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KINGS' MUSHROOM PRODUCTION
AND MARKETING ENTERPRISE

SHORT-TERM TRAINING ON VEGETATIVE PROPAGATION TECHNIQUES OF FRUIT TREES

JUSTIFICATION



Ethiopia has a wide range of edaphic and climatic conditions that permit the production of tropical and subtropical fruit crops. Temperate crops can also be grown in the highlands. Irrigation can be provided from rivers and fresh water lakes throughout the year. In addition to the growing demand in the local market, the neighboring Arab countries and winter export to Europe are potential markets for the expansion of fruit industry in the country. Despite of these, exports of fresh produces are currently negligible due to quality and other related problems. As studies revealed, there are two strong justifications for the expansion of fruit industry in Ethiopia.

- The diet of our people is very low in fresh fruits; and
- There is high potential of export market for high quality fruits to

the western and neighboring Arab countries. Thus, a well-established propagation system in combination with an effective management system reduces production costs, whilst improving the quality of fruit products and leading towards winning the competitive market.

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TARGET GROUPS OF THE TRAINING

- ✓ Horticulturalists involved in agricultural extension work, research, or teaching;
- ✓ Agricultural development agents working in government offices or NGOs;
- ✓ Students of agriculture or horticulture;
- ✓ The commercial nurserymen; and
- ✓ Individuals interested on vegetative propagation of fruit trees.

OBJECTIVES

The objective of all fruit growing enterprises, horticulturalists in development, research and/or teaching activity is to enhance the quality and productivity of fruits and fruit products. Concomitantly, our objectives remain the same as outlined below:

GENERAL OBJECTIVES

- ✓ To enhance the quality and productivity of fruit crops.

SPECIFIC OBJECTIVES

- ✓ To make you best nursery practitioner;
- ✓ To make you skilful plant propagator capable of performing plant propagation professionally;
- ✓ To enable you vend your produces with value addition.

CONTENTS OF TRAINING

- Morphological, anatomical, and physiological bases of different plant materials used in vegetative propagation;
- Methods of propagating fruit tree plants by cutting, grafting & budding, and layering;
- Transport care and protection measures of propagation material;
- Use, preparation and application of synthetic growth substances in fruit tree propagation; and
- Choice and characteristics of rootstocks and scion, scion wood selection, storage and care, time of budding and grafting of fruit trees.
- Sample experiments with their datasheet and exercise.

TRAINING METHODS

Trainee centered type of training method will be followed. Both the theoretical and practical hours will be conducted on participatory bases. During discussion hours trainees will be acquainted with the theoretical background of the subject under discussion. Whereas during the practical hours, trainees will choose propagation materials, practice the different methods of propagation and perform propagation by themselves.

Finally, the activities of the trainees in group and individual bases will be evaluated based on assignments provided.

REQUIREMENTS

- Interest on vegetative propagation of fruit trees.

DURATION

- 6 days (48 hours)

PLACE OF TRAINING

- Bahir Dar, Ethiopia

TRAINING FEE

- Negotiable

CONTACT ADDRESS

Kings' Mushroom Production and Marketing Enterprise
 P. O. Box: 341
 Bahir Dar, Ethiopia
 Phone: +251-911-963544
 E-mail: kingsmushroom@gmail.com
 Contact person: Kiflemariam Y.



OUTLINE OF THE TRAINING

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S.No,	Description of training component	Hours
1	Introduction of trainers and trainees	1.0
2	Introduction to vegetative propagation	1.0
3	Propagation of fruit crops by cutting	
3.1	Introduction to propagation of fruit crops by cuttings	1.0
3.2	Physiological basis of rooting	1.5
3.3	Environmental factors affecting rooting	2.0
3.4	Cutting types; stem, leaf, and root cuttings	2.5
3.5	Transport care of cuttings and protective measures	2.0
3.6	Use, preparation and application of rooting hormones	1.5
3.7	Local protective structures for cuttings	1.0
3.8	Introduction to cutting tools	0.5
3.9	Practical on techniques of propagation by cuttings	8.0
4	Propagation of fruit crops by grafting & budding	
4.1	Introduction to propagation of fruit crops by grafting and budding	1.0
4.2	Graft union, graft incompatibility	1.0
4.3	Choice & characteristics of rootstocks	2
4.4	Scion wood selection, storage & care	1.0
4.5	Time of budding & grafting	1.0
4.6	Introduction to budding and grafting tools	1.0
4.7	Practical on techniques of grafting	5.0
4.8	Practical on techniques of budding	4.0
5	Propagation of fruit crops by layering	
5.1	Use, importance, and application of layering techniques to propagate fruit trees	1.5
	Introduction to layering tools	0.5
5.2	Practical on techniques of layering	4.0
6	General theoretical and practical training examination	4.0
	Total training hours	48.0