

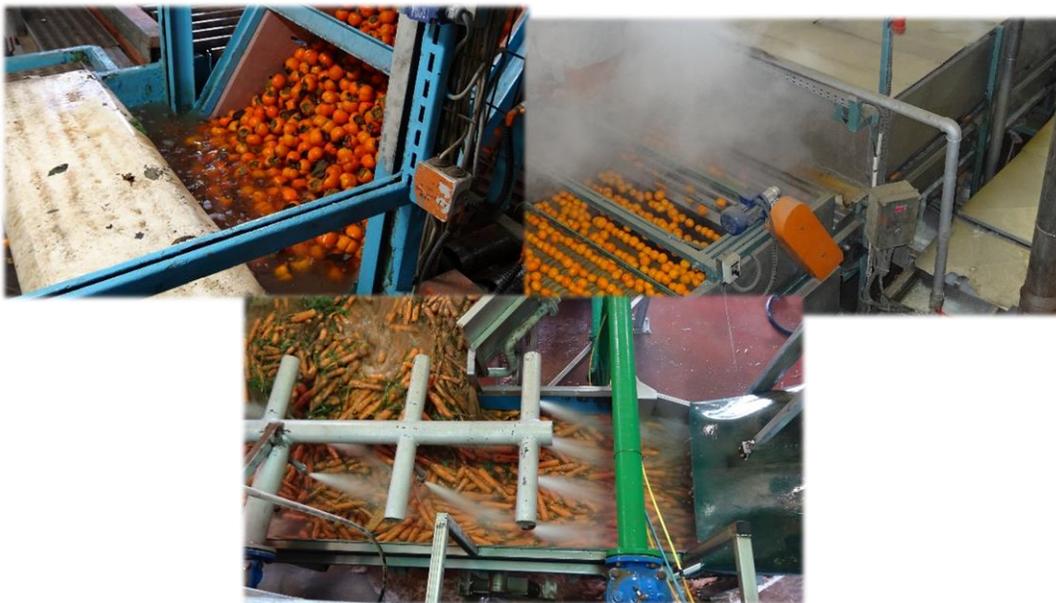


International Course on:

Postharvest Physiology, Pathology and Handling of Fresh Commodities

In cooperation with the Institute of Postharvest and Food Sciences, ARO-
the Volcani Center, Rishon LeZion

February 1st -14th, 2020



About the Course

Background

Despite the remarkable progress made in increasing food production worldwide, approximately half of the population in the developing countries does not have access to adequate food supplies; thus, the food security problem is worsening.

There are many reasons for this, one of which is food losses occurring throughout the supply chain from production, post-harvest, processing and marketing.

In its recent report “Global food losses and food waste”, the FAO suggests that roughly one-third of food production for human consumption is lost or wasted globally, which amounts of about 1.3 billion tons per year.

Evidence suggests that these losses tend to be highest in those countries where the need for food is greatest.

Pre-harvest conditions and events in the fields such as cultivar, soil type, fertilization and irrigation practices, weather conditions, pest control programs etc. have a significant influence on achievement of the best potential postharvest quality and shelf life of fresh fruits and vegetables.

Plants or plant parts continue to function metabolically after harvest and are subjected to physiological and pathological deterioration and loss. “Loss” means any change in the quality of the food that prevents it from being consumed by people. Postharvest loss in fresh fruits and vegetables is estimated at 5-25% in developed countries and 20-50% in developing countries.

Causes of this loss are varied with microbiological, mechanical and physiological factors being the main cause in perishable crops. Other causes are in-adequate harvesting, packaging, handling skills and refrigerated storage, as well as inadequate transportation. Storage and shelf life are defined as the period from harvest to consumption, while a food product remains safe and wholesome. There is a wide range of postharvest technologies that can be adopted to reduce losses throughout the process from field to fork. Both quantitative and qualitative food losses of extremely variable magnitude occur at all stages in the post-harvest system from harvesting, through handling, storage, processing and marketing to final delivery to the consumer.

Appropriate storage can minimize moisture loss, slow down respiration rate and inhibit development of decay-causing pathogens. Wilting, re-growth, ripening, senescence and decay can be postponed. Temperature is the most important determination of fresh produce deterioration rate. An important supplement to temperature and relative humidity management is the use of controlled atmosphere (CA) or modified atmosphere (MA) and other technologies.

Postharvest loss results not only in the loss of the actual crop, but also have an impact on the environment, resources, labor needed to produce the crop and livelihood of individuals involved in the production process. The implementation of appropriate storage and postharvest techniques will add value to the produce and will increase the farmer’s income.

Aims

To understand the Physiological, pathological & environmental factors involved in the deterioration of fresh agricultural produce. To learn postharvest technologies and best practices associated with the postharvest handling of fresh fruits and vegetables, to assist in the delay of senescence, reduce loss and maintain the best possible quality of the produce. To initiate research, teaching and transfer knowledge to extension workers and farmers.

Main Subjects

Physiological and pