by delegates towards decision makers and/or politicians on the importance of the flower industry and significance and benefits of a well functioning plant health system and phytosantitary inspections of export flowers.
Activities 2	Based on specific training needs as identified while formulating the project and those further identified under 1.3, to be implemented by specialists from the region and/or the Netherlands: 2.1 Specialised technical training as identified under 1.3 (*Feedback workshop*), and anyhow: 2.2 Specialised technical training on: (i) IPM and biological control for some selected flower pests, including *Spodoptera,* (ii) use of selective pesticides in IPM and pesticides combined with biological control, and (iii) scouting techniques for those pests, data recording and threshold levels for control, including field recognition of flower pests. 2.3 Specialised and detailed training on plant quarantine, phytosanitary inspections, phytosanitary certificates, EU requirements, e-certificates and other new developments. 2.4 Specialised training on pest surveillance systems and monitoring, design and analysis techniques and how to implement, including roles of public specialists and those of the private sector, such as the scouts in the flower farms.
Activities 3	3.1 Based on the three training programmes under 2.2 [*(i) IPM and biological control,(ii) Selective pesticides, and (iii) Scouting techniques*], flower companies may try to improve their pest management and scouting system with support of regional or specialists from the Netherlands in that field (preferably the same specialists who were involved in the training). 3.2 Exchange visits between the pest management specialists and scouts of different flower companies. 3.3 The technical assistance of specialists on the topics under 2.2 [*(i) IPM and biological control,(ii) Selective pesticides, and (iii) Scouting techniques*] will be provided through a couple of technical advisory missions and consultations by email.
Activities 4	4.1 Two staff members of DCP and/or crop protection officers of flower farms have to be selected on basis of their interest in flowers and pest management. 4.2 They should be involved in all or most activities of the proposed project, including study tour.
Activities 5	5.1 Based on the knowledge obtained from the training under 2.2 (iii) [*Scouting techniques*], and 2.4 [*Pest surveillance and monitoring*] together with a specialist from the region or EU, develop further a detailed and practical surveillance and monitoring system for certain priority pest(s) of flowers, like *Spodoptera*, its data recording, pest identifications in the field, while involving both inspectors and company scouts.

	5.2 Implement a pilot surveillance and monitoring system for e.g *Spodoptora*. 5.3 Based on the experiences with the pilot, refine the system. 5.4 Implementation of surveillance and monitoring programme by inspectors and scouts.
Activities 6	Based on the training under 2.3 [*plant quarantine, phytosanitary inspections*] with the assistance of a regional or EU specialist development of reliable and efficient phytosanitary inspections, including: 6.1 Streamlining the phytosanitary export inspection procedures, the issue of phytosanitary certificates at Entebbe Airport, together with the ways and means to enhance the efficiency in cooperation between phytosanitary inspectors, export companies and Fresh Handling Ltd. 6.2 Set up of a small office and laboratory at the airport (preferably at premises of Fresh Handling Ltd) with basic tools, equipment and reference material for use by inspectors. 6.3 Develop further the existing operational manual for pytosanitary inspection, test it and make it available for airport inspectors. 6.4 Specialised staff training on diagnostics in two essential disciplines, being entomology and phytopathology. 6.5 Improve laboratory facilities with essential equipment for the disciplines Entomology and Phytopathology at the Post Entry Quarantine Station, Namalere. 6.6 Fast operational technical support on unclear identifications of quarantine pests by experts who have a functional laboratory available to use.

Mains stakeholders:

- DCP
- UFEA
- Flower growers/exporters

Other stakeholders and/or beneficiaries:

- Fresh Handling Ltd
- Uganda National Bureau of Standards
- Uganda Export Promotion Board
- National Agricultural Research Organisation (Horticultural Programme)
- Makerere University (Crop Science Department, Horticulture)
- UFA
- Labourers in the Uganda Flower Sector
- KEPHIS, Kenya
- COPE
- Netherlands Plant Protection Service

Project implementation by DCP

Supervision of the Project by CABI Africa

Annex 5.1 Programme Validation Workshop

PROGRAMME

Validation Workshop

STDF formulation of Project on "Strengthening the Phytosanitary Capacity of the Floriculture Sector in Uganda"

16 June 2011

Venue: Planning Board Room MAAIF

09.45 Registration

10.00 Opening and introductions of participants by Komayombi Bulegeya, Commissioner DCP

10.15 Objectives and outline of Validation Workshop (Huub Stoetzer)

10.30 Overview of crop protection and phytosanitary issues in floriculture by Ephrance Tumuboine, Head Phytosanitary, DCP

11.00 Presentation of draft outline STDF Project Proposal (Huub Stoetzer)

11.30 Coffee break

11.45 Group work (3 groups):

- Identification of key plant health issues in the floriculture sector affecting export of flowers
- priority areas of assistance needs & activities
- Stakeholders and their roles in activities
- Risks of proposed activities
- Other issues

12.30 Lunch Break

13.30 Group work, continued

15.00 Coffee Break

15.30 Group work: Presentations of main findings (10 min / group)

16.15 Further steps in development of STDF proposal (Huub Stoetzer)

16.30 Final observations and Closure of Workshop by Ephrance Tumuboine

Annex 5.2 Participants Validation Workshop

Attendants validation workshop 16 June 2011
Draft STDF formulation of Project on
"Strengthening the Phytosanitary Capacity of the Floriculture Sector in Uganda"
Venue: Planning Board Room, MAAIF

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Annex 5.3. Validation Workshop: Summaries feedback presentations of the three groups

GROUP 1.

