

# Ethiopian-Netherlands Horticulture Partnership

## Mission Report

### Strategy Development Floriculture Capacity Building

October 15 – 21, 2006



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## Index

1.	Introduction.....	3
2	Visits and discussions .....	4
3	Stakeholders meeting on training needs .....	7
4	Writeshop capacity building strategy .....	9
5	Proposed plan of activities in 2006 en 2007 to 'get started' .....	10
6	Concluding remarks .....	10
Annex 1	Draft Strategy Capacity Building in the Export-Oriented Floriculture Sector in Ethiopia.....	12
Annex 2	Itinerary .....	25
Annex 3	Review of Models used for industry specific training provision elsewhere.	26

## 1. Introduction

Horticulture exports from Ethiopia are growing very rapidly and are considered to be an important element in the country's efforts to diversify exports. Horticultural exports also contribute directly to poverty reduction by generating foreign exchange and the creation of employment, particularly in rural areas. All parties agree that joint efforts on a wide range of issues are needed to secure a further well balanced growth of the sector and to minimize the possible negative impact on the natural resource base.

The Netherlands' Government has committed itself to contribute to a balanced growth of the horticulture sector in Ethiopia through a public-private partnership program in line with the WSSD partnership programs in South-east Asia and East-Africa. Jointly with the stakeholders a plan of activities for 2006 for this partnership was formulated and consists of the following topics:

- Capacity building in the floriculture sector in Ethiopia;
- Code of Conduct for the floriculture sector;
- Capacity building phytosanitary unit;
- Market Information Service;
- Integrated Pest Management;
- Decision support model for location of flower production;
- Identification of competitive product-market combinations for fruits and vegetables;
- Implementation of EUREPGAP.

Next to the activities under the intended partnership programme, also a programme is being developed to address natural resource management issues in the Central Rift Valley. Since Wageningen UR is also involved in the latter project, linkages between activities in the two programmes will be made where opportune.

In order to address the first topic 'Capacity building in the floriculture sector in Ethiopia' a mission was conducted in the period October 16-21, 2006 with the following objectives:

- Identify needs and priorities for capacity building in the floriculture sector
- Formulate a strategy for capacity building activities in the floriculture sector for the period 2007 - 2012

Note: the mission focused on education and training; while limited attention could be paid to research and development issues in the floriculture sector.

The mission consisted of three persons:

- Dr. Glenn Humphries of NRDC/ZEGA Training Trust, (NZTT) Zambia having extensive experience with setting-up and running a similar capacity building programme in Zambia
- Mr. Peter van Oene of PTC+ with a longstanding experience in running and managing practical horticultural training programmes in the South and The Netherlands
- Mr. André de Jager, Wageningen UR, expert in horticultural development programmes in East Africa.

The mission during the period in Ethiopia interacted closely with the major stakeholders in the horticultural sector: the flower producers, EHPEA, Ministry of Trade and Industry and potential training providers.

The program of activities of the mission is presented in Annex 2.

## 2 Visits and discussions

### Technical and Vocational Education and Training (TVET)

A short discussion was held with Dr. Andreas Konig, Coordinator TVET Reform Programme. Currently the TVET programme is undergoing a thorough reform. A draft strategy paper states that the intended guiding principles are:

- Demand-orientation
- Quality and relevance
- Equal access versus equal opportunity
- Permeability
- Flexibility
- Life-long learning
- Gender sensitivity.

In addition aspects as stakeholder involvement, public-private partnerships, decentralisation and efficiency are addressed as well.

A number of centers focus on agro-business in general, but no specialised horticultural programmes exist. However, within the new strategy, it will be possible to integrate and link specialised practical floriculture training programmes within the TVET system.

### Jimma University, Jimma

Jimma University is located 347km Southwest of Addis Ababa at Jimma Town. It is an autonomous public higher educational institution established in December 1999 by the Jimma College of Agriculture (founded in 1952) and Jimma Institute of Health Sciences (established in 1983). It is Ethiopia's first innovative Community Oriented Educational Institution of higher learning.

In the School of Agriculture the following programmes are offered:

- Horticulture (BSc. and MSc)
- Crop Sciences (BSc.)
- Animal Sciences (BSc.)
- Natural Resources Management (BSc.)
- Agricultural Engineering
- Agricultural Economics

Students in horticulture have the opportunity to do a two month internship at a commercial flower farm. Jimma University has signed several MoU with flower growers for this activity. Through this set-up graduates from Jimma are in high demand within the floricultural sector. The College conducts research in agriculture (among other floriculture) through its collaborating Universities and Research Institute/centers, industries/companies, students and staff. The faculty of Agriculture has excellent facilities for students to be trained in the various aspects of horticulture including crop management and post-harvest issues.



The mission observed that Jimma University has successfully started exposing students to the commercial floricultural sector within the curriculum and has excellent facilities for students wishing to specialize in horticulture or floriculture. Therefore the mission recommends that Jimma University should play one of the key-roles in the development of a capacity building programme in the floriculture sector.

### **Ethiopian Management Institute, Debre Zeit**

A short visit was paid to the Ethiopian Management Institute in Debre Zeit. The mission discussed the options for organising floriculture training sessions at the institute with its Director Dr. Solomon Tafesse. Given the excellent facilities and its location within one of the floriculture production centers, it was concluded that the facilities are suitable to organise training courses in floriculture. It enables quick switches between classroom sessions, visits to the flower farms and conducting experiments at the neighbouring experimental station. As long as no permanent infrastructure for a floricultural training center has been realised, this venue is a potential location for conducting training programmes in the short-term.

### **Visit Rose Farms Debre Zeit and Holetta**

During the course of the mission visits were made by team members to five rose farms in the Debre Zeit and Holetta areas. Farms were typically 5-15 ha in size and entering their second year of production. At each Farm the team members met with Managers and Farm staff and were able to see a range of facilities and cultural operations being carried out.

It is noted that not all activities and facilities have been seen on all sites and that the sample of farms seen may not give a true or comprehensive picture of the whole Floriculture sector. However the commonality between practices seen on the farm sites and matters raised by Managers in discussion together with additional comments made during the industry stakeholder meeting held during the Mission does however suggest that the observations are valid and representative of a significant proportion of the industry.

**Key areas of note and concern that could be addressed and improved by training are as follows:**

<b>Topic</b>	<b>Area of concern raised by persons interviewed and/or noted by the Mission team members</b>	<b>Notes</b>
Basic horticultural knowledge	New sector so many staff are unfamiliar with needs and expectations of the job and customer	There is a need for all staff in all sections of the Farm to have a basic understanding of plant production in greenhouses, company operations and the requirements of the market place
Practical Skills	New entrants to the industry lack practical skill  Graduates envisage a 'clean/office' environment when joining the Farms  Trained staff are very 'Jumpy' and often fail to stay with a company for much time	Managers observed that a structured training programme for all staff may help to encourage staff to stay with the company  Currently much management time is spent carrying out routine skills training at the expense of carrying out true management activities
Pesticide use	Facilities to enable pesticides to be used in accordance with international good practice are not complete on several sites  Workers are reluctant to use protective clothing  Application techniques are not effectively supervised	Farmers need guidance on how to complete their facilities  Staff at supervisor and operator level need training

Topic	Area of concern raised by persons interviewed and/or noted by the Mission team members	Notes
Production	<p>Relatively low on several sites visited</p> <p>Losses due to RSM and Botrytis have been extensive on some sites during the rains</p>	<p>This may be linked to incorrect application of pesticide and management of the greenhouses environment, see above</p>
Post Harvest	<p>Many handlings</p> <p>High incidence of physical damage to flowers</p> <p><b>Note:</b> Low production coupled with loss of quality in the post harvest handling period will undoubtedly affect the long term sustainability of the industry where reputation is important and operating margins small</p>	<p>Significant losses are being incurred during the post harvest phase and could be corrected by giving attention to basic practical skills and effective supervision of harvest and post harvest operations</p>
Reliance on Consultants	<p>Owners and managers rely heavily on the advice given by Consultants</p>	<p>There is a need to increase the level of knowledge of Owners and Managers so that they can work in partnership with the consultant rather than as now where instructions are followed but not understood</p>
Technical services for maintenance and repair of equipment	<p>Training given at installation is insufficient and soon forgotten</p> <p>Maintenance and repair need more skilled technicians and a supply in country of spare parts</p>	
Language Use	<p>Most staff interviewed below Manager level do not have fluency and/or confidence to communicate in English</p>	<p>Training will initially require interpretation</p> <p>Courses in basic technical English may be useful to facilitate communication between managers and staff</p>
Investor/owner understanding of the demands of running a successful farm	<p>Inputs may arrive late</p> <p>Areas of investment necessary for good practice but not directly 'productive' do not receive adequate attention</p>	<p>Owners need guidance on:</p> <ul style="list-style-type: none"> <li>- Factors that contribute to productivity, record keeping and budgeting</li> <li>- Management communications</li> <li>- Recruitment of staff</li> <li>- Standards needed for compliance with Ethiopian Law</li> <li>- Standards for Code of Practice and Market Label compliance</li> </ul>
Information sharing	<p>This works informally and well in a limited number of cases</p>	<p>There is need for Farmers and Managers to share more freely information that is not 'sensitive' to marketing and competitiveness</p>

**A number of positive aspects, pertinent to the proposed Training programme were also noted during the Farm visits and are as follows:**

<b>Topic</b>	<b>Positive aspects noted</b>
Quality of production facilities and crops	Production facilities are of a good standard  Problem with productivity and crop quality could be reduced significantly by practical improvements in working practice that can be addressed by training
Willingness to cooperate and participate in the Training programme	All owners and managers recognised that there was an urgent need for training in all subjects at all levels and are willing to cooperate with the Association and the Training Task Force to ensure that the programme can be implemented as quickly as possible
Attitude and willingness to contribute to the cost of providing training	Contribution to the cost of provision of training was not viewed as a problem <b>Note:</b> Actual figures for the size of contribution that would be viewed as acceptable were not discussed
Farm staff's attitude and ability to learn	Farm staff are keen to learn and the Mission team members witnessed that instruction given during the visit was shared immediately with colleagues and put into practice
Possibility for positive results as a result of implementing a training programme	These are significant. Many problems are not of a complex nature, there is tremendous willingness to cooperate to get the programme running, farm staff are keen to learn and have the capacity to respond to training, etc.

### **3 Stakeholders meeting on training needs**

On Wednesday October 18, 2006 a stakeholders meeting was organised with the following objectives:

- Identify and discuss the immediate and long term training needs for the industry
- Examine various models used elsewhere to provide specialist vocational and practical training for the floriculture sector
- Identify the way forward for the Ethiopian Floriculture Sector Training initiative



The meeting was attended by six grower members of EHPEA, two board members and the executive secretary of EHPEA, representative of MoTI. Mr. Westenbrink of the Royal Netherlands Embassy and the mission team.

#### ***Training needs Identified by the Industry Members present***

Training needs identified by the industry are listed in the table below. Please note that the needs listed are presented by category and do not necessarily reflect the priority and urgency of need or the complete picture of industry training needs. Topics identified do however reflect the information collected and observations made on the five farm visits conducted during the mission.

Topic	Needs Expressed by Industry Stakeholders	Notes
<b>Practical skills</b>	<b>Diploma and Degree</b> holders need 'Hands On' experience in a wide range of tasks related to crop Production <b>Operators/attendants</b> need training in basic practical skills, how the industry operates and what standards are expected <b>Supervisors</b> need the same training followed by basic supervisory skills so that skills training from the Manager or Consultant can be cascaded to the workforce and correct working practices and standards implemented effectively	Training is currently provided on an ad-hoc basis in house by Managers. This may not be the best use of Management time and many Training needs would be more effectively addressed by the use of a dedicated team working in cooperation with the Farm Manager. <b>Note:</b> In the longer term development of 'in house' expertise to deliver routine training will be necessary to accommodate frequent staff changes
<b>Pesticide use</b>	All aspects of pesticide use must be included Formal Certification, as in Certificates 1 & 2 in the Netherlands is desirable	Important to do this before accidents occur and industry reputation is damaged Training is part of 'Duty of Care'
<b>Post Harvest</b>	Training in all aspects is needed	Losses due to post harvest handling are significant on a number of sites Ethiopian reputation in the auction could be improved if these matters are addressed satisfactorily
<b>Machinery and Equipment</b>	Routine operation and maintenance of farm and greenhouse equipment, fertigation, irrigation, farm electrics, plumbing carpentry, tractor driving, etc. Tractor driving and maintenance	Training provided at installation is insufficient and soon forgotten Many maintenance needs may arise from use in inexperienced hands Training should be carried out using systems and equipment in use in the industry Training could be linked to an existing training unit e.g. at TVET Nazareth
<b>Supervisory Skills</b>	Skills including training, leadership, team work, implementation of standards, control of labour and labour laws are all seen as relevant and necessary	Harassment and bullying do not form part of the Ethiopian culture and are not seen as problems at this stage
<b>Technical Training</b>	Greater understanding of technical topics are needed by new Owners and Managers to reduce the total reliance on advice from Consultants	Fertigation is cited as the most urgent
<b>Record Keeping and Data Management</b>	This is seen as necessary and suitable software packages are needed	This activity needs to be linked to the Code of practice and record keeping required for market Label compliance, e.g. MPS Collection of useful data in a standard readily accessible form would facilitate the establishment of Study Groups later



### ***Other views pertinent to the training initiative expressed by the industry stakeholders during the Meeting***

Training is a big motivator and an active training programme can help to retain good staff on the farm. One farm assists with access to distance learning in basic school subjects and employees sign a training agreement with the Farm.

Diploma and Graduate entrants to the industry are very 'Jumpy', i.e. moving frequently from job to job and many Farmers observe that their stable supervisory group is made up of local people who have not had exposure to further or higher education. 'Growing Supervisors in house is seen as important and suitable training for this client should not be neglected.



Assistance with basic English and Maths pertinent to routine operations on the farm would be useful and would assist with 'School Leaver' progression to supervisory posts

Training provided by Input suppliers and visiting professionals/consultants should be coordinated to ensure that the maximum number of companies is able to benefit. Acquisition of practical exposure and skill as part of a formal training programme prior to employment is seen as desirable

### ***The Way Forward for Ethiopia***

The meeting concluded with the following overall directives:

- The training initiative must be industry driven as the industry will be the major end users;
- Training must be practical and relevant to current production techniques;
- The training initiative must work in line with existing strategic plans for the sector and with relevant operators and stakeholders in the public sector, e.g.. Min of TI, Min of Ed, TVET, etc.;
- A Task force should be formed to prepare a strategy plan for discussion by the industry and potential support agencies.

## **4 Writeshop capacity building strategy**

With the observations made during the visits to the various organisations and producers as well as the results of the stakeholders meeting as inputs, a small taskforce engaged in a writeshop to formulate a strategy for a capacity building programme in the floriculture sector. The taskforce consisted of the following persons:

- Mr. Seifu Bedada (Board Member EHPEA)
- Mr. Yidnekachew Ayele (Board Member EHPEA)
- Dr Adhanom Negasi (Ministry of Trade and Industry / Ministerial advisor horticulture)
- Mr. Dhuguma Adgugna (Dean College of Agriculture & Veterinary Medicine Jimma University)
- Dr. Glenn Humphries (NRDC/ZEGA Training Trust / Advisor)
- Mr. Peter van Oene (Practical Training Center PTC+ The Netherlands / Advisor)
- Mr. André de Jager (Wageningen University and Research Center / Facilitator)

During a 1,5 day session the taskforce members discussed the major components of a training strategy, identified short-term as well as long-term activities, and formulated the global outline of an action plan. This outline was further developed by the facilitators in a first draft of a strategy. Immediately after the writeshop, the results were presented and discussed during a second stakeholder consultation. The remarks, suggestions and comments made by the stakeholders were included in the draft strategy. The draft strategy is presented in Annex 1 of this report.

## 5 Proposed plan of activities in 2006 en 2007 to ‘get started’

In the formulated draft strategy a set of activities for the short-term and long-term have been formulated. In order to ensure the timely implementation of the strategy it is suggested to immediately appoint a Training Task Force comprising of two members of EHPEA, one representative from MoTI and the Dean for Jimma University. This Task Force will act on behalf of the EHPEA membership to organise training activities in 2006 and early 2007 and carry out the preparatory work needed for the establishment of the full-fledged training programme to start early 2008. The Training Task Force will report to the EHPEA Executive and Board. Activities to be undertaken by the Task Force in 2006-2007 are as follows:

Activity	Period	Remarks
Sourcing funds and recruitment external Training Coordinator	December 2006 – February 2007	
Sourcing funds and organisation of two training courses in specific technical topics	December 2006 – June 2007	With assistance of Training Coordinator and Wageningen UR
Sourcing funds and organisation of an ‘on-farm’ training programme	January – December 2007	Lead by Training Coordinator
Proposal for suitable legal framework and management structure	January – March 2007	
Needs assessment	April – September 2007	With assistance of Training Coordinator and Wageningen UR
Formulation long-term project, submit and acquire funds	April – December 2007	With assistance of Training Coordinator and Wageningen UR

## 6 Concluding remarks

The mission concludes that the major stakeholders (growers, EHPEA, Ministry of Trade and Industry, Jimma University) have agreed upon a common approach and strategy to develop of capacity building programme for the floriculture sector for the period 2007-2012.

The training and capacity building programme will be industry-driven, but will operate as a public-private sector partnership working within the guidelines outlined in the Sector Strategy Paper and the Ethiopian Vocational Training Policy (TVET). In the long-term the programme and its facilities should become financially sustainable after initial donor support during the establishment and development phase.

The programme consists of a structured plan that identifies short and long term goals, and allows continued evaluation, review and revision in the light of the performance of the

training programme, industry developments and changing industry training needs. It aims to achieve an optimal combination of theory, formal practical training ('safe learning environment') and exposure to real-life conditions and on-the-job-learning ('rich learning environment').

Training will be provided initially via short part-time courses delivered at a range of existing sites mainly within the industry (e.g. farms) and at close range to the existing production centres to facilitate easy access for the target groups. Gradually a full-fledged training programme will be developed, including a specialist practical training centre to facilitate the delivery of additional short courses and longer Certificate and Diploma programmes. In addition practical training facilities will be made available at Jimma University to enhance the delivery of practical training at the university level.

Emphasis in all the training provided will be on practical skills training and the knowledge and understanding needed to meet the demands and standards of the sector and the international market place. Practical hands on experience is important to ensure that trainees are able to perform to expected standards and are able to relate theory to practice in the work place. Trainees will initially work with practical facilities found in the industry and then after the construction of a dedicated practical training facility will have the opportunity to learn basic and additional skills in a 'safe learning environment' where commercial production does not limit the scope of the training activities.

A pool of local trainers, needed to facilitate delivery of all the components of the training programme in the short and long term, will be developed through ongoing modular staff development and training-of-trainers programmes.



In follow-up activities more attention needs to be paid to a capacity building process in research and development in the floriculture sector. This may include MSc exchange programmes and sandwich PhD's with Universities

with extensive horticulture and floriculture research and education programmes.

Given the immediate need for capacity development the mission concludes that identification of financial sources to enable implementation both the short and long-term plans should receive the highest priority and it is recommended that the capacity building taskforce takes the lead in this process.

## **Annex 1 Draft Strategy Capacity Building in the Export-Oriented Floriculture Sector in Ethiopia**

### **A Strategic Plan for the Period 2007 – 2012**

#### **1 Introduction**

In the draft strategy plan of EHPEA as well as in the Ethiopian-Netherlands Partnership Programme in Horticulture, the need for capacity building activities in the floriculture sector has been identified as one of the priorities to facilitate a further and sustainable growth of the floriculture sector in Ethiopia. In the period October 16-20, 2006 a taskforce was formed to develop a first draft of a strategic plan for capacity building in the floriculture sector in Ethiopia. This taskforce consisted of the following persons:

- Mr. Seifu Bedada (Board Member EHPEA)
- Mr. Yidnekachew Ayele (Board Member EHPEA)
- Dr Adhanom Negasi (Ministry of Trade and Industry / Ministerial advisor horticulture)
- Mr. Dhuguma Adgugna (Dean College of Agriculture & Veterinary Medicine Jimma University)
- Dr. Glenn Humphries (NRDC/ZEGA Training Trust / Advisor)
- Mr. Peter van Oene (Practical Training Center PTC+ The Netherlands / Advisor)
- Mr. André de Jager (Wageningen University and Research Center / Facilitator)

This taskforce held discussions with various stakeholders in the sector and potential training providers in Ethiopia and finally formulated this first draft of a strategic plan. It is anticipated that this draft will be discussed with the various stakeholders in the sector and that a final version will be approved and integrated in the EHPEA strategy and Ethiopian-Netherlands Partnership Programme.

The draft contains a global overview of the proposed capacity building activities to be implemented by the various actors in the sector. Detailed project proposals need to be developed for separate activities once the overall strategy paper has been approved.

The strategy focuses on the floriculture sector. However, it is anticipated that over time also the export-oriented fruits and vegetables sectors will be integrated in the capacity building activities.

It is concluded that, despite the huge commitments from the private sector and the government for this training programme, additional funding is required during the establishment phase of the programme. This additional funding is required because it is observed that external expertise and investments need to quickly and sufficiently upgrade the knowledge within Ethiopia on export-oriented horticulture and that huge efforts need to be made to train a good number of competent trainers and develop relevant curricula. This strategy document aims at formulating an overall long-term strategy of floriculture training and capacity building programme in Ethiopia, to describe a set of specific activities required and identify the required resources (personnel, knowledge, funding).

## 2 Sector description and state-of-the art

The floriculture sector in Ethiopia is young fast growing industry (Table 1) resulting in an increased importance of the share in the GDP and foreign exchange earnings.

Table 1 Major statistics floriculture development in Ethiopia

Year	Number of farms	Cultivated area (ha)	Number of exported stems	Export value (US\$)
2001/02	n.a.	n.a.	-	305,000
2002/03	n.a.	n.a.	16,000,000	2,900,000
2003/04	n.a.	n.a.	32,000,000	5,500,000
2004/05	n.a.	n.a.	83,000,000	12,700,000
2005/06	69	345	186,000,000	21,900,000
2006/07 <sup>1</sup>	80	645	1,114,000,000	113,000,000

<sup>1</sup> estimation by Ministry of Trade and Industry

Roses under green houses make up 80% of the cultivated area, cuttings under greenhouses 8% and the remaining 12% are summer flowers in open air conditions. The majority of the floriculture production is concentrated within a radius of 50 km around the capital Addis Ababa, but still a few farms are located as far as 160 to 170 km from Addis Ababa. Different types of agro-ecological conditions exist: from the highlands up to 2600 meter till the vicinity around Nazareth at 1550 meter. This indicates that a wide variety of roses can be grown in Ethiopia. Currently, the main areas of production are Holetta (2100 – 2400 meter), Sebeta (2100 meter) and Debre Zeit (1800 meter) and Ziway (1600 meter). Water resources are available, but depletion of water supply has been observed in the Holetta area.

The international market for flowers is still growing, but is characterised by increased competition. It is expected that Ethiopia can further increase its market share by diversifying its product range and market channels. Currently the Dutch action (50%) and direct sales to Germany and UK (50%) are the major market channels. Also the proximity of Ethiopia to its major export markets (Western Europe, Middle East and Russia) is considered to be a favourable factor.

It is estimated that currently over 25,000 jobs are created in the floriculture sector, mainly for women located in the rural areas. Labour is available and experiences show that unskilled labour can easily be trained for the floriculture industry.

The Ethiopian Government in general and The Ministry of Trade and Industry in particular creates a very conducive environment for investors in the floricultural sector such as customs duty exemption, income tax exemption, land availability for investment on leasehold basis, interest rates and available airfreight space with Ethiopian airlines. In addition general investments in electricity, communication and road infrastructure further have stimulated foreign and local investments in the sector. Compared to other countries in the region, the general security conditions in Ethiopia attract foreign investors.

A floriculture sector organisation (EHPEA) exists, but needs further strengthening to effectively deal with the many issues related to a fast growing industry. A strong dialogue between the government and the private sector exists.

The fast growing industry requires access to up-to-date production technology and equipment. The level and quality of local input suppliers and service providers are currently lacking behind the demands of the sector. Most of the equipment and technical production and post-harvest knowledge is imported from Europe, Kenya and Israel. In

general a rather ad-hoc approach is observed toward technical training, with many initiatives by individual companies, limited coordination and attention to a sustainable build-up of technical capacity.

The sector has also identified the immediate need for the formulation and implementation of a Code of Conduct and guidance on how to achieve compliance with this and the various existing labels to meet current market requirements and to protect the reputation of the Ethiopian horticultural sector internally and internationally. Initiatives have been taken by EHPEA to realise this in the coming year. This code will also address environmental (water, pest and disease management) and labour issues.

### **3 Problem statement capacity building in the floricultural sector**

The fast growing industry requires a growing supply of staff equipped with relevant and practical technical knowledge. All stakeholders in the sector acknowledge there is an urgent shortage of technical experienced staff at various levels: owners, managers, administrators, supervisors and attendants.

Within Ethiopia currently no floriculture industry specific practical training programme exists. Moreover, at the various levels of training institutes, it is only with limited technical and practical know-how of the floricultural sector that trainings are conducted. For instance no vocational training institutes deals with floriculture and at BSc and MSc level no specific specialisations in floriculture exists.

On the other hand, technical support from the input suppliers is considered to be insufficient, while companies also lack other sources of information such as extension or research.

This situation implies that many commercial companies conduct or organise in-house training for their staff individually on an ad-hoc basis. Initiatives from higher learning institutes such as at Jimma University, where BSc students in horticulture can go for a two month internship to a commercial flower farms are very much appreciated by the sector and show the need for a more practical and industry-oriented capacity building programme.

All stakeholders in the floriculture industry in Ethiopia emphasize the urgent need for the establishment of a sustainable, industry-led, practically oriented capacity building facility as major prerequisite for the development of a profitable and sustainable development of the industry in Ethiopia.

### **4 Objectives**

#### **Overall objective:**

- To facilitate the development of an Ethiopian floriculture industry to be profitable, sustainable, dynamic, reputable and compliant with national and international market and legal requirements.

