

Thesis Report

Development of training programs For (future) Practical Training Centre in Kunming, China



Institute: Van Hall Larenstein University of Applied Sciences
(Part of Wageningen University and Research Centre)

Student name: Hu Rui

Student Number: 890331002

Major: International Horticulture and Marketing (IHM)

Thesis organization: Practical Training Center (PTC+)

Organization supervisor: Hermine de Wolf

Internal thesis coach: Geert Houwers

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Abbreviation

EVD: The Dutch Agency for International Business and Cooperation

VHL: Van Hall Larenstein, University of Applied Sciences

VDB: Van den Bos Flowerbulbs B.V

PTC+: Practical Training Centers in the Netherlands

CAU: China Agricultural University

Sanli: Zhangjiagang Sanli Agricultural Technology Co.Ltd

PTC-KM: Practical training centers in Kunming

YAU: Yunnan Agricultural University

KAS: Kunming Agricultural School

KIFA: Kunming International Flower Auction

YFA: Yunnan Flower Association

ToT: Training of Trainer

Abstract

As a bachelor student majoring in International Horticulture and Marketing in Van Hall Larenstein, Wageningen. I did my thesis research from February to June 2010 in Practical Training Center in Yunnan, China within the EVD program ASIA FACILITY FOR CHINA 2008. It is the project collaborating with the core objective of strengthening practical education in floriculture in rural areas in Yunnan Province. Currently, ToT trainees and second group of specialists were successful prepared and the further organization for practical training center in Kunming is under planning.

For my thesis research, with the objective of supporting ToT trainees to develop the training programs for future PTC in Kunming, China, I participated in the fourth training module and Pilot Trainings. I supported ToT trainees to prepare the Pilot Training Programs and acted as the observer during the pilot trainings. The evaluation and improvement given by participants and observer during Pilot Trainings was great help for future training programs in PTC *Kunming*, Yunnan. The collection and analysis of training materials designed by ToT trainees were also part of my contribution to the future PTC in Kunming. Additionally, the needs assessment of local small scale farmers gave me the ideas about future training programs which PTC Kunming can provide. Large proportion of farmers who experienced drought and urbanization required to be trained in water related programs and future work performance in horticultural area, respectively. For the recommendation for future training programs, firstly, irrigation system, rainfall management, specific skill in city planting and landscape can be designed for local small scale farmers. For students, Ptc in Kunming can also provide placement opportunity to find out potential cities to establish PTC. For three target groups, the training programs of sustainable horticulture can be also designed for future training in PTC Kunming, so as to improve their awareness of protecting the environment.

Though my thesis research was more oriented in education rather than horticulture, this research was of great help for me. Most important of all, I learnt extra but very useful knowledge which differ from my major. It was really a nice opportunity to enrich my learning experience and expand my learning horizon.

Hu Rui
Wageningen

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YAU: Professional Zhu Haishan

YAU: Mr. Wang Youguo

YAU: Zhao Yan

KAS teacher: Chen wu rong

KIFA technology and service department: Deng YuJuan

The landless farmers in Qi Busuo Village

The rose and carnation farmers of KIFA

The flower farmers in Yuxi, Songming, Jinning and Chenggong

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1. Introduction

There are two main parts in this chapter: Project background and my research background. The first part is a overall introduction of project background including the project goal, project outcome and design of project programs; the second part is the statement of my research objective, main research question and sub questions.

1.1 Project background

1.1.1 Background

The EVD program ASIA FACILITY FOR CHINA 2008 is supported by VHL (Van Hall Larenstein), VDB (Van Den Bos Flower bulbs), PTC+(Practical Training Center) , CAU (China Agricultural University) and Sanli (Zhangjiagang Sanli

Agriculture Technology Co. Ltd) collaborating with the core objective of strengthening practical education in floriculture in rural areas in Yunnan Province. The floricultural industry is advancing fast and plays a critical role in economic development in Yunnan province, especially in the development of the rural areas. One of the major constraints in the industry development is a lack of practice oriented and integrated training & education on all levels of the industry. Practice oriented training and education will be developed and strengthened in order to support further development of the sector's competitiveness and business environment. Theory and practice go hand in hand. Therefore practical training centre (PTC) with trial facilities, are planned, based on a sustainable, market oriented operation. Target groups are regular students, farmers and employees of various companies in the flower industry.

1.1.3 Project goals

For further project goals, Firstly, the five project participants want to have a system and operations in practical training in Yunnan and being financial independent, then being anchored in the local infrastructure and embedded in local organizations. Secondly, improve the Yunnan flower industry with the modern horticulture technology and develop power in rural areas. Finally, improve the living standard of farmers, reduce poverty and boost Yunnan's rural economic development.

1.1.3 Project outcomes

The project started on September 2008 and planned to finish on August 2010. At this moment, organizational framework for the practical training centre and training team

are established; a team of 20 ToT trainees is prepared to be trained for the various target groups in Yunnan floricultural industry; these ToT trainees are selected staff of the Chinese project partners and other Chinese stakeholders (or public organizations, extension services, universities, schools and private companies). A selected group out of 20 ToT trainees has made a study visit to the Netherlands for broadening and deepening experience in the Dutch flower sector. This core team has received an intensive training program in China which started on March 2009 and finished on 19th May, 2010. Until now, four Train the Trainers Modules have been successfully accomplished and the Pilot Training were designed and conducted by ToT trainees from 17th to 19th May, 2010. These four training modules are mainly about: 1. Introduction & Learning & Training; 2. Cultivation of crops; 3. Chain management, Quality & Post Harvest Handling; 4. Market orientation, Entrepreneurship & Management. In the end, the capabilities and skills were tested by Pilot Training. Divided into 7 different groups, ToT trainees worked out the training program for Pilot, which made great contribution to the future training programs. Most ToT trainees, who participated in four training modules and Pilot training, then showed their motivation and attitude, already received their certificate. This group of ToT trainees is skilled and experienced local trainers to train the farmers, employees and students. Other, who didn't receive the certificate, was required to continue the extra assignment. In addition, two training modules have been done for second group of specialists (in China) to prepare them to be occasional trainer for specialized topics (subject matter specialists). Currently, ToT trainees and second group of specialists were successfully prepared and the further organization for practical training center in Kunming is under planning.

1.1.4 Design of training programs

The ToT trainees worked on the design of different training programs. As the developer of the training programs, it is important for ToT trainees to identify how to analyze the target groups and to do a needs assessment, to find out what training content and what type of training strategy, as well as what type of development will be perceived as relevant and useful.

The table below shows the different potential options for the program set ups, for example: 1 day training for farmers on lily cultivation. The designed programs are also input for the future Chinese Practical Training Centre.

Table 1 Framework for training programs

Duration	Target group	Flower crops			Content (steps in floriculture production chain)			
		Lily	Rose	Carnation	Preparative activities	Cultivation	(Post) harvest handling	Marketing & Sales

1 Day	Farmers	X			X			
	Employees							
	Students							
3 Days	Farmers							
	Employees							
	Students							
1 Day per week (longer period)	Farmers							
	Employees							
	Students							

1.1.5 The Pilot Training Programs

-Definitions

Trainers (ToT Trainees) – Extension educators, university faculty, agricultural government officials, industry personnel and specialized company technicians. This group of ToT trainees is divided into 7 groups and designed 7 different trainings.

Trainees (Target group/Participants) – Three main target groups: Local small scale farmers, employees and students who are relevant in the horticultural sector or are planning to working in horticultural area.

Training program– Planned and designed by Trainers (ToT Trainees) to extend and develop the capabilities of trainees for better job performance included the acquisition and utilizations of new knowledge, skill building, and attitude change.

-Pilot Training Programs and certificate

A group of 20 ToT trainees, divided into Group A, B, C, D, E, F, and G firstly worked out the different Pilot Training Programs. These designed programs are the first pilot training in which ToT trainees' skills can be examined and also these training programs are the first modules prepared for future PTC in Kunming. Four groups (Group A, B, E, F) are chosen to do real life pilot training and the other three groups (C, D, E) mainly worked on written materials. Most ToT trainees show their motivation and attitude by participating in four training modules and Pilot training, then, contributing to the development of written materials. They've already received their certificate. This group of ToT trainees is skilled and experienced local trainers to

train the farmers, employees and students. For other who didn't receive the certificate, they were requested to continue the extra assignment. This assignment is under design and uncompleted yet.

1.2 Research background

Beneath, it is my research background including research objective, main research question and research sub-questions.

Research Objective :

To support ToT trainees to develop the training programs for future PTC in Kunming, China.

Main research question :

How to evaluate and improve the Pilot Training Program designed by ToT trainees in order to contribute to future training programs in PTC Kunming?

Sub-questions :

- *What pilot training programs are designed by ToT trainees?*
- *How do the ToT trainees follow the training cycle?*
- *Is this training program effective, taking the training needs assessment of the target groups into account?*
- *What can be improved in the different Pilot Training Programs?*
- *What are the training needs of local small scale farmers?*
- *What further or new programs can be designed, taking the training needs of the different target groups into account, in particular, the target group of farmers?*

2. Methodologies

In order to find out the answers to my research questions and reach my research objective, both desk and field research should be planned and conducted. The execution of my desk research and field research beneath were what I actually did during my research.