No.	Key issues	Priority 1=high 2= medium 3=low	Solutions	Related activities	Risks
1	Inadequate capacity of inspectors to regulate the pest problem in the flower industry	1	Build the capacity of inspectors to carry out inspections by training them and availing logistical support Increase the number of inspectors to man the entry/exit points 24 hours	Trainings	Trained staff leaving Inadequate funds to train sufficient numbers
2	Inadequate knowledge and skills to identify and manage pests by the flower farms	2	The flower farms should recruit qualified people, train them in pest identification and control, and facilitate them to work	Training	Trained staff leaving Inadequate funds to train sufficient numbers
3.	Lack of a pest list for flowers	1	Conduct a survey for flower pests and compile a list for flower pests Train diagnostics to identify pests up to species level and come up with a pest list	Conduct Surveys Posters, charts and related materials developed and distributed to stakeholders.	Weather Instability Lack of cooperation from the respondents.
4.	Inadequate flow of information between the flower farms and DCP	2	Information sharing tool should be developed	Develop adequate tools to capture and transfer information	The users of the tool may not use it because of wanting to hide some information.

Roles of stake holders

DCP

1. Implementing the project
2. Carryout the pest surveillance
3. Develop a pest list for flowers
4. Ensure that pest control policies are followed
5. Receive the interception notices from the importing countries and transmit them to the flower companies and UFEA

UFEA

1. Employee a quality controller specialist

2. Mobilize their members and encourage them to put in place systems for pest and disease control

GROWERS
1. Proper production management
2. Report to DCP of any pest out breaks
3. Ensure that inspections are carried out on their flowers
4. Carryout internal regulatory controls for pests and diseases

CABI AFRICA
1. Monitoring the overall implementation of the project

GROUP 2

Issues	**Ranking of priority**	**Solutions**	**Main stake holder role**	**Activity**	**Risk**
1. Capacity building along the chain from production to packaging and finally the exit point	1-high	Technical expertise needed for diagnosis of pests Infrastructure e.g. vehicles inspection rooms and laboratory	UFEA and DCP Involved identification of individuals for the training	Technical training of specialist in IPM methodologies study tours and refresher courses regionally and internationally	High staff turn over after being trained
2. Facilitation / motivation	2-moderate	Acquisition of appropriate tools like magnifying glasses, gloves, chemicals Risk allowance Overtime incentives for extra work after official working hours Updated manuals Transportation Manuals	UFEA and DCP and the project since they are the main employers of the project staff	transparent management and good HR policy for the project Devising systems that can keep the success of the project sustainable after project end	Misuse of resources

3. Weak IPM systems especially in flower farms as employees of flower farms generally have little knowledge in IMP.	2-moderate	Training of IPM specialists and farmers to focus on biological control over chemical control which should be a last resort. Note that if biological control is focused on then the issues of effluents polluting the environment shall be addressed since less of such chemical residues shall be produced. Sensitization of flower farms on regulations and standards	UFEA	Liaising with technical expertise from the DCP for trainings on farm. Insolvent of flower farm staff in study tours	Refusal to involve staff by flower farm owners

NOTES

- Sustainability of the project/exit strategy needs to be clearly spelt out in the project design
- High staffs turnover of especially specialist. Possible solution can be a 'retention policy ' for all trained specialist to work for the project for a specific time period. Policy should be favourable to job market offers

GROUP 3.

Key Issues	**Priority**	**Solutions**	**Related Activities**	**Risks**
Inspection should be done 24hrs at the airport.	1	Institute a shift system for the inspectors to work.	Payment of over time and allowance to the inspecotors.	Loss of funds for other activities within the department
Lack of laboratory at the airport.	2	We need equipment for a lab at the airport.	Transfer of cold room facility at FHL so as to expand and allow for office space for the inspectors.	CAA is not allowing transfer of cold room facility to FHL.
Lack of trained entomologists in the flower sector.	1	Training of workers on the farms.	Workshops and seminars	Willingness by the farms to release workers for training.
Poor diagnostic capacity in MAAIF lab.	1	Improve the facilities in the lab.	Funding	Inadequacy of trained personnel.
Lack of Auditors from MAAIF	2	Regular provision of agro chemical list by MAAIF	Updating list	
High cost of interception of flowers	1	Follow up of farms by MAAIF and panelizing	Follow of farms	Time

		the defaulters		
Growers failure to respond to interceptions	1	,,	Follow up	Loss of funds
Inadequate monitoring and non compliance to pest management	2	IPM & MPSGAP	Follow up by UFEA	More man hours & costs

Roles and responsibilities

DCP	**UFEA**	**GROWERS**	**CABI**	
Implementation	coordination	avail staff for training and other activities	supervise the project	