#### **Specific objectives:**

- To establish sustainable, industry-led and practically oriented capacity building programmes which facilitate the floriculture sector development in Ethiopia;
- To have sufficient supply of educated and practically trained staff for all required levels in the floriculture industry in Ethiopia

- To link other horticultural sectors to the developed capacity building programmes and facilities

#### **4 Target groups / clients**

For the capacity building programmes and facilities the following target groups and clients are identified:

- Growers (owner, managers, administrators, supervisors, attendants)
- Service providers (EHPEA, phyto, suppliers, handling)
- Education providers (Universities, TVET, independent trainers)
- Research centers

#### **5 Overall approach**

The training and capacity building programmes will be industry-driven, and will operate as a public-private sector partnership working within the guidelines outlined in the Sector Strategy Paper and the Ethiopian Vocational Training Policy (TVET). In the long-term the programme and its facilities should become financially sustainable after initial donor support during the establishment and development phase.

The programme consists of a structured plan that identifies short and long term goals. It should allow continued evaluation, review and revision in line with the performance of the training programme, industry developments and changing industry training needs. It should aim at achieving an optimal combination of theory, formal practical training ('safe learning environment') and exposure to real-life conditions and on-the-job-learning ('rich learning environment').

Training will be provided initially via short part-time courses delivered at a range of existing sites mainly within the industry (e.g. farms) and at close range to the existing production centers to facilitate easy access for the target groups. Gradually a full-fledged training programme will be developed to facilitate the delivery of additional short courses and improvement of the longer Certificate and Diploma programmes. In addition practical training facilities will be made available at Jimma College of Agriculture and Veterinary Sciences to enhance the delivery of practical training at the university level.

Emphasis in all the training provided will be on practical skills training, knowledge and understanding needed to meet the demands and standards of the sector and the international market place. Practical hands-on experience is important to ensure that trainees are able to perform to expected standards and are in a position to relate theory to practice in the work place. Trainees will initially work with practical facilities found in the industry and then after the construction of a dedicated practical training facility will have the opportunity to learn basic and additional skills in a 'safe learning environment' where commercial production does not limit the scope of the training activities.

A pool of local trainers, needed to facilitate delivery of all the components of the training programme in the short and long term, will be developed through on-going modular staff development and training-of-trainers programmes.

## **6 Working Packages**

### **6.1 Introduction**

Since the industry has expressed the urgency of the training needs, in this strategy a set of short-term and long-term activities are distinguished. The short-term activities scheduled for the period December 2006 – December 2007 ensure that within the first year concrete training activities on specific priority topics are organised. The long-term activities, scheduled for January 2006 – December 2012 ensure that a full-fledged training programme and related training facilities are developed and thereby implementation starts from January 2008 onwards. This implies that in the year 2007 both training activities are implemented (short-term activities) and preparations are made for the full-fledged long-term training programme.

### **6.2 Short-term activities (December 2006 – December 2007)**

Discussions with producers and other stakeholders highlighted that training needs are many and urgent. Individual producers are too busy to implement all the activities needed in the time available without assistance and there is a high commitment by all stakeholders 'to get started'.

The short term set of activities comprises the following activities:

1. Formation of the Training Task Force
2. Appointment of an experienced Training Coordinator
3. Implementation of two training courses in specific technical topics
4. Establishment and implementation of an 'on-farm' training programme
5. Preparation for the activities to be carried out in the longer term work plan

#### **6.2.1 Formation of the Training Task Force**

The Training Task Force comprises two members of EHPEA, one representative from MoTI and the Dean for Jimma University. This Group of people will act on behalf of the EHPEA membership to organise training activities in 2006 and early 2007 and carry out the preparatory work needed for the establishment of the full-fledged training programme to start early 2008. The Training Task Force will report to the EHPEA Executive and Board. Activities to be undertaken by the Task Force in 2006-2007 are as follows:

- Acquiring funds for and organisation of the two specialist training activities;
- Sourcing of funding and selection/recruitment of Training Coordinator;
- Sourcing of funding for on-farm training programmes in 2007;
- Prepare proposal for suitable legal framework and management structure for the 'Training Institute'.

#### **6.2.2 Appointment of an experienced Training Coordinator**

A Training Coordinator will be recruited for a two year period to coordinate the described short-term activities in 2006 and 2007, make preparations for the full-fledged training programme and coordinate the programme in its initial year (2008). The Training Coordinator will liaise between EHPEA members, stakeholders and external training providers to ensure that people remain informed, needs are met and the project activities operate within the various relevant plans for capacity building and training. The Training Coordinator will report initially to the Task force and later to the Board of Trustees of the Training Trust. The Training Coordinator will operate from 2008 onwards within an



international consortium of training experts which will guide and backstop the training programme during the establishment phase envisaged for the period 2008 – 2012. A draft Terms of Reference for the Training Coordinator are provided in Appendix 1

### **6.2.3 Implementation of two training courses in specific technical topics**

To address the immediate training needs of the sector two training sessions will be implemented in the period December 2006 – April 2007. The Training Task Force will conduct the following activities:

- Identify technical topics and target groups
- Identify and recruit specialists (consultants)
- Implementation training on-farm in selected cluster areas (Holetta, Debre Zeit, Sebeta etc.) (December 2006 – April 2007)

### **6.2.4 Establishment and implementation of an 'on-farm' training programme**

'On-farm' training, i.e. short courses in specialist topics designed to be delivered on individual farm sites is a cost efficient and effective way of starting a training programme quickly. Training material to be used will be based on existing material and adapted to suit local conditions. Courses that could be delivered by the mobile training unit include: Various aspects of pesticide use, post harvest handling, supervision skills, basic crop production, etc. The programme will be industry driven and will be developed depending on the identified needs.

Approximately 8-10 trainers for this programme will be recruited locally and trained initially by the Training Coordinator and the international consortium. This will include a training-of-trainers programme at one of the consortium members (preferably PTC+ in The Netherlands) and training on specific topics by specialists from the international consortium. On completion of their training some of these trainers will remain with the mobile training unit and others will move on to deliver training at the practical training centre when it is established early 2008. It is assumed that Training of the Trainers programme and the curriculum development requires external funding and assistance and that the implementation of the training is financed by the participants (companies) on operational costs basis. As much as possible links will be made with the proposed activities on the establishment of the code of conduct.

In short this will entail the following activities:

- Training-of-trainer of local trainers (8-10 persons)
- Development of training material
- Implement short topic-specific courses (May 2007 – December 2007)

Guidelines for the appointment of the local trainers are provided in Appendix 2

### **6.2.5 Preparation for the activities to be carried out in the longer term work plan**

Activities in the long term work plan e.g. Certificate and Diploma Training, Practical and management training for Degree Holders, etc. require that:

- Training needs for the long term are identified fully
- Various ways of servicing the needs identified are investigated and a feasibility study is conducted for the construction and operation of practical training facility(ies) and a training centre

- Application for funding to support the construction of practical facilities and provide the technical assistance needed to set up, commission and use effectively the practical facilities and equipment installed.