2.1 Execution of desk research

- Write an obtainable time planning involving what to do, how to do, why I need to do and who I do for.
- Read three reports of Train the Trainer Program Modules, Project proposals and literatures relevant to training guide and training methods.
- Search for local small scale flower farmers' present situation in Yunnan. Collect related information about training and education parts in Yunnan flower industry.
- Prepare the questionnaire, and it is attached in appendix 1.
- Study and analyze all materials designed by ToT trainees

2.2 Execution of field research

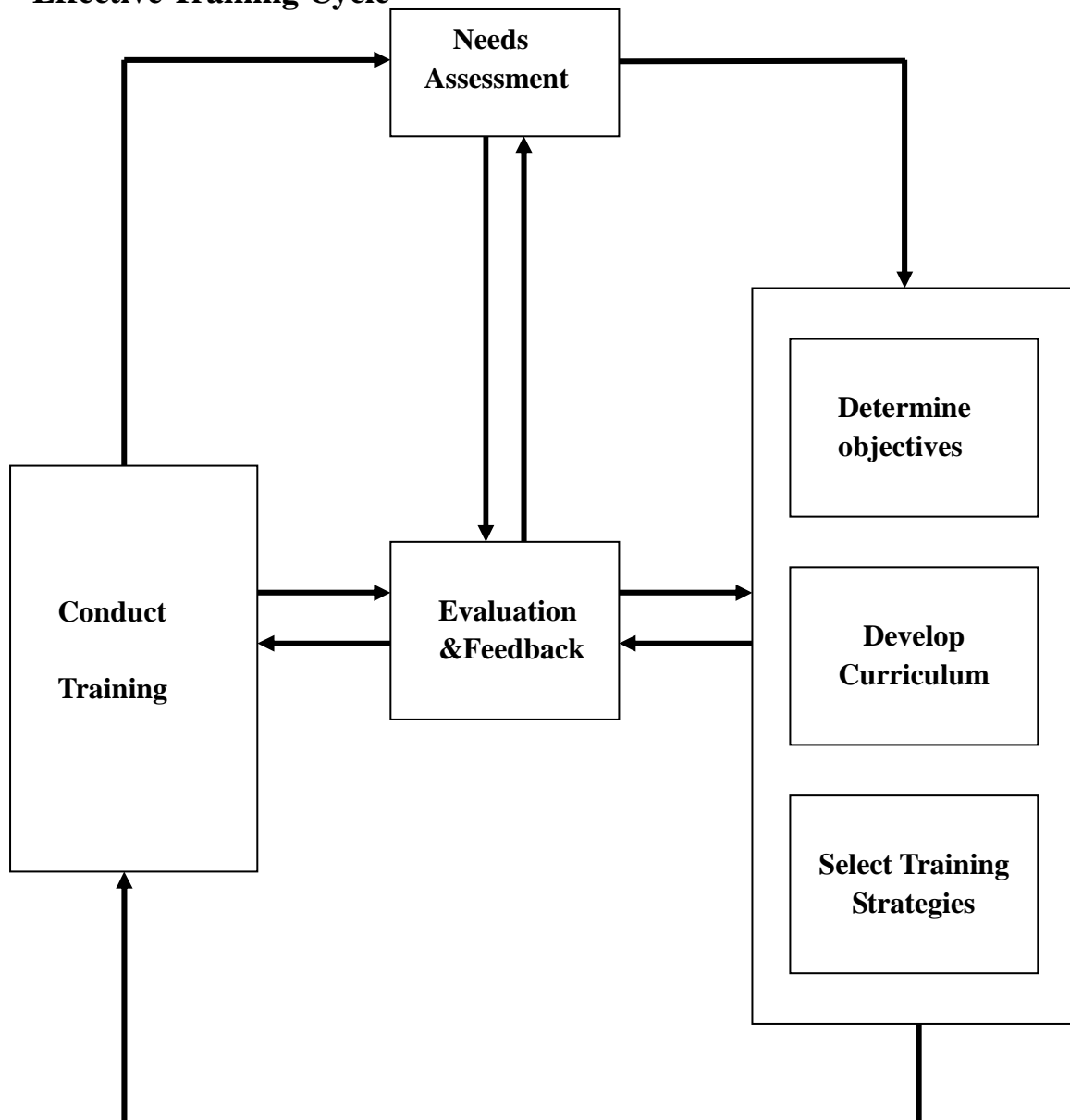
I started with supporting the ToT trainees to design the Pilot Training which is the first training program for testing the capabilities and skills of ToT trainees, also contributes to the future training programs for PTC in Kunming.

- During the preparation for Pilot Training, I supported ToT trainees to select the training methods and prepare the training materials.
- I also act as the observer during the Pilot Trainings and give ToT trainees my personal evaluation and feedback.
- Collecting and analyzing all materials designed by ToT trainees during Pilot Trainings were part of my field research which can contribute the development and future planning for PTC Kunming.
- Additionally, in order to find out one target group - the local small scale farmers, what they are really worried about and what are the problems they really have but can't tackle; I conducted 10 different interviews with local small scale farmers, mainly focusing on their situations and current problems. Questionnaire mixed with open questions and close questions is for collecting general information about target group. The interviewed farmers and I also had open discussions about current issues in Yunnan province which can be related to the practical training. The questionnaire for farmers is attached in appendix 1.
- The training needs assessments I did for target groups can be also useful for future PTC Kunming. The detailed information about my execution of field research and involved person is attached in the appendix 2.

3. Plan of Effective Training

This is the chapter combining the training guide for ToT trainees designed by Hermine de Wolf¹ and literature study about effective training². This chapter is important, because it is the reference for ToT trainees to design a effective training and this literature research can be a standard to evaluate the training programs designed by ToT trainees. In the following, the framework of training cycle gives an outline of effective training; the description of training cycle is also shown in this chapter.

Effective Training Cycle



¹ Training Guide_VHL Version June 2009, authored by Hermine de Wolf, Van Hall Larenstein

² http://jifsan.umd.edu/pdf/gaps_en/VI_Effective_Training_Cou.pdf

3.1 Description of Effective Training

Successful training program needs continually consideration which will guide participants to learn and motivate them to learn. A good planning training course should be designed to meet the participants' needs in an effective way. The picture below shows the training cycle which can be the guidance to the effective training design.

3.1.1 Needs Assessment

-Select target group

It is important to identify relevant data from the people who are to be trained, your trainees or participants. To take education level, experience, present occupation, future perspectives, sex, age, personal interest, status and any other factors into consideration, Using the right knowledge and specific skills as a starting point will be both effective and motivated in the practical training design. It is also important to ensure that all of the participants have received the appropriate level of information to achieve the training objectives. To ensure the information is delivered at an appropriate level, the trainers should listen and learn from the target group about their level of knowledge. Once the target group is identified, the trainer need to determine the most appropriate season, day of the week, time and length to conduct a training course.

-Analyze needs

The needs assessment is one of the most important aspects of a planning process in Training design. The needs assessment is focusing on identifying and solving problems as well as indicating what the participants want and need from the training. To ensure that there is a need for training and to conduct the training program, an assessment is a way to determine what training is relevant, and whether training will make a difference after improved performance. A needs assessment provides an opportunity to consult with a variety of people. When the conversations, interviews, observations, questionnaires, tests, field visit and discussion take place, the information will be exchanged and collected

3.1.2 Determine objectives

Training objectives or learning outcomes state what will be achieved as a result of training. Defining and determining objectives is a great help in determining the

topics/subjects and the instructional methods to use ; The objectives are also the basis for evaluating and guiding the participants to organize their learning.

To connect individual need with one or more learning outcomes, the learning outcomes should be specific, measurable and achievable to match each need. Aiming at achieving acquisition and utilizations of new knowledge, skill building, and attitude change, clear and instructional learning outcomes are of a great use to develop the training curriculum or the training program. Learning outcomes also provide an important link between the needs assessment and the design and preparation of the training materials. Aim to include the major learning outcomes:

3.1.3 Curriculum Development

After determining learning outcomes or objectives, it is important to select the relevant content. The content has to be essential to the learning objectives; the training content and the included information should be relevant and interesting to the participant; besides, the learning module and learning material should be distinct and developed. A clear outline of training content can present the key information to participants easily.

3.1.4 Training Strategies Selection

- Select Training Methods

The training methods can be selected after the training content has been designed. Training method is one of the training strategies that trainers use to present the information to the participants in order to obtain the training learning outcomes or training objectives. It is an effective way to make good use of various training methods to attract trainees' attention.

In selecting Methods of Training, there are 7 MAJOR FACTORS to be considered.

1. *Learning Outcome.* Is the focus of this outcome knowledge acquisition, skill building, or attitude change?
2. *Experience of Trainer.* Is the trainer or instructor capable of using the techniques and does he or she feel comfortable in choosing this method?
3. *Content.* Is the content material abstract or concrete? What is the level of complexity and comprehensiveness of the material? Amount of information to be covered?

4. *Trainees.* Size of audience. How many trainees will there be? What expectations do the trainees have in terms of the techniques to be used and are they capable of learning through those techniques?
5. *Costs.* Are the costs, if any associated with the techniques chosen realistic?
6. *Time.* What time, length of time and what period of time are available?
7. *Available resource.* Are the space, equipment or material are limited or necessary to use

-Select and prepare Training Materials

Training materials are useful on emphasis on the essential points designed by trainers. Such as the various of printed handouts, manuals, brochures, ect. They are visible aids to explain the difficult points and they can help make a abstract concept to be practical. Well-prepared materials can make a great contribution to the effective training. Logical training material design often makes it easier for participants to understand and long-term storage in memory. On the other hand, the participants may divert attention from the different materials. In case, the trainers should guide participant to pay more attention on the trainers not on the training materials.

Here shows the lists of Common Training Methods

Learning Outcome	Methods of training	Description
<i>Knowledge acquisition</i>	Lecture	<p>A one-way, organized, formal talk given by a resource person for the purpose of presenting a series of events, facts, concepts, or principles</p> <p>Often used because it is easier to organize and large amount of information can be delivered in a short period of time</p> <p>Useful when there are a large group of participants</p>
	Panel	<p>A group of three to eight experts present their views and ideas on a particular topic or problem</p> <p>A moderator coordinate the discussion</p>
	Debate	<p>A presentation of conflicting views by two people or two teams of people for the purpose of clarifying the argument between them</p>

Learning Outcome	Methods of training	Description
	Group discussion	<p>A group of 5 to 20 people have a relatively unstructured exchange of ideas about a specific problem, issue, priorities, questions ect.</p> <p>Group may select a leader to collect the different ideas and make decisions</p> <p>Discussion encourage every participant to join in the activities</p>
	Buzz groups	The dividing up of a large group into small “huddle” groups for the purpose of discussing the problem or subject matter at hand
	Reaction panel	A panel of three or four participants reacts to a presentation by an individual or group of individuals.
	Screened speech	Small groups of participants develop questions they wish resource persons to respond to informally
	Symposium	A series of related speeches (three to six) by persons qualified to speak on different phases of a single subject or problem.
	Listening groups	In groups, participants are asked to listen and observe an assignment part of a speech, panel, or the like
	Demonstration	A resource person performs an operation or a job, showing others how to do a specific task
<i>Skill building</i>	Case study	Written or oral presentation of an event, incident, or situation for a small group to analyze and solve.
	Demonstration with return demonstration	A resource person performs an operation or a job, showing others how to do a specific task. The participants then practice the same task.
	Games	An activity characterized by structured competition to provide opportunity to practice specific skills (e.g. decision making)
	Simulation	A learning environment that simulates the real setting in which the skills are required.
	In-basket exercises	A form of simulation that focuses on the “paper symptoms” of a job. Participants respond to material people might have in their in-baskets

