

SHORT-TERM TRAINING ON POSTHARVEST HANDLING & SMALL SCALE PROCESSING METHODS OF MAJOR HORTICULTURAL COMMODITIES

NEEDS FOR THE TRAINING

Individuals involved in the post-harvest management of fresh fruit, vegetable and root crops must understand the biology of the commodities in order to make appropriate management decisions. The ever-increasing demand for fresh produce creates the need for sound technical as well as managerial expertise.

Centers of consumption of fresh produce are usually remote from production areas. The costs of distribution in both money and energy which terms. includes handling, packaging and transportation, often exceed those of production. Careful management of the distribution system will ensure that produce retain its quality and that economic returns are maximized.

The objectives of applying postharvest technology to harvested fruits and

vegetables are to maintain quality (appearance, texture, flavour, nutritive value and safety) and to reduce losses between harvest and consumption. Effective management during the postharvest period, rather than the level of sophistication of any given technology, is the key in reaching the desired objectives. While large-scale operations may benefit from investing in costly handling machinery and hightech postharvest treatments, often these options are not available to small-scale handlers for the simple reason of economies of scale. Instead, simple, low cost technologies can be more appropriate for small volume, limited resource commercial operations, farmers involved in direct marketing, for home gardeners, as well as for handlers in developing countries.



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KINGS' MUSHROOM PRODUCTION AND MARKETING ENTERPRISE

Many innovations in postharvest technology in developed countries have been in response to the desire to avoid the use of costly labor and the cosmetically desire for "perfect" produce. These methods may not be sustainable over the long-term, due to socioeconomic, cultural and/or environmental Local concerns. conditions for small-scale handlers may include labor surpluses, lack of credit for investments in postharvest technology, unreliable electric power supply, lack of transport, storage facilities and/or packaging materials, as well as a host of other constraints. Fortunately, there is a wide range of simple postharvest technologies from which to choose, and many have the potential of meeting the special needs of small-scale food handlers and marketers. Many of the practices to be included in this training have been successfully used in various parts of the world for handling horticultural crops for many years.

One purpose of this training is to acquaint the trainees with post harvest handling and improved ways of processing fruits and vegetables at a scale that is appropriate for families and other groups of people to earn a daily income.

The training is designed to teach the principles of physiology/biochemistry which are relevant to the processes occurring in harvested horticultural crops. This knowledge is used to understand how produce responds to changing environmental conditions, and how produce can in turn affect the environment, thereby allowing postharvest management decisions to be made that maintain quality and reduce losses.

There are many interacting steps involved in any postharvest system. Produce is often handled, transported stored repeatedly between and harvest and consumption. The most common causes of postharvest losses in developing countries include rough handling and inadequate cooling and temperature maintenance. The lack of sorting to eliminate defects before storage and the use of inadequate packaging materials further add to the problem. In general, minimizing rough handling, sorting to remove damaged and diseased produce and effective temperature management will help

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considerably toward maintaining a quality product and reducing storage losses. It is only when the temperature during the postharvest period is kept as close to the optimum as feasible for a given commodity that its storage life will be enhanced.

In most developing countries food processing is also a method of generating employment and family incomes. With some important exceptions traditional processing methods produce foods that are usually inadequate to compete with the "newer" products.

There are important reasons for improving fruit and vegetable processing that is done in the home to meet family needs and the small scale industrial production level.

However, to be successful in the business related to fruit and vegetable processing initiatives should be that training to various part of the society related to these areas should be provided.

CRITERIA

The training could be useful for groups or individuals involved in fruit and vegetable as a production manager, development agents from various sectors of government organization and NGOs, marketing agents, exporters, processing industries and research institutes.

Participants should at least complete grade 12 or 10+1.

CONTENTS OF THE TRAINING

While particular practices and the sequence of operations will vary for each crop, there is a general series of steps in postharvest handling systems that will be followed. The topics to be covered in this short-term training will be:

- Causes of postharvest fruit and vegetable deterioration and its control.
- **2.** Harvesting practices and methods of preparation for market.
- Curing products before further handling or storage.
- **4.** Simple technologies that can be used in the packinghouse.
- Packing methods and packaging materials that can help to maintain product quality and reduce mechanical damage during handling and storage.

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- 6. Simple methods for cooling.
- Storage structures and methods for ensuring adequate ventilation, and simple technologies for modified atmosphere storage.
- **8.** Transport practices that can reduce losses.
- Methods for handling at destination (wholesale or retail markets)
- **10.** Postharvest insect and disease control.
- Simple methods for processing fresh produce such as drying, canning and juice extraction.

METHODS OF TRAINING

The course will have 30 hours of theoretical and 60 hours of practical sessions. Excursions will be made to production areas and local fruit and vegetable markets.

DURATION OF TRAINING

o 10 days (80) hours

PLACE OF TRAINING

o Bahir Dar, Ethiopia

TRAINING FEE

Negotiable

TRAINING TEAM

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- 2. Mengistu Gizaw
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