These activities remain the responsibility of the Training Trust and Training Task Force who will be assisted, when necessary by the Training Coordinator.

### **6.3 Long-term activities (January 2007 – December 2012)**

The long-term set of activities comprises the following activities:

1. Needs assessment
2. Project formulation and acquiring funds
3. Curriculum development and implementation
4. Development of training material and courses
5. Establishment of training facilities and locations
6. Training of trainers

#### **6.3.1 *Comprehensive needs assessment for long-term training programme and a feasibility study***

Important for the long term to strengthen the flower industry, is building sustainable links between the private companies, producers' organizations and education institutions. Training capacity development entails also economic, institutional and private and public interests. There are many stakeholders who have their own perspectives, expectations and interests. Therefore a comprehensive needs assessment for long-term training programme and a feasibility study should be carried out.

#### **6.3.2 *Project formulation and acquiring funds***

Based on the needs assessment, a comprehensive project proposal needs to be formulated by the Training Task Force to acquire additional assistance in terms of personnel, knowledge and funds during the establishment phase of the training programme and related facilities in the period 2008 – 2012. It is anticipated that, in addition to external support, substantial financial contributions for the programme will be made available by the Ethiopian government and the private sector.

#### **6.3.3 *Curriculum development and implementation***

The process of curriculum development consists of a series of sequential steps in order to ensure that the curriculum meets the demands of the involved parties. These steps follow the common project cycle steps: analysis, design, development, pilot-test, revision, implementation and evaluation. All steps are interactive, local beneficiaries and other stakeholders should be involved as much as possible to formulate curricula for:

- Short topic specific courses (modular) including licenses (enabling as building blocks for diploma / certificate)
- Diploma / certificate level
- Degree courses (develop new or review existing curricula in line with University)
- Post-graduate specialisation

#### **6.3.4 Development of Training Material / Courses**

For the identified curricula, training material and courses should be developed based on relevant and existing materials that accommodate the needs of the floriculture sector in Ethiopia. After the immediate implementation of training programmes on the short term there should be a gradual development of full-fledged training programmes. Topics of the training material and courses should at least be:

- Basic Crop production
- Integrated Pest Management
- Post Harvest
- Machinery and Equipment
- Supervisory skills
- Fertigation / Climate control
- Record Keeping and Farm economics

#### **6.3.5 Establishment of training facilities and locations**

The selection of the facilities and equipment will be based on a concise needs assessment and the focus of the training provision will be on the optimal combination of theory, formal practical learning (safe learning environment) and on-the-job learning (rich learning environment). The training facilities and provision should include the following as a minimum:

- Horticultural training centre (safe learning environment), pivot within 50 km from the different production areas
- On-the-job learning (rich learning environment) on farms / satellites in the production areas
- Universities for boosting up (theoretical / practical) knowledge on floriculture

The scale of the facilities and locations needed/justified should be investigated as part of the needs assessment and the aim is to provide sufficient sustainable resources to support the training programmes needed by for the flower sector.

#### **6.3.6 Training of Trainers**

Continuing with the staff of the mobile training Unit should be the start point for the long term to organise trainings for different identified areas. Exploring the practical world and gaining experience in the floriculture production- and export companies in Ethiopia are essential for the (future) trainers in the sector.

The future trainers need to have a clear picture of the trends, opportunities, technical modalities and day-to-day practice in this sector, in order to develop competences of training staff, course contents and training materials matching with the demands in the floriculture sector in Ethiopia. Selection and training of appropriate training staff will be an ongoing process. This training could be done on-the-job and for specific topics abroad.

## 7 Global time table

The activities identified will be implemented according to the following global time table:

Activity	2006	2007				2008	2009	2010	2011	2012
	Q4	Q1	Q2	Q3	Q4					
<b>Short-term activities</b>										
1 Formation Training Task Force										
2 Appointment Training Coordinator										
3 Implementation 2 trainings										
4 Establish on-farm training program										
5 Preparation long-term program										
<b>Long-term activities</b>										
1 Needs assessment										
2 Project formulation										
3 Curriculum development + impl.										
4 Development training material										
5 Establishment training facilities										
6 Training of Trainers										

## 8 Budget estimation

It is anticipated that the budget for the implementation of this strategy will be realised from various sources: Ethiopian private sector, industry partners, government funding and donor funding. A global estimation of the required external funding is presented in the Table below. The funding from the private sector and the government has been presented as 'PM' (pro memoria) and needs to be quantified at a later stage.

Activity	Budget estimation (k€)								
	Private Sector	Public Sector	External Funds						
			2007	2008	2009	2010	2011	2012	
<b>Short-term activities</b>									
1 Formation Training Task Force	PM	PM	-	-	-	-	-	-	-
2 Appointment Training Coordinator <sup>1</sup>	-	-	100	100	-	-	-	-	-
3 Implementation 2 training courses	PM	PM	50	-	-	-	-	-	-
4 Establish on-farm training program	PM	PM	100	-	-	-	-	-	-
5 Preparation long-term program	PM	PM	10	-	-	-	-	-	-
<b>Long-term activities</b>									
1 Needs assessment	PM	PM	25						
2 Project formulation	PM	PM	10						
3 Curriculum development + implementation	PM	PM	-	500	500	250	250	250	
4 Development training material	PM	PM	-	200	200	-	100	-	
5 Establishment training facilities	-	PM	-	300	200	-	-	-	
6 Training of Trainers	PM	PM	-	125	125	-	-	-	

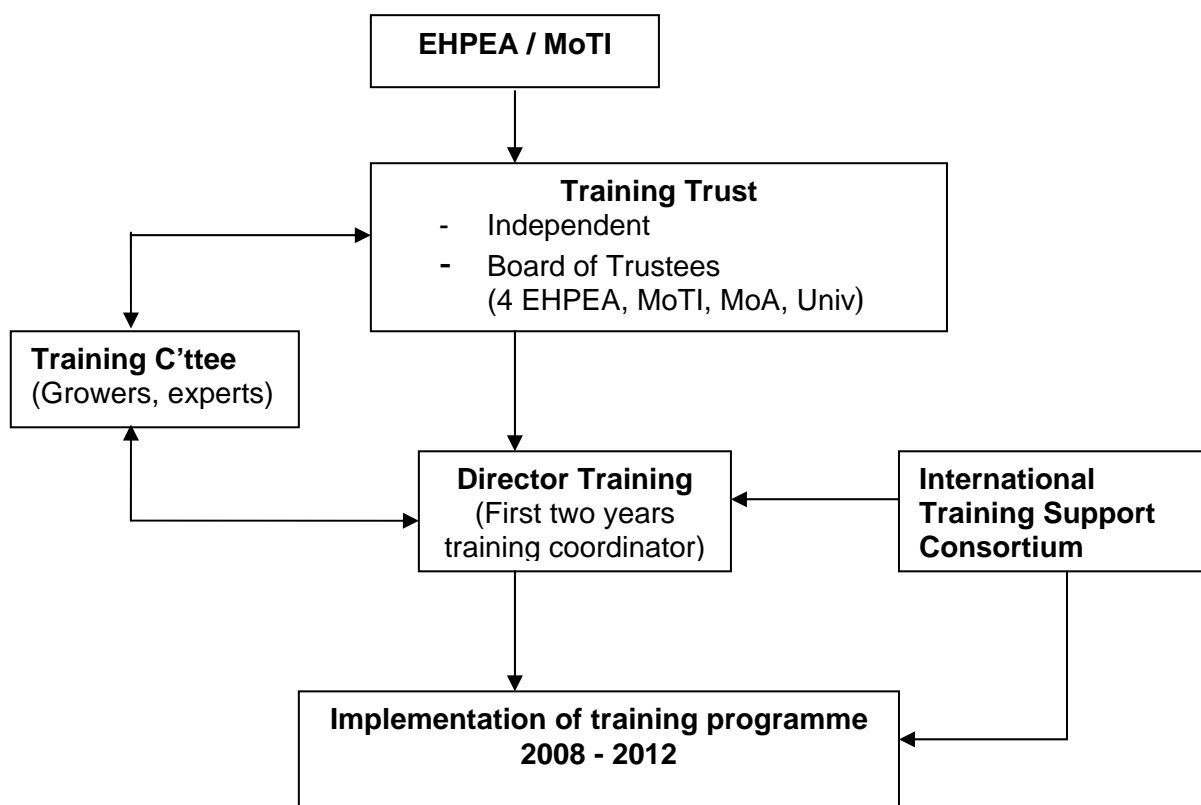
<sup>1</sup> external coordinator in 2007 and 2008; from 2009 local training coordinator included in the long-term curriculum implementation budget

## **9 Governance, organisation, management**

During the first year, 2007, the governance and organisational structure for the training programme needs to be established under the coordination of the Training Task Force, consisting of members of the key stakeholder organisations. They will ensure that at the beginning of 2008 an initial permanent governance structure will be operational.

It is suggested that the training programme will be managed by an independent training trust, which is governed by EHPEA and the Ministry of Trade and Industry. A training committee consisting of growers, technical and training experts will advise the Trust on the content, structure and management of the programme.

The Director Training is responsible for the day-to-day management of the training programme. The first two years this position will be fulfilled by the appointed Training Coordinator. An international consortium of technical and training experts will assist the Director Training during the establishment phase of the programme (2008 – 2012), after which this support will be phased out.



## 10 Sustainability of the programme

One of the crucial elements of the programme will be its financial sustainability in the long-term. As stated earlier it is anticipated that during the establishment phase of the programme (2008 – 2012) external funding is required for development and implementation of the training programme, training of trainers programme, initial investments etc.

However, immediately after the start of the programme in 2008, activities need to be initiated which will lead eventually to a programme that can be run in a financially sustainable way from 2012 onwards. Therefore an integrated costing system must be put in place to provide detailed insight in the costs and potential income sources. Based on the results of this financial monitoring, a business plan needs to be developed by the Trust in 2010-2011 aiming at a financial sustainable Training Trust.

Focal points in the business plan should be among others:

- Cost effectiveness of the programme
- Identifying various sources of sustainable funding such as:
  - Growers (member fees, levy on export etc.)
  - Government (regular budget MoE/MoA)
  - Fee structure
  - Industry partners (sponsorships etc.)
  - License renewal

## Appendix 1

### Profile and Terms of Reference for the Training Coordinator (Draft)

#### **Introduction**

A Training Coordinator will be appointed to guide and oversee the implementation of the training programme for the initial 2 year period.

The Training Coordinator will be an employee of .....and will report directly to .....

A local Director of Training will be appointed during the first year of the project and will continue with the management of the training programme and practical training facilities after the departure of the Training coordinator.

#### 1. Terms of Reference for the Training Coordinator

- Develop and implement a programme of on-farm training to meet the immediate and priority training needs of existing employees
- Train, in conjunction with external training providers, a pool of local staff which will to continue with short course development and delivery
- Conduct a comprehensive training needs analysis
- Conduct a feasibility study for practical training facilities and if justified oversee, in conjunction with external service providers, the construction of practical training facility(ies)
- Assist EHPEA with the preparation of applications for financial support and technical backstopping for the training programme
- Liaise with external specialist training providers, EHPEA, other relevant stake holders, e.g. TVET and the Producer/Exporter members of EHPEA
- All other duties as directed by the management.

#### 2. Profile

- Educated to degree level with at least 5 years of relevant working experience;
- Experienced in the commercial floriculture, international market standards and practical vocational training in preferably in Africa;
- Proven management experience and reporting skills;
- Outgoing, positive, committed, determined, hard working, able to get along with people and able to encourage and develop local staff to take roles of responsibility and deliver training.

## Appendix 2

### Guidelines for appointing local trainers

#### 1. Profile

- Educated to Diploma or Graduate level in Agriculture or Horticulture with at least two years of work experience after qualification in a relevant topic area. (Extension work, Agro chemicals, Horticultural/Floriculture farm or internship)
- Fluent in written and spoken English and able to translate easily and accurately into Amharic and other local vernacular languages
- Enthusiastic, outgoing and charismatic, (helps to attract and keep trainees interested)
- Prepared to work hard and be flexible with working hours
- Reasonable computer literacy, (Word, Excel, Publisher, Power point, etc.)
- Ability to drive is an advantage

#### 2. Selection

- Applicants to apply in written English (Letter and CV)
- Promising candidates to be invited for interview
  - Oral interview +/- 40 min (Biodata and range of technical issues pertinent to current and potential future employment)
  - Practical instruction exercise involving use of Flip Chart, real practical materials and at least one live trainee
- Interviews to be conducted by panel comprising two members of the Task force, (one producer and one other) together with input from the Training Coordinator