Learning Outcome	Methods of training	Description
	Action mazes	A case study that has been programmed, involving a series of decision points with options at each point.
	Skill practice exercises	Repeated performance of a skill with or without the aid of an instructor
	Behaviors modeling	A model or ideal enactment of a desired behavior presented via an instructor, a videotape, or film. This is usually followed by a practice session on the behavior.
<i>Attitude change</i>	Role playing	The spontaneous dramatization of a situation or problem followed by a group discussion.
	Simulation	A learning environment that simulates a real setting with the focus on attitudes and values related to the situation presented
	Group discussion	A group of 5 to 12 people have a relatively unstructured exchange of ideas focused on the attitudes and values they hold relative to a specific issue or problem.
	Games	An activity characterized by structured competition to provide insight into the attitudes, values and interests of the participants
	Exercises, structured experiences	Planned exercises or experiences, usually using some instrument or guide, followed by a discussion of thy participants' feelings and reactions
	Critical incident	Participants are asked to describe an important incident related to their work lives. This is then used as a base for analysis
	Field visit	<p>A visit to an organization or workplace that demonstrate the practical experience and ideas under discussion</p> <p>Participants are required to be well-prepared for the field visit and should be encouraged to observe and make notes through real activities and deliver what they record when they return to the classroom</p>

3.1.5 Evaluation & Feedback

-Evaluation

Training evaluation is “the terminal session of the training course aiming at collecting information for all training activities which can be used for guiding decision making, for assessing participant’s behavior and the relevance training elements.” Evaluation gives an extended measure to which the training has been successful in attaining the training objectives. Evaluation methods reflect in feedback from the participants. Adequate evaluation makes a useful contribution to continuous improvement of the training program.

-Feedback

Feed back is reaction on how your behavior or your results are seen by others

It is the engine as well as the evidence of your input and development.

Feedback is an effective way to give knowledge to both trainer and trainees, and they could regard feedback as on opportunity to learn something, not as an attack.

4. Results of Pilot Training Programs

Pilot Training Programs are the first and the most important trial module of training programs which make great contribution to the future training programs in PTC Kunming. The three main parts in this chapter are description of different training program designed by ToT trainees, the evaluation and improvement from participants and the evaluation and improvement from observer, respectively. The effective training cycle is used to guide and evaluate trainings. The effectiveness of different Pilot Trainings also reflect on the evaluation from participants and observer.

4.1 Motivation of participants

Participants' motivation is essential in designing a training course. Generally they are motivated to learn when they see that:

- They can satisfy a need or a want by learning
- They may increase their income or make money and therefore live a better life for themselves and their families

For example: Roses that are cultivated using high-tech agricultural systems can result in more income to all involved in the cultivation process.

To highlight the importance of improving the quality and quantity of roses, the following points should be outlined:

- Horticulture makes a great contribution to the economy of most countries;
- Rose cultivation for rural and urban communities and for export and import market must be qualified and clarified to increase the competition capability;
- Quality controls are required at all sectors in the supply chain, from the primary grower to the end consumer.

4.2 Description of Designed Pilot Training Programs

Beneath, there are descriptions of trainings designed by group A, B, C, D, E, F, G; and then the selected 4 groups: group A, B, E, F are also evaluated by participants and observers during the Pilot Trainings; the other 3 groups are evaluated by written materials. The most important result is the wishes for future training programs given by participants in Pilot Trainings.

4.2.1 Group A

Group A designed a half-day-training in Jinning rose cultivation base aiming at training the employees to identify the pest and disease, to make good use of pesticides in rose cultivation. More details are described in the following table:

Group A
Training Topic: Cultivation of rose, focus on pest & disease
Target group: Employees (Rose growers)
Number of participants: 8
Length of training course: Half day
Venue: Jinning
Needs assessment: -Some of the participants in this group are going to be the rose growers after the construction of the new greenhouse is accomplished. The training gives them opportunity to have the first general insight of rose cultivation. -For other participants, though they have experience on rose cultivation, a Specialized practical training for Pest & Disease control is also of great help for them.
Intended Learning outcomes: 1. Rose growers are able to identify the common pest and disease on rose in an efficient and correct way. 2. Participants are able to acquire the knowledge about causes to common pest and disease. 3. Establish and strengthen the concept of water-fertilization managements on cultivating process for rose.
Methods of training: 1. Lecture 2. demonstration 3. Real product show 4. demonstration with return demonstration 5. field visit 6. group discussion 7. Group field exercise. 8. On-the-spot guidance 9. Exercises, structured experiences
Materials of training: 1. Printed materials for time planning and training content 2. Manual for common Pest & Disease on rose and corresponding solution 3. Common samples for pesticides 4. Folder 5. Ball pen
Back up plan: Yes (Unexpectedly, no electricity at the training place)
Prepare the evaluation form for participants: Yes, written evaluation at the end. Participants answered 4 open questions

4.2.2 Group B

Group B conducted a half-day-training in KAS, combining the room lecture with field demonstration in order to train the farmers realizing the basic principles of rose cutting and the market situation of edible rose. More details are described in the following table:

Group B
Training Topic: Propagation of edible rose (by cutting)
Target group: Local Farmers
Number of participants: 12
Length of training course: half day.
Venue: Kunming Agricultural school
<p>Needs assessment:</p> <ul style="list-style-type: none"> -Some of Participants are the selected farmers who also joined in the training of “Professional skills for horticulture and gardening” in Qi Bu Suo village in Cheng Gong County. -Other Participants are vegetable growers. They plan to change to grow rose in the coming years due to their low profit from vegetables. -All participants are investigated by the trainers through telephone. The information contains their names, sex, and age, and education level, scale of land, land income, training need and training willingness.
<p>Training strategy:</p> <ul style="list-style-type: none"> -the training content should be designed simple and easy to understand; -theory +Practice.
<p>Methods of training:</p> <p>1. Lecture 2. Real products show 3. Taste test 4.classroom exercise 5.Field visit 6.questionnaires 7.Sampled discussion 8 Group field exercise 9. Exercises, structured experiences</p>
<p>Materials of training:</p> <p>1. Printed materials for time planning and training content 2. the cuttings and petals for edible rose 3. Apples 4. Pallet 5. Toothpick 6. paper glasses 7. Scissors 8. Sprayer 9. Shovel 10. Powder pearl 11. Peat soil 12. Rooting powder 13.Disinfectant 14. Carbendazim 15.Projector 16. Paper 17. Ball pen 18. Removed disk 19. Knife</p>
Back up plan: Yes
<p>Prepare the evaluation form for participants: Yes</p> <p>Written evaluation at the end. Participants answered 4 open questions</p>

4.2.3 Group C

This was a market analysis of cut carnations designed by group C. To aim at guide horticulture major related KAS students to recognize their capabilities and plan for their future career in horticultural area, market research was conducted to enrich their market oriented knowledge. More details are described in the following table:

Group C
Training Topic: Market analysis of carnation cut flowers
Target group: KAS students
Number of participants: 40
Length of training course: one day
Venue: Kunming Agricultural school
Needs assessment: The participants are the students who are majoring in Horticulture Identifying the different aspect of market effects on sales will be beneficial to the future career of students.
Intended Learning outcomes: <ol style="list-style-type: none">1. Identify the marketing situation for carnation2. Recognize personal requirement for future career in horticultural industry3. Test personal awareness and capabilities in horticultural industry
Methods of training: <ol style="list-style-type: none">1. Field visit2. Questionnaire3. Powerpoint4. ice breaker5. Games6. Lectures7. Group discussion8. Feedback9. Classroom exercise10. Field exercise
Materials of training: <ol style="list-style-type: none">1. Paper2. cut rose3. Printed materials for time planning and training content4. Projector5. removed disk
Back up plan: Uncertain
Prepare the evaluation form for participants: Uncertain

4.2.4 Group D

Group D was a laboratory training which gave horticultural major related KAS students the knowledge about aseptic operation technique of gerbera as well guided students to put the theory into practice. More details are described in the following table:

Group D
Training Topic: Aseptic operation technique of gerbera
Target group: KAS students
Number of participants: 20 (divide into 2 groups)
Length of training course: One day
Venue: Kunming Agricultural school
Needs assessment: The trainers collect information about students during the lectures at school. As the teachers in KAS, the trainers are clear about the education level of participants, what way they used to learn and what they real worry.
Intended Learning outcomes: Put what students learnt from books about aseptic operation technique of gerbera into practical use
Methods of training: 1. Lectures 2. Demonstration 3. Experiments 4. Observation 5. Keep record 6. Group discussion 7. Discussion 8. Feedback 9. Opinion sharing 10. DVD
Materials of training: 1. Lab 2. Projector 3. Equipments for tissue culture 4. Instrument for tissue culture 5. Proliferate seedlings 6. Culture medium 7. Alcohol 8. DVD
Back up plan: Uncertain
Prepare the evaluation form for participants: Yes 2 Written evaluations, one is in the beginning and another is at the end. Participants answered 8 open questions in total.

4.2.5 Group E

Group E designed a half-day-training about post harvest treatment of rose to local farmers in Jinning County. The training was intended to highlight the importance of post harvest treatment to both rose farmers and non-rose farmers. The key points of grading were also an important part in training. More details are described in the following table:

Group E
Training Topic: Post Harvest Treatment of rose
Target group: Farmers
Number of participants: Uncertain
Length of training course: Half day
Venue: Jinning
Needs assessment: Some of participants are new growers, and they lack knowledge of post harvest treatment. For other participants - current growers, they are still not aware of the importance of post harvest treatment.
Intended Learning outcomes: 1. Recognize the importance of post harvest treatment 2. Comprehend and grasp the key points about how to process post harvest treatment in a normative way 3. Put the skills into daily use
Methods of training: 1. Ice breaker 2. Observations 3. Questions 4. Lecture 5. Demonstration 6. Demonstration and return demonstration 7. Real product show 8. Group discussion 9. Skill practice exercises 10. Feedback 11. Screened speech 12. Outcome measure 13. Case study 14. Exercises, structured experiences
Materials of training: 1. Cut roses 2. Projector 3. megaphone 4. keg 5. packaging paper Printed materials for training content 6. Ruler 7. Ball pens 8. mineral water 9. Bananas
Back up plan : Yes Extra information was well-prepared when participants require this unexpectedly
Prepare the evaluation form for participants: Yes Written evaluation at the end. Participants answered 6 close questions and 1 open question.