Note: it is desirable that at least some of the Training Team is Female



## **Annex 2 Itinerary**

### **Saturday October 14**

- Arrival Dr. Glenn Humphries from Lusaka

### **Sunday October 15**

- Farm visits Dr. Glenn Humphries accompanied by Mr. Tsegaye

### **Monday October 16**

- Arrival Bole Airport André and Peter from Nairobi
- Morning: courtesy call embassy-briefing/discussion
- Lunch: Mr. Sisay, update of the planning
- 13:00: Dr. Andreas König coordinator TVET Reform Component GTZ
- Visit Management Training Institute Debre Zeit and a flower farms
- Evening 19:30: Dinner with Board

### **Tuesday October 17**

- Early morning departure for Jimma University. The mission will accompanied by Dr. Adhanom (MoTI)
- Discussions and visits to the faculty led by Mr. Duguma Adugne Deblel, Dean College of Agriculture and Veterinary Medicine.
- Diner with staff and President of Jimma University

### **Wednesday October 18**

- Early morning departure for Addis
- Meeting key stakeholders on training requirements and training models.
  - Inventory of training needs
  - Presentations of existing training models and initiatives (Zambia, Uganda, The Netherlands)
  - Discussions on appropriate approach in Ethiopia
  - Discussions on key partners and organisational set-up in Ethiopia

### **Thursday October 19**

- Morning: Additional visits to flower farms in Holetta
- Afternoon: Starting writeshop with taskforce

### **Friday October 20**

- Morning: writeshop continued
- Afternoon: Meeting key stakeholders  
Presentation and discussion on project/programme outline  
Agreements on way forward
- Evening: dinner and debriefing

### **Saturday October 21**

- Adjustments of project/programme outline and writing of mission report
- Morning: departure of Dr. Glenn Humphries
- Evening: departure to Amsterdam André and Peter (23:00)

## **Annex 3      Review of Models used for industry specific training provision elsewhere**

### ***PTC plus***

PTC plus is the practical training centre which provides practical horticultural and floricultural training in the Netherlands.

#### *Legal structure and funding*

Currently operates as a public institution funded by the government but will move to being a private, independent Trust in 2007.

Currently funding is given directly to the institute by Government. In the future this funding will be given to current in country users of the institute who may choose to buy training provided by PTC plus. Income is also raised from the design and delivery of short courses for industry and by international consultancy.

#### *Facilities*

PTC plus (Horticulture and floriculture) has residential facilities and classrooms and is equipped with a multi-factorial greenhouse unit and a comprehensive range of greenhouse equipment for 'hands on' Practical training delivered in a 'Safe Learning environment'.

Crops are raised for training purposes only and not for income generation and research

#### *Services provided*

In country      Short practical courses are provided for all horticultural training institutes in the country  
Short courses are also designed and delivered in response to individual requests from the industry

#### International Work

This is an increasing sector of business and activities include:  
Training of Trainers, delivered in Holland  
Development of Training materials  
Assistance in country with the set up of practical training facilities  
Follow up visits and advice re. the operation of the practical training facilities  
PTC plus is currently active in India, China, Korea and Serbia

### **Advantages of having one single Specialist practical training Unit**

- High cost of providing and keeping equipment up to date is justified by having many users
- Students are able to work in a 'Safe environment' where crop loss due to incorrect actions is of limited significance
- Training needs are not compromised by the need for crops to be profitable **or** of demonstration standard
- Many types/models of equipment are available for use by students
- Staff have good practical training skills and an in-depth knowledge of their specialist subjects
- On site training is supplemented by visit to neighbouring production units to see how learning is being used in the commercial environment

### ***Training model being implemented in Uganda***

This is a new project working under the leadership of the Floriculture Industry Association, in Uganda, UFEA and with guidance from Wageningen UR and PTC plus.

Funding is being provided initially by the NUFFIC programme.

Strategies for sustainability have yet to be developed but consideration is being given to contribution from the Government via TVET, contribution from the industry, maybe as a training levy and the collection of fees for training services provided.

Training facilities are to be developed a two vocational centres, UFEA and on two Farm sites.

Training provision will include Certificate and Diploma Courses in Floriculture and Topic Specific Modular courses for existing industry members and their employees.

Research and development will not be carried out at the training centres but Course participants will learn the techniques needed to be able to conduct trials work in a commercial farm setting.

### ***The NRDC/ZEGA Training Trust, (NZTT), Zambia***

Zambia was a new entrant to the horticulture and floriculture export sector in the early 1990's and at this stage the Industry viewed a lack of suitably trained and experienced manpower as one of the constraints to future industry growth and sustainability.

A training needs analysis was conducted in 1995 and a short course programme for 'On Farm' delivery developed and implemented in the period 1996-8. During this period plans were also made to establish a dedicated training unit, NZTT and a Diploma course.

#### ***Legal structure and funding***

The Trust, NZTT was established by a public / private sector partnership in 1999. Partners being the Industry Association, ZEGA and the Ministry of Agriculture represented by the Natural Resources Development College, NRDC.

The Trust is legally registered in Zambia and operates as an independent institute managed by a Board of Trustees comprising 3 Producers, 3 representatives from the Government and 3 representatives who are independent but linked with the industry.

A Memorandum of Understanding was made with the Ministry of Agriculture making land and building available on an existing College site and funding for the initial set up phase was provided by the industry via ZEGA and ZEGA Ltd.

This enabled the Industry to attract donor funding for private sector support from both the Dutch and Norwegian Embassies. Assistance for set up was also provided by many suppliers who contributed inputs and equipment at cost or at a subsidised cost.

Student fees, sale of training to the industry, sale of produce from the Farm, Auditing the ZEGA Code of Practice and participation in a small number of international projects also now contribute, in a small way to the running costs of the organisation.

#### ***Facilities***

NZTT has residential facilities and classrooms made available via the MOU and a commercial training farm for 'hands on' Practical training for students

Crops raised, greenhouse roses and vegetables are sold locally and exported to generate income to sustain the farm facility and contribute to the cost of training provision

*Services provided to the industry*

'On Farm'

Training            Short practical courses for delivery on individual farm sites or at the Trust Farm. Training provision is industry driven and includes all aspects of pesticide use, crop scouting, farm safety, supervision skills, etc.

Diploma  
Course

A three year sandwich course specialising in Export Horticulture, for new entrants to the industry

Auditing

Trust staff audit the ZEGA Code of Practice and provide a pre-audit and advice service for Farms preparing for MPS and EUREPGAP Certification

***Key Experiences from NZTT***

- On Farm approach to training is effective, flexible and able to respond rapidly to industry needs
- Diploma students have relevant skills for the industry but also for the NGO sector. Many students move into the NGO sector which pays better
- Links with the Code of practice have meant that industry has easy access to the training needed for Code, Legal and market label compliance
- Operation of a commercial training farm demands a lot of management time and in the current economic climate in the country is a large drain on resources
- Commercial farm activities can detract from the training focus
- Industry involvement and interest in training reduces as profit margins diminish