4.2.6 Group F

This training program was a lecture training designed for YAU students. The topic of “lily cultivation” was a sort of helpful source for horticultural major related students to broaden their specific knowledge. More details are described in the following table:

Group F
Training Topic: Cultivation of lilies
Target group: YAU students(2008 2+2 program)
Number of participants: 10
Length of training course: Half day
Venue: Yunnan Agricultural University
Needs assessment: The participants are the University students who are majoring in horticulture. Cultivation of lilies is one of the major related topics for their current and further study and further career.
Intended Learning outcomes: 1. Knowledge: Acquire the cultivation and production conditions about lilies and market prospect of cut lilies 2. Skills : Grasp cultivation skills of lilies. 3. Attitude: to fall in love with cut lilies.
Methods of training: 1. Lecture 2. Ice breaker 3. Real product shows 4. Classroom exercise 5. Group discussion
Materials of training: 1. DVD 2. Lily bulbs 3. Printed materials of training content
Back up plan: Uncertain
Prepare the evaluation form for participants: Yes Written evaluation at the end. Participants answered 4 open questions

4.2.7 Group G

It was a one-week-training designed by Group G. It was focusing on cultivation of lilies and use of related equipments. This training was not completed yet and it was under preparing.

Group G
Training Topic: Cultivation and Post Harvest for cut lilies
Target group: Uncertain
Number of participants: Uncertain
Length of training course: one week
Venue: Professional Training organization(Uncertain)
Needs assessment: Uncertain
Intended Learning outcomes: 1. Comprehend the cultivation process of cut lilies 2. Identify the different usage of equipments
Methods of training: 1. Lecture 2. Field visit 3. Discussion 4. in-site interaction
Materials of training: 1. PowerPoint 2. Questionnaire 3. real product show
Back up plan: Uncertain
Prepare the evaluation form for participants: Uncertain

5. Evaluation and Improvement

Contrasting with the plan of effective training from literature, and collecting the feedback from participants and observers, the training program can be examined as effective training or not. However, the feedback is also an opportunity for ToT trainees to improve their training program. For the 4 groups (Group A, B, E, F) which join in the Pilot Training are evaluated by the participants, observers. The other groups (Group C, D, and G) are evaluated by observers according to their written materials.

5.1 From participants

According to 4 different Pilot Trainings, the evaluation from participants is the most important input for future training programs.

Here are the evaluation results and points for improvement given by participants in different trainings.

Evaluation and Improvement from Participants	
<i>The most important you learned today:</i>	
Group A	<ul style="list-style-type: none"> - Learn more specific knowledge about Pest and Disease on rose. - On-the-spot guidance is of a great help. - Have a throughout knowledge of Pest & Disease control.
Group B	<hr/> <ul style="list-style-type: none"> - Vegetable farmers form a general idea of edible rose and they realize that how they can be benefit from rose cultivation. - Vegetable famers also learned the main principles of rose cuttings and usage of basic cultivating materials as well as equipment. -Rose farmers, realized the new varieties of rose and new technique of rose cutting
Group E	<hr/> <ul style="list-style-type: none"> -Importance to take post harvest treatment for cut rose -Products information relevant to post harvest treatment -How to grade the cut rose
Group F	<hr/> <ul style="list-style-type: none"> - Cultivation skills for lilies - The principles to choose lily bulbs - management relevant to lilies

The most interested parts in today's training are:

Group A	<ul style="list-style-type: none"> - Group exercise: learning by doing. As two groups, Participants learn to recognize the common Pest and Disease by themselves in the rose cultivation area. - Pest & Disease control. For example: spider mite control. - Cultivating technique for rose
Group B	<ul style="list-style-type: none"> - Make cutting and rooting powder by themselves - Use the spraying instruments
Group E	<ul style="list-style-type: none"> - Rose grading
Group F	<ul style="list-style-type: none"> - Interaction during the group discussion - Distinguish the different flower bulbs - Observation for Real lily bulbs

According to this training, what are the suggestions you can give to our trainers:

Group A	<ul style="list-style-type: none"> - The length and times of the training could be longer and more. - Guide the participants to solve more realistic problems. - More Depth and professional guidance or knowledge.
Group B	<ul style="list-style-type: none"> - More basic knowledge about rose cultivation
Group E	<ul style="list-style-type: none"> - No suggestions
Group F	<ul style="list-style-type: none"> - Combine the field visit with lecture. - More detailed information about lily cultivation - "Dirty fingers" to practice more - Slow down the training course

What wishes do you have for the further trainings?

Group A	<ul style="list-style-type: none"> - More information about Water-fertilizer management - New topics and new training content, for example: new cultivating techniques. - Course could be longer and more - Rose grafting and daily treatment
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Group B	<hr/> <ul style="list-style-type: none"> - New varieties of rose - Usage of new equipments - Water management - Selection of crops & varieties - Uncertain willingness to pay for the training <hr/>
Group E	<ul style="list-style-type: none"> - Cultivating Techniques - Pest & Disease Treatment - Propagation Techniques - Water-fertilizer Management - Variety choice - Auction & sales <hr/>
Group F	<ul style="list-style-type: none"> - Continue the structured and detailed training - Combine the field visit with exercise - Further development of cut lilies in Yunnan province.

5.2 From observer

For the most important part of my field research, I acted as observer to evaluate the different Pilot Training Programs and written materials. I collected and analyzed all materials designed by ToT trainees so as to contribute to the further improvement of training programs.

Here are the evaluation and improvement done by observer; group A, B, E, F were evaluated by their performance during the Pilot trainings; group C and D were evaluated by their written materials. No evaluation for group G, because it was under preparing and not finished yet. The evaluation form for observer is attached in appendix 3:

- Group A

The target group analysis is relatively weak, because the level of participants is not equal. It leads to parts of participants feel difficult to follow the training. The good points are: setting in a realistic training situation, the training methods are diverse and suitable for participants and the training materials are effective for training, especially the manual. It is a flexible training, because the training goes successfully even without electricity. One thing can be improved is the evaluation form. More detailed open questions can be designed in evaluation form. Beneath, there are more detailed comments:

Group A Cultivation of rose, focus on pest & disease Scored by: Poor / Fair / Good / Very good / Excellent

Name observer: Hu Rui		
Target group	Fair Part of participants are current rose growers, but some are still not; No needs assessment is done before the training.	
Learning outcomes	Feasible	Good
	Realistic	Very good Training in a realistic rose cultivation area
	Challenging	Good Not a relatively homogenous group with relevant knowledge
	Met	Very good The realistic situation and conduct in a direct way make the outcome easier to meet
Methods	Diverse	Excellent
	Suitable	The training methods are diverse and suitable for target groups; also very effective and direct to present information
	Effective	
	Challenging	
Content	Relevant	Very good Some are current rose growers and some are future rose growers
	Appropriate	Fair It is difficult for part of participants who lack of experience of rose cultivation
	Technically correct	Very good
Organization	Available materials	Good The designed PPT can't be used because of no electricity; The self -designed manual is useful
	Time is Managed	Fair, Started later than they planned
	Flexible	Excellent No electricity unexpected; Part of training material can't be use to support the course.
Evaluation	Evaluated	Good can be more detailed and specific
	Relevant for improvement	Very good

- Group B

The target group analysis is done before training, but the level of participants is still not equal. The training content is relatively too much for half day training. Participants feel difficult to digest all the information. The good points are: “Taste test” is a creative method to attract attention, combining the lecture with field visit is a effective training method, participants are practicing in real situation and the training materials are prepared well. The evaluation form can be designed in a open way in order to motivate the participants to share their opinions. Beneath, there are more detailed comments:

Group B Propagation of edible rose (by cutting)		
Scored by: Poor / Fair / Good / Very good / Excellent		
Name observer: Hu Rui		
Target group	Very good Assess the needs by telephone before training	
Learning outcomes	Feasible	Good Needs assessment is helpful for achieving the learning outcome
	Realistic	Fair Parts of participants are vegetable farmers without rose background
	Challenging	Good A group with different background
	Met	Fair
Methods	Diverse	Very good
	Suitable	“Taste test” is a creative method to attract attention
	Challenging	
	Effective	
Content	Relevant	Good
	Appropriate level	Fair Information is too dense for participants to digest
	Technically Correct	Good Participants look uncomfortable in PPT lecture
Organization	Available materials	Excellent Well-prepared diverse materials
	Time is managed	Good
	Flexible	Fair
Evaluation	Evaluated	Fairs Participants always hesitate to ask and hesitate to give the suggestions
	Relevant for improvement	Fair

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- **Group C**

Group C is evaluated according to the written materials. The first target group analysis is easily done, because the information from target group is easy to get. The learning outcomes are feasible and realistic, but not so challenging. The designed starting point “ice breaker” is a attractive training method. The training content is relevant to the participants and the level is appropriate. However, the time management and backup plan are not taken into account, and evaluation form is not prepared. Beneath, there are more detailed comments:

Group C Market analysis of carnation cut flowers		
Scored by: Poor / Fair / Good / Very good / Excellent		
Name observer: Hu Rui		
Target group	Very good The information from students is relatively easy to get. They have relatively equal horticulture background	
Learning outcomes	Feasible	Very good The participants are motivated, because the training is relevant to their future career
	Realistic	Good Market analysis should be actually done in realistic situation rather than only on literature or computer.
	Challenging:	Fair Market research is the common topic for students
	Met	Fair Personal capability is difficult judge
Methods	Diverse	Good
	Suitable	To start with game or ice breaker is effective training methods; Students are easy to get bored with PPT lecture.
	Challenging	
	Effective	
Content	Relevant	Excellent Participants are all majoring in horticulture
	Appropriate level	Very Good
	Technically correct	Very good Students are easy to adjust to all kinds of technical content
Organization	Available materials	Uncertain
	Time is managed	Uncertain
	Flexible	Fair

		No back up plan prepared
Evaluation	Evaluated	Uncertain
	Relevant for improvement	Uncertain No Attached Evaluation form

- Group D

Group D is also evaluated by written materials. The information from target group is easy to get and participants are at homogenous level of education. The learning outcomes are relatively realistic and met, due to the equal education level of participants. The weak points are: the training methods are not diverse to motivate the participants and the flexibility of training is not mentioned in the written materials. The good points are: appropriate and relevant content, available training materials and good evaluation form. Beneath, there are more detailed comments:

Group D Aseptic operation technique of gerbera		
Scored by: Poor / Fair / Good / Very good / Excellent		
Name observer: Hu Rui		
Target group (The training is relevant for the target group, based on their learning needs)	Good - The information from target group is easy to get., the need assessments are easy to conduct -at homogenous level of education	
Learning outcomes	Feasible	Good Experiment in lab combine the theory with practice
	Realistic	Good
	Challenging	Fair
	Met	Good
Methods	Diverse	Fair
	Suitable	Good
	Challenging	Fair, More interacted method can be added
	Effective	Very good
Content	Relevant	Very good Major related to participants
	Appropriate	Very good
	Technically	Very good

	correct	Target group
Organization	Available materials	Very good Well-prepared materials
	Time is managed	Very good
	Flexible	uncertain No back up plan
Evaluation	Prepared	Very good
	Relevant for improvement	Very good

- Group E

Group E starts with a large quantity of participants, but not all participants are relevant to training. The level of knowledge and skills are not equal among participants. The learning outcomes are feasible, realistic and met, but not so challenging. The training methods are very suitable and diverse, but parts of passive participants are difficult to join the training activities. Training content is not so relevant for parts of participants. The excellent point is the trainers are well-prepared for extra information whenever participants ask for. The poor point is that trainers hand out the evaluation form too early to disperse participants' attention. More detailed comments are described in the following table:

Group E Post harvest treatment of rose		
Scored by: Poor / Fair / Good / Very good / Excellent		
Name observer: Hu Rui		
Target group (The training is relevant for the target group, based on their learning needs)	Fair	Large quantities of participants, but not all are relevant. Participants have unequal level of knowledge and skill.
Learning outcomes	Feasible	Good
	Realistic	Good
	Challenging	Fair
	Met	Good
Methods	Diverse	Excellent, especially ice breaker by

		bananas
	Suitable	Very good
	Challenging	Good, sometimes the participants are passive
	Effective	Fair
Content	Relevant	Good
	Appropriate	Fair, parts of participants are not relevant
	Technically correct	Very good Prepared extra information is available
Organization	Available materials	Very good Well-prepared and considerable, e.g. mineral water
	Time is managed	Good
	Flexible	Good
Evaluation	Prepared	Fair Hand out too early
	Relevant for improvement	Good Prepared choice on evaluation form

- Group F

The target group analysis is easy and well to be conducted and the participants are at a homogenous level of education background. The learning outcomes are difficult to judge, because the training is only the lecture training rather than field visit. The training can be diverse to attract participants' attention. The training materials are prepared well; especially the DVD show is very attractive and effective. The training is flexible, because the trainer is capable to present the DVD unexpected situation happened on DVD. To be improved, the evaluation form can be more specific and detailed. Beneath, there are more comments attached.

Group F Cultivation of lily	
Evaluated by: Poor / Fair / Good / Very good / Excellent	
Name observer: Hu Rui	
Target group (The training is relevant for the target group, based on their learning needs)	Very good - The information from target group is easy to get., the need assessments are easy to conduct -at homogenous level of education background

Learning outcomes	Feasible	Good
	Realistic	Fair, present knowledge without real situation
	Challenging	Fair
	Met	Very good
Methods	Diverse	Fair, without realistic conduction
	Suitable	Very good
	Challenging	Fair, More interaction and visible method can be added
	Effective	Good
Content	Relevant	Very good Major related to participants
	Appropriate	Very good
	Technically correct	Very good Easily acceptable
Organization	available materials	Very good Well-prepared materials
	Time is managed	Very good
	Flexible	No back up plan But flexible when no voice in DVD
Evaluation	Prepared	Good
	relevant for improvement	Fair Evaluation form can be more detailed and in higher level

6. Training needs assessment

To find out the real training needs of Yunnan small scale farmers, I conducted 10 interviews. During these interviews and during the time of my research, I found out that water related problems and Land issues are the most important issues at this moment that are relevant to the practical training.

6.1 Water issue

Yunnan, on the southwest China, has faced water shortage since last autumn to this February due to lack of rainfall and high temperatures. Almost 6 million people and 3.6 million head of livestock are experiencing drinking water shortages in Yunnan. The drought has brought great losses to provincial industrial and agricultural production, and increase risks of forest fires. Large scale of crop land and grain production was dramatically decreased. The number of people which were face with drinking water shortages in Yunnan raised to 7.92 million in March. Authorities have taken actions to allocate special funds, dispatched relief personnel, water trucks, mineral water to the drought-stricken areas. The drought in Yunnan Province was released to some degree by a relatively copious downpour of rain on 28th of March.

6.1.1 Cause to the water shortage

No much rainfall is the primary and direct cause to the drought, but there are some important factors behind that exacerbate the water shortage. ³The expert, Ma Jun-director of the Institute of Public & Environmental Affairs said that *“one factor is logging, deforestation and general eco-degradation in that region. That’s weakened the ecological capability to regulate water. In recent years, much eucalyptus, rubber trees and other non-local species —called “economic trees” — have been planted by paper mills in much of southwestern China. Monsoons and droughts are not unusual, but forests can hold some of that excess water and release it in the dry season.*

Another problem is water pollution in the region. Lakes have been polluted, so the water is no longer good for drinking or irrigation.

Recently, large hydropower projects and mining activities in the region have all worsened the problem. We really need to prevent overexploitation of our resources. This drought is the worst in a century, and it’s another demonstration that our water supply system is on a very tight balance.”

In urban areas, heavy traffic leads to soil compaction, creating an environment where

3

<http://www.beijingtoday.com.cn/blogger/ahen/an-environmentalist%E2%80%99s-view-on-china%E2%80%99s-drought>

existing plants cannot obtain sufficient oxygen or water to survive and seedlings cannot germinate. Fertilizers and pesticides are often applied in excessive quantities, which can lead to such environmental disasters. Unsustainable horticulture may also require more frequent weeding, watering, pruning, and other high-maintenance activities to keep them functional.

6.1.2 Loss from water shortage in flower industry

Since autumn last year, Yunnan suffered severe drought, the flower industry in Yunnan province also suffered unprecedented water shortage. Both the yield and quality of horticultural products declined, so as to stimulate the declining of production cost and operation cost. The whole flower market faced an enormous challenge. According to preliminary statistics, until early March, the area of 80% flowers were negative influenced by the drought, 170,9 thousand acres were experiencing this disaster, 25.6 thousand acres of crops died out of 170,9 thousand acres, directly result in 897 million Yuan economic loss. Mrs.Deng Yu Juan, the leader of the Technique Service Department of KIFA, said that” *The cut flowers at level A to level B decreased from 30% to less than10%, then, the proportion of level E flowers increased from 5% to 20% this year.*

For the horticultural companies with relatively high technological equipments, though they have measures to resist drought, the production of seedlings were seriously affected by continuous drought. The production of flowers was quickly affected by the loss of died seedlings and ill seedlings throughout the year.

Feedback from the market showed: on one hand, local farmers and seed production companies had to delay their transplanting time, and some even gave up the expansion of the new cultivation bases as well as slowed down new investment. As a result, the retention took place on large quantities of seedlings; on the other hand, the continuous high temperature and water shortage led to lower quality seeds and seedlings. Their loss rate kept increasing, to be worse, the supply of quality seeds was even a challenge when rainy days came.

6.1.3 Cultivating situation

Beneath, the map shows two main floricultural areas in Yunnan province. One is Jinning which is the main cultivation area and another is Chenggong which is the place that Dounan flower market located.

Map 1. Jinning and Chenggong, two main floricultural areas in Yunnan province



Jinning⁴ is one of the biggest cultivation counties in Yunnan. A ditch nearby Little Bay Village is the main channel of irrigation for greenhouses in Jinning County. But this ditch was dried and no water supply any more. Both the quality and quantity decline due to severe drought. Li Jiliang and Zhang Huashou, two of the local scale farmers, pointed at their rose greenhouse and said to me *“only once irrigation per week led to leaves turn yellow and dry, buds turn smaller and pale. Each acre of rose cultivation area used to make nearly 10 thousand Yuan profit, but now decreased to 3,000 Yuan for each acre.”* Zhang Huashou also told me that *“my cousin started to cultivate Gerbera since five years ago; he has 1.8 acres of Gerbera and the annual total income used to be over 20,000 Yuan, but the situation was predictably negative this year”*.

Compared with the local small scale farmers, most of the production companies in Jinning County pay more attention on the construction of base, especially the water conservancy facilities. Irrigation systems in most companies are mainly drip irrigation, which can save 10 times water more than the ordinary irrigation. These production companies were able to survive during this period. Thus, throughout the county, the overall flower production is still not promising. The total area with roses, carnations and gerbera cut flowers is 38.3 thousand acres; total volume is 1.85 billion and 605 million Yuan value, respectively. Currently, the total area which was influenced by the drought was 11.892 thousand acres, and an area of 630 acres of crops died from the disaster. Compared with the same time last year, 40% reduction happened on the production of Cut flowers, and the proportion of high-quality flowers from 60-70% reduced to about 40%.

6.1.4 Market situation

⁴ http://news.yninfo.com/yn/jjxw/201004/t20100408_1518970.htm

Because of long-term continuous high temperature and water scarcity, the production of cut flowers was 50% less than expected, and the ratio of high-quality flower also declined substantially. At the same time, the demand for domestic and international floral market kept steadily, especially in Shanghai, Beijing, Guangzhou, China, Japan, Thailand, Singapore and other international markets. Demand for high quality flowers increased year by year, resulting in the great price polarization between the scale of best and worst. Especially the Quality A cutting flowers for roses are nearly 10 times more expensive than Quality E flowers. Due to high quality at low price, Yunnan province was capable to occupy the domestic market and play an important role in the international market. However, Yunnan experienced the tough period with high quality at also high price, giving an opportunities to Japan, Korea, Kenya and other foreign competitors. “Yunnan Flower” undoubtedly faced with the risk of losing part of the markets, and the overall competitiveness of the flower industry in Yunnan was severely damaged.

6.1.5 Training needs

When suffering from the severe drought, Yunnan realized how important water is. As far as the horticultural sector, the water shortage has seriously influence the whole industry and it is a structural problem that can be considered during practical training. All extension educators, university faculty, agricultural government officials, industry personnel and specialized company technicians are organized to solve the water shortage problems. Especially the local small scale of farmers, lose a lot from the drought. Most of them were aware of the importance of water management including irrigation systems, water storage, and water treatment of drinking water, waste water and industrial water. Local small scale farmers used to utilize the most common irrigation system: surface irrigation system. It is also called flood irrigation. Water is pumped, or lifted by human power to the level of the land. The disadvantages of flood irrigation are: too extensive, lack of water uniformity, and big water loss.

6.2 Land issue

Yunnan is situated in Southwest China on the Guizhou-Yunnan Plateau. This topography has significant effects on the economy, hyper-gathering capacity of more local resources. GDP per capita in flat areas are 2.7 times higher than the hilly areas; hilly areas are 3 times higher than the mountain areas. Kunming⁵, as the center in Yunnan Province, can be divided into four regions: core region, first ring road, second ring road, and third ring road. The efficiency of land use for the rural collective construction decreases from the core region to the second ring road, and increases slightly to the third road ring (The efficiency of land use is comprehensively

⁵ http://www.mlr.gov.cn/wskt/gkx/tdgl/201004/t20100420_146124.htm

measured by the per capita GDP, net income of peasants per capita, local revenue per capita, and distance to the central city, construction of rural residential land per capita and other indicators). Large proportion of rural land for collective construction is used for residents, rarely used for township enterprises and public facilities. This shows that the township enterprises and village collective economy are undeveloped in Yunnan Province.

6.2.1 Urban villages

“Urban Villages”⁶, villages surrounded by the city also known as "the cities of the village,” are result from long-standing urban-rural dual management system, the rapid development of the cities, and the rapid expansion of the cities. After the formation of new constructions, the villagers not engaged in agricultural production, but in planning the future life.

Table 2 the distribution of urban villages

	Villages	Villagers	Households	Covering area
Core region	288	219,000	77,500	28 km ²
Within the Second Ring Road	66	34,500	14,200	4.25km ²
Between the second and the third ring road	222	184.989	63.346	23.74 km ²

Notes: According to a survey, a total of 288 villages in core region in Kunming, involves 219,000 villagers, 77,500 households, covering an area of about 28km. 16% out of total 180 km² in core region. Within the Second Ring Road, There are 66 villages, and the total population is about 34,500 people, 14,200 households, and the total land area is 4.25km², 9.4% out of the total area within the second ring road. Between the second ring road and the third ring road, the total number of villages and villagers are 222 and 184.989, respectively. Additionally, there are 63.346 households and 23.74 km² areas. To conclude from the table, there is large proportion of urban villagers in Kunming.

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<http://www.yn.cei.gov.cn/fgwnet/developProgramming.nsf/deskShow/B63D9FC075A53909482573D700106491?opendocument>

6.2.2 Urban Village Renovation

Urban village renovation is the product of social development. The current urban cities are evolved from the villages. China as well as Yunnan Province is influenced by the urban-rural dual management system which segregates the urban areas with rural areas. In order to supply equal conditions to both villagers and urban residents, for example: running water, coal gas, normative street, drainage system, waste processes and so on, renovation is very necessary to take in the coming years.

The different measures for urban village are:

Firstly, construct new Public Park mainly led by the government. Secondly, with the supervision of government, bring in more non-governmental capital (Property company, Hydraulic, Hydro-Power Engineering companies, TV station, ect) for renovation and construction. The developers should arrange for life guarantee of villagers.

Third, start Construction Project of new airport and Lake Road so as to transform the surroundings.

6.2.3 Landless Farmers

Importantly, farmers who lose land due to rapid development of cities, have an uncertain future. Though they get much compensation for their land, they experienced the tough time to plan their future. It is reported in the newspaper Harbin Daily that some farmers who receive big compensation for loss of land due to the Urban Village Renovation are addicted to luxury cars and gambling. The rapid changes in life style lead them to be blind with their life. Rather than spending the compensation, many farmers will plan for their further life and work. They try to find different ways to improve their working capabilities.

6.2.4 Training needs

Along with the urban village renovation, practical training is also required to contribute to new parks, new governmental construction project, nongovernmental project as well as self-construction activities. To deal with renovation, the government in Yunnan province not only pays compensation for landless farmers, but also pays for the practical training. The practical training is prepared for farmers to continue to work for new construction projects in the future. Qi Bu Suo is one of the villages under renovation in Cheng Gong County and this village will be renovated into a new park within two years. From March to June this year, the first session of practical training called “Professional skills for horticulture and gardening” was organized by the local government, aiming at training the local farmers to be skilled in landscaping. Chen Wu Rong and Zhao Ming Fang, two teachers in Kunming agricultural school as well as ToT trainees in PTC Kunming, are invited to be the trainers to give practical

training to this group of farmers twice a week. The content of lectures is mainly about identifying the different plants, the basic cultivating skills and basic knowledge of crop protection. Mrs.Chen said: *“though most farmers know little about horticulture and landscape, some are without education background; even some can’t recognize Chinese characters, they are motivated and active to learn, because they would get the opportunity to work for horticulture or landscape in the new park or new lake road in the future if they can get the technical certificate.”* Mrs.Chen also mentioned: *“the most useful training course should aim at helping farmers to solve problems. Practical manual which contain solution to problems could be one the most useful training materials. Currently, the post harvest specialized logistic and service after sales are relatively weak in Yunnan horticultural industry. These can be three suggestions to put in practical training design. Additionally, new technology could be one attractive topic for local small scale farmers, companies’ employees and student, though they can’t afford this equipment.”*

6.3 The outcome of questionnaires

During the interviews with different local farmers, including 3 rose farmers, 2 carnation farmers who experienced the water shortage as well as 5 landless farmers who are experiencing the land loss. Here is the outcome of the questionnaires I used during the interviews. The first part is the general information of target group and the second part is the multi-selected questions mixed with open and close topics.

a. General information (10 interviewees in total)

Ages: 1 (20-29) 5(30-39) 3(40-49) 1(above 50)
Marital status: 10 married (each 10 has one or more children)
Gender: 5 Males 5 Females
Living conditions: 0 living alone 10 living with family
Level of Income/per month: 5 ($x < 1000$) 4 ($1000 \leq x < 2000$) 1 ($2000 \leq x < 3000$)
Level of Education: 7 Primary school 3 Junior school
Type of products: 3 Rose 2 Carnation 1 Vegetables Others:2 Wheat 2 Maize
Years activities: 3 (2- 5 years) 5 (5-10 years) 2 (10-20 years)

b.The multi-selected questions(10 interviewees in total)

1. Really worry about: 10 Lose water ; 8 Lose land; 8 Lose money;
7 Loss job

2. Current problems : 10 Water shortage; 5 Land reform; 7 Lack of skills; 10 Lack of knowledge; 5 Lose job;

6 Lack of money; 5 Lack of equipments

3. The way to solve problems: 4 By my self; 5 Ask neighbors; 5 Ask local leaders; 1 Ask government; 2 Ask professional organizations

4. The experience of training: 3 (Not yet); 7 (1-5 times)

5. How often in training: 4 (Once a year); 3 (three times a year)

6. When want to train: 3 Time is available; 5 Job requires; 2 Government organize

7. Willingness to pay for training: 1 Yes; 6 No; 3 It depends

8. Get from practical training: 8 Specialized knowledge; 10 Specialized skills
7 Better work performance; 3 Information exchange; 2 Know more people

9. Ever recommended others: 4 Yes; 6 No

10. More topics in practical trainings?

- Use of different irrigation systems, water storage system 4
- Water treatment of drinking water, waste water and industrial water 5
- The specific skills including urban planting and urban landscaping for future work planning in horticultural area 5
- New horticultural policies in Yunnan 7
- New varieties of rose 3
- Water-fertilizer management 4
- Crop protection 4

7. Future Training Programs

There are two parts beneath including the list of future training programs and three samples of designed trainings. The programs beneath are listed in different steps according to the floriculture production chain and relevant policies, including the programs come from participates during Pilot Trainings and also come from the interviewees during the training needs assessment. For the samples of designed training, I use the Format for Designing a Training and choose three topics from the list below. These three training programs are designed for three target groups.

7.1 List of future training programs

- Policy Instructions:

- Further development of cut flowers in Yunnan
- New horticultural policies in Yunnan

- Preparative activities:

- The identification of garden plants
- The identification of new rose varieties for growers

- Propagation

- Selection of new rose / lily varieties for breeders
- Propagation Techniques of rose/ lily

- Cultivation:

- Water-fertilizer management on rose
- Pest & Disease Treatment on rose
- Cultivation techniques for new rose varieties
- The maintenance of rose
- The maintenance of garden plants
- Usage of new equipments on rose cultivation

- Crop protection for carnations
- Use of different irrigation systems
- Water storage systems
- Waste water treatment for rose cultivation

- **(Post) harvest handling:** No suggested programs

- **Marketing & Sales**

- Types of auction
- Auction process
- Bidding strategy

7.2 Designed training programs

The following three samples are different topics designed for three different target groups:

- Sample 1

The first training program is designed for local small scale farmers which have little knowledge about garden plants. The training content is easier to prepare in an appropriate and relevant level, because this group of farmers is in a homogenous level as well.

Title of training: The maintenance of garden plants

Facilitator/Trainer: Chen Wu Rong(KAS)

Number of days and daily times of work: Half-day training/ two trainings a week

Venue: Qi Bu Suo Village, Chenggong County

Participants or Target group: Local small scale farmers

Needs:

- Vegetable farmers need to change their crops into garden plants
- Landless farmers need to get the certificate to work for garden planting
- Cut flower farmers want to change their crop into garden plants

Intended Learning outcomes:

After participating in this training, participants should be better able to:

- Identify different characteristics of different garden plants
- Recognize the importance of crop maintenance on garden plants
- Recognize the profitability of garden plants
- Grasp the key knowledge and skills to deal with crop maintenance on garden plants
- Get the certificate to work for garden planting

Methods of training: 1. Lecture; 2. Real product show; 3. Group classroom exercise;

4. Field visit; 5. Demonstration and return demonstrations;

6. Group field exercise 7. Group discussion; 8. Homework

9. Trial field

- Sample 2

The second training program is designed for employees about new varieties of rose, since more and more companies want to develop their varieties and expand their markets. When the companies themselves have no specific training department about new varieties and techniques, the Employees are required to be trained to support companies to develop their new products.

Title of training: Cultivation techniques for new rose varieties

Facilitator/Trainer: Zhao Yan(YAU) & Wu Yu Mei(KAS)

Number of days and daily times of work: Half-day training / once a week

Venue: KAS

Participants or Target group: Employees

Needs:

- Rose companies need to get the latest information about new varieties to explore their new markets.
- Employees are required by companies to grasp the specific techniques of new rose varieties and capable to support companies to select new varieties
- Rose companies have no specific training department to train their employees

Intended Learning outcomes:

After participating in this training, participants should be better able to:

- Identify the latest and the most popular varieties of roses
- Recognize the importance of crop maintenance on garden plants
- Recognize the profitability of new varieties
- Grasp the key cultivation techniques to deal with new varieties of roses

- Help company to select new varieties of rose

Methods of training: 1. Lecture; 2. Group classroom exercise; 3. Experience sharing

4. Field visit; 5. Demonstrations 6. Group field exercise 7. Group discussion; 8. Homework 9. Trial field 10. Case study

- Sample 3

The third training program is designed for students to enrich their major-related knowledge. The training about auction sale gives the opportunity to students to test their capabilities of sales in horticultural area.

Title of training: Auction sale

Facilitator/Trainer: Deng Yu Juan(KIFA) & Ma Yan Hong

Number of days and daily times of work: Half-day training / twice a week

Venue: KIFA - Dounan flowers market

Participants or Target group: Students

Needs:

- Horticultural major related students need to enrich their major related knowledge
- Students need latest information about auction sale to plan their future career

Intended Learning outcomes:

After participating in this training, participants should be better able to:

- Identify the importance of auction sale in flower market
- Identify the different types of auction sale
- Recognize different processes in auction sale
- Be capable to bid in strategic way
- Be capable to plan their future career in flower industry

Methods of training: 1. Lecture; 2. Group classroom exercise; 3. Observation

4. Auction visit; 5. Demonstrations 6. Group exercise

7. Group discussion; 8. Homework; 9. Case study; 9. Skill practice exercise;

11. Role play; 12. Debate

8. Discussions and conclusion

In this chapter, discussion about target group analysis and conclusion for the research result are combined. We can see difference among three different groups and different group has its different training needs.

8.1 Target Group Analysis

The effectiveness of the Pilot Training Program can be reflected by the evaluation both from participants and observers. As an observer during the pilot training programs, the first factor I found that influence the effectiveness of training is the needs assessment. The target group analysis and needs assessment may guide trainers to set feasible, realistic, and challenging learning outcomes. The training content may be more relevant and at an appropriate level for the target groups according to the target group analysis. In the table beneath you can find a summary of the most important elements of a proper target group analysis.

Table 3 Target Group Analysis

Target Groups Element	Farmers	Employees	Students
Training needs	1.Solve problems 2.Make more money	1. Promotion 2.Better job performance	1. Future career
Communicative competencies	Low, no questions to ask and no answer to the question	Good, when linked by intermediary person	Very good; Very open-minded
What they worry about	1.Loss of money 2.Loss of land	1. Loss of job 2.Loss of promotion opportunity	1. Lack of certificate 2. No opportunity for future job
Level of education	Low	Medium to high	High
Level of skills	High	Medium to high	Low, relatively low floricultural skills in practice
How are they used to learn	By solving problems after the problem occurs	By working in practice or learning from collages	By learning from teacher and books
Motivation to learn	Be paid	Be send	Voluntary

Time availability	Mostly not available -(farmers with land) Mostly available -(Landless farmers)	Mostly not available	Mostly available
Money availability	Mostly not available	Available	Mostly available
Internet availability	Not available	Available	Available
Attitude to change	Difficult to change (conservative)	Mostly difficult to change (Cautious)	Mostly easy to change (Advanced and adjustable)

Local small scale farmers: they have plenty of experience in the horticulture area, because they are managing their own greenhouses. They are capable with practical skills, because they have experience to manage their own greenhouse. For theoretical knowledge, the average education level of farmers is relatively low. Most of them are willing to learn but lack capability to communicate, to come up with questions. It means it is difficult to ask farmers what they want and need. The time arrangement for farmers is also a problem that trainers should consider. Usually, the farmers are busy in their greenhouse and there is no enough labor for exchanging their daily work in the greenhouse. In addition, the small scale farmers are separated from each other, resulting in the difficulty in gathering them at the same place on the same time for training. Traveling distance is a point to consider. Farmers are willing to travel to your place if your pay for the transportation fee. Normally, there are more men than women working in local small farmlands. These important elements of target group analysis are the first and most important step in training design. After these analysis, trainers are able to make decision about *“how to motivate farmers to train; How to arrange the time and place to train; how long the training could last; how to select the realistic and useful training methods and materials; how to prepare the attainable evaluation form.”*

Employees: Most employees are not willing to join the training until someone sends him to or the promotion needs, though their money is available for training. When some specific skilled technicians are needed or some serious problems can't be solved, the company is willing to send their employees to a training. Additionally, the company is willing to send the employees for training when there is no specialized training in the company for new comers. E.g. Chrysal organized its own sales training for all new employees. The data are easy to get from employees when there is a contact person between each other. The time availability for employees is also a problem when we take the training into account, because they spend most of their time on working; however, they are capable to learn from working experience and from internet.

Students: Most students in agricultural school or university acquire specialized knowledge and they are motivated to learn, because they should plan for their further study or future career. The information from students is easy to obtain since they are capable to communicate and pleased to present their views. The disadvantage is: most university students are lacking the capability to put what they learnt from book into practice, though they are equipped with rich and broad knowledge. Mostly, they are willing to spare their time and money on training as well as improve their learning capability.

8.2 Conclusions

To conclude, the first point is the Pilot Training Programs designed by ToT trainees; these training programs are effective according to training cycle; the improvement from participant and observer side are: training needs should be done to avoid inhomogeneous level of participants, training methods can be more diverse and evaluation should be done in correct way. The outcome of interview with local farmers is also part of important source contributing to the future training programs. Finally, combine the wishes for future training programs given by participants during the Pilot Trainings with what I found during interview, the future training programs can be concluded.

8.2.1 Pilot Training Programs

The table below shows the Pilot Training Programs with different topics designed by different ToT groups, different target groups as well as the duration of training.

Table 4 Pilot Training Program designed by ToT trainee

Group	Topic	Target Group	Duration
A	Cultivation of rose, focus on pest & disease	Employees	Half day
B	Propagation of edible rose (by cutting)	Farmers	Half day
C	Market analysis of carnation cut flowers	KAS Students	One day
D	Aseptic operation technique of gerbera	KAS Students	Half day
E	Post harvest treatment of rose	Farmers	Half day
F	Cultivation of lily	YAU students	Half day
G	Cultivation and Post Harvest of cut lilies	Uncertain	One week

8.2.2 Fitting the training cycle

20 ToT trainees (Group A,B,C,D,E,F,G) worked out the Pilot Training Program which is fit for the plan of effective training. Pilot Training Program is designed starting

from needs Assessment, then determine training objectives according to the needs assessment to their target group; next, prepare and organize the training content to develop curriculum; then, ToT trainees select and determine the most effective and realistic training methods and materials in order to conduct an effective training. They also prepare terminal evaluation form for participants so as to improve and develop for future training program.

8.2.3 Effectiveness of Pilot Training

For one of the target groups: Farmers, the Pilot Training has positive influence on their current situation and future planning, especially for the landless farmers, giving them the opportunity to broaden their knowledge on future work plan. For current vegetable farmers who are planning to change to rose cultivation, the Pilot Training is also an effective way to give them general insight of horticulture. For the rose farmers who participated in Pilot Training, the training of rose propagating is kind of useful source for their further planning.

For employees, the specific and throughout knowledge are delivered successfully by field visit, group field exercise, and demonstration with return demonstration are all effective training methods to present the more abstract knowledge.

For students, the Pilot Training helps students to richen their major related knowledge and guides them to recognize their capability in horticultural area.

8.2.4 Improvement

-Firstly, the not homogeneous level of participants can be solved by the target group analysis and the needs assessment in the very beginning of training design. The improvement for target group analysis and needs assessment is significant, because they indicate what training is useful to the participants. The training content can be more relevant for the target group and designed at the appropriate level with particular needs assessment.

-Secondly, according to the evaluation from participants, the length of training can be longer, because sometimes the training content is too dense to digest. Then, the time for training can be more scheduled and stricter. The back up plan is required to prepare to avoid unexpected situation.

-Thirdly, the evaluation can be more specific and detailed according to the different target groups. The evaluation choice can not only focus on terminal evaluation, but can be the pre-evaluation, process-evaluation and follow-up evaluation. Then, handing out the evaluation form in the most appropriate time can be more effective.

-Fourth, the training methods can be more motivated to encourage participants to be active, especially for farmers.

-Fifth, for students, the training methods can be more diverse. It is more effective to combine the lecture with field visits in training.

8.2.5 Outcome of interviews

According to different interviews, I found that all local farmers are married and live with family; their average age is around 38 years old. Male farmers are more than females in flowers cultivation; though the education level of flower farmers is low, this group of farmers has years of cultivating experience and they also have some training experience. Only when their time is available, they are willing to attend in training; the current problems of flower farmers are mainly water shortage and loss of money. Then, the landless farmers are mainly females who have no experience of training and no high level of education; this group of landless women is worried about their future job.

9. Recommendations

This chapter is divided into two main parts, one is what I recommend for future training programs, and the other is what I recommend for training methods. Recommended future training programs contain the water related topics for flower farmers, sustainable related topics for three groups, topics of planning for future job for landless farmers, and placement program for students. Moreover, the recommended training methods may be helpful in the future trainings.

9.1 Future training programs

PTC Kunming, together with a group of prepared trainers (ToT trainees) and groups of specialists should train farmers to be conscious to take measurements before the problems happen. Cooperate with government and universities, schools, institutes and specialized companies, and relevant industries, PTC Kunming can select and design training programs as follows:

Water related programs:

1. Sources of irrigation water;
2. Problems in irrigation;
3. Rainwater management;
4. Drain water collection;
5. Efficiency of water use in greenhouse

Sustainable Horticulture:

1. The importance of good plant choices;
2. Improvement of site conditions;
3. The importance of maintenance;
4. Integrated Pest Management
5. Waste management of plastic
6. Pot planting

9.2 The instructions of policy

Besides the practical training programs, the current policies which can be relevant to horticulture are also necessary to be designed and organized for target groups. Beneath, there are list of relevant policies can be considered for future training:

1. Identify the current situation of horticultural industry in Yunnan province;

2. Realize the probability to start their future career in horticultural industry in Yunnan province;
4. Improve their communication skills and working performance in Yunnan;
5. Get the information about the horticultural certificate which can be the qualified proof for future work;
6. Provide placement opportunities for students to find out which are the potential cities to establish PTC in China;
7. Organize students to do needs assessment for local farmers
8. Distribution of water in rural area and urban area
9. Water management& service

9.2 Training methods

-“Reward” can be one effective training method to encourage the participants join in the training activities, especially the target group farmers. For example, the Pilot Training of Group E - Post Harvest Treatment for rose. The products of Chrysal are introduced during the training, and then a small bag of Chrysal can be the Reward to the volunteer who are willing to do the demonstration of grading in front of the classroom.

- Pre-training evaluation can be designed to be a previous testing to collect the general knowledge of participants, then, the learning results of participants can be evaluated by the comparison between pre-evaluation and terminal evaluation.

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Appendix

1. Questionnaire

Name:

Ages: below 20 20-29 30-39 40-49 above 50

Marital status: single married (have child have no child)

Gender: Male Female

Living conditions: living alone living with family

Level of Income/per month: $x < 1000$ $1000 \leq x < 2000$ $2000 \leq x < 3000$

$3000 \leq x < 4000$ $4000 \leq x < 5000$ $5000 \leq x < 6000$

$x > 6000$

Level of Education: Primary school Junior school Senior school
 University Above university

Type of products: Rose Lily Carnation Gerbera Vegetable

Others _____

Years activities: below 1 year 2-5 years 5-10 years
 10-20 years above 20 years

1. What do you really worry about?

Lose water Lose land Lose money Lose job

2. What are current problems you have?

Water shortage Land reform Lack of knowledge Lack of skills

Lose job Lack of money Lack of equipments

3. How do you usually solve problems?

- By myself Ask neighbors for help Ask local leaders for help
 Ask government for help Ask professional organizations for help

4. Have you ever participated in practical training?

- Not yet 1-5 times 5-10 times more than 10 times

5. How often do you participate in training?

6. When will you participant in training?

- Time is available Job requires Government organize
 Others_____

7. Are you willing to pay for training?

- Yes No It depends

8. What do you want to get from practical training?

- Specialized knowledge Specialized skills
 Better work performance Information exchange
 Know more people Others_____

9. Have you ever recommended others to participant training?

- Yes No

10. What is the topic to know more about in practical training?

2. List of contact person

2.1 List of participants in the Train the Trainers program

Name	Organization	Mobile number	email
Jos Leeters	VHL	13520170659	Jos.leeters@wur.nl
Hermine de Wolf	VHL	13678719654	Hermine.dewolf@wur.nl
Aad van den Bosch	PTC+	15912135704	A.vdBosch@ptcplus.com
Anouk Sloot	VHL		Anouk.sloot@wur.nl
Sharon Nijemanting	VHL		sharon.nijemanting@wur.nl
Shi Meng	VHL	13888436787	shimechel32@hotmail.com
Hu Rui	VHL	15288412645	rui.hu@wur.nl
Michiel van Mill	PTC+		M.vanMil@ptcplus.com
Ansjeliek	PTC+		
Deng Yujuan	KIFA – ToT trainee	15974841101	1050163470@qq.com
Kui Lihua	KIFA – ToT trainee	13354918258	kuilihua@yahoo.com.cn
Ma Yanhong	KIFA – ToT trainee	13508809012	865538219@qq.com
Li Ming	KIFA – ToT trainee	13987638262	1007548946@qq.com
Li Yan	KIFA – ToT trainee	13577002840	993749727@qq.com
Zhao Mingfang	KAS – ToT trainee	13619656583	
Li Hai	KAS – ToT trainee	13354606568	
Nian Hongzhong	KAS – ToT trainee	13888700070	415529593@qq.com
Zhao Feng	KAS – ToT trainee	13888115106	Lmz8226647@sina.com
Chen Wurong	KAS – ToT trainee	13529256153	chenwurong.good@163.com.cn
Wu Yummei	KAS – ToT trainee	13888335353	
Zhang Hong	KAS – ToT trainee	13888081352	464132254@qq.com
Lan Ling	KAS – ToT trainee	13769197379	
Wang Youguo	YAU – ToT trainee	13888639021	wy99988@sohu.com
Zhao Yan	YAU – ToT trainee	13700624007	zhaoyan4545@yahoo.com.cn
Zhu Haishan	YAU – ToT trainee		shanyau29@hotmail.com
Shi Libo	JY – ToT trainee	13238667505	shilibo0212@sina.com.cn
Mao Jinhong	YYY– ToT trainee	13619635960	272370343@qq.com
He Wenping	KAB – ToT trainee	13808719176	apple@163.com
Liu Bin	VDB – ToT trainee	13608881721	calmain168@163.com.cn

2.2 Execution of field research

Date	Place	Contacts person	Subject
24/03/2010 25/03/2010 26/03/2010	VHL-Wageningen	Jos Leeters Hermine de Wolf Sharon Nijemanting Guo Xiangyun	Participant in the meetings to discuss the 4th Train the Trainers Module and Pilot Training
01/04/2010	Kunming	Shi Meng	Start to build the network with project person in Kunming
03/04/2010	Kunming	Chen Wu Rong	Collect information about current practical training relevant to horticulture
07/04/2010	KAS	Chen Wu Rong	visited the basement of KAS
09/04/2010	Jinning county	Li Ji liang Zhang Hua shou	visit the rose greenhouses and discuss the water issue with local small scale rose farmers
14/04/2010	KIFA	Deng Yu Juan Xu Ming Qu Jin Song	Discuss the current flora-market and local farmers' situation in Yunnan. Interview two of their customers
14/04/2010	Qi Busuo village (in Cheng Gong county)	Li Yu mei Zhang qing wei Shi Yan Zhao Yu Lu Qiang (Local Farmers)	Join the training course " <i>Professional skills for horticulture and gardening</i> " organized by government and trained by KAS teachers (Chen Wu Rong and Zhao Ming Fang). Assess the needs of participants by asking questions.
18/04/2010	Kunming	Jos Leeters Shi Meng	Join the meeting about project planning and preparation for flower presentation course
19/04/2010	Kunming	Shi Meng	Prepare the materials for one-day flower presentation course
20/04/2010	KAS	Ansjeliek	Join the one-day flower presentation course
20/04/2010	KAS	Jos leeters TOT trainees	Join the meeting about the 4 th session of Train the Trainer program and Pilot training

21/04/2010	Kunming	Jos Leeters Shi Meng	Join the meeting to discuss the 4 th Training Module and course schedule for Pilot Training.
23/04/2010	Kunyang	Wang Shi yuan (Local rose farmer)	Visit <i>Huan yuan rose farmland</i> –observe its current situation in the greenhouse and conduct an interview.
28/04/2010	Qi Busuo village (in Cheng Gong county)	All Participants in this Training	Join the training course “ <i>Professional skills for horticulture and gardening</i> ”. Assess the needs of farmers by questionnaires.
01/05/2010	Kunming	Hermine de Wolf	Discuss about my further thesis procedure
04/05/2010	Dounan	Uncertain	Visit Dounan flower market and ask their current situation; assess their needs and observe the market situation
05/05/2010	YAU	Zhao Yan	Assist TOT trainees (Group A) to prepare for Pilot Training.
06/05/2010	KAS	Chen Wu Rong	Assist TOT trainees (Group B) to prepare for Pilot Training
10/05/2010	KAS	Aad van den Bosch	Join the first day of 4 th Training Module. The first introduction for “Market orientation and Entrepreneurship”.
11/05/2010	KAS	Hermine de Wolf	Join the second day of 4 th Training Module. The lecture about “How to conduct Training assessment”.
12/05/2010	Authura Ball Horticultural Company	TOT trainees	Join the third day of 4 th Training Module, field visit to Authura, Ball company
13/05/2010	KAS	TOT trainees Specialists	The lecture about “Market orientation, Entrepreneurship” and combining class with TOT trainees and specialists
14/05/2010	Songming (basement of Van Den Bos lily bulb company)	TOT trainees	Join the fifth day of 4 th Training Module. Discussion and preparation for Pilot Training

15/05/2010	KAS	Hu Jin you (participants of the project)	Join the sixth day of 4 th Training Module, the lectures about Market orientation, Entrepreneurship
16/05/2010	Kunming	Shi Meng	Assist Shi Meng to prepare the training materials for Pilot Training
17/05/2010	Kunyang	Zhao Yan Wu Yu Mei Deng Yu Juan Kui Li Hua Li Ming Li Yan Du Xiu Juan	Participant in whole-day Pilot Training; Observe and assess two Pilot Trainings. Collect the feedback from participants
18/05/2010	YAU	Zhu Hai Shan Ma Yan Hong	Participant in half-day Pilot Training in YAU; Observe and assess the Pilot Training; Collect the feedback from participants
19/05/2010	KAS	Chen Wu Rong He Wen Ping Li Hai	Participant in half-day Pilot Training; observe and assess the Pilot Training. Collect the feedback from participants Participant in evaluation for Pilot Trainings and collect the training materials designed by TOT trainees. Participant in the close ceremony.

2.2 List of interviewees

Name	Place	Telephone number
Li Ji liang (Rose farmer)	Jinning	15877193583
Zhang Hua shou (Rose farmer)	Jinning	0871-5326281
Xu Ming (Carnation farmer)	Dounan	13519803579
Qu Jin Song (Carnation farmer)	Dounan	138884473801
Wang Shi yuan (Rose farmer)	Kunyang	13109623418
Li Yu mei	Qi Bu Suo Village	0871-5326190

(Landless farmer)		
Zhang qing wei (Landless farmer)	Qi Bu Suo Village	0871-5337285
Shi Yan (Landless farmer)	Qi Bu Suo Village	15227861904
Zhao Yu (Landless farmer)	Qi Bu Suo Village	13700674832
Lu Qiang (Landless farmer)	Qi Bu Suo Village	13190087865

3. Evaluation form from observer

Observation form pilot training part 1: the training (per group)

Name observer:		Group:	
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Target group						
Please rate the quality of the following	Poor	Fair	Good	Very good	Excellent	Comment
The training is relevant for the target group, based on their learning needs						

Learning outcomes						
Please rate the quality of the following	Poor	Fair	Good	Very good	Excellent	Comment
The learning outcomes are:						
Feasible						
Challenging						
Realistic						
Met						

Methods

Please rate the quality of the following	Poor	Fair	Good	Very good	Excellent	Comment
The training includes active learning exercises						
The audience is involved in each of the following used training methods (fill in the training methods in the left column):						
Method 1:						
Method 2:						
Method 3:						
Method 4:						
Method 5:						

Content						
Please rate the quality of the following	Poor	Fair	Good	Very good	Excellent	Comment
The content of the training is:						
Relevant for the target group						
At the appropriate level						
Technically correct						

Organization						
Please rate the quality of the following	Poor	Fair	Good	Very good	Excellent	Comment
Time is adequately managed						
All the materials are available on time						
The program is flexible						

The different (co-)trainers cooperate effectively						
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Evaluation						
Please rate the quality of the following	Poor	Fair	Good	Very good	Excellent	Comment
The training is evaluated						
The questions are relevant for improvement of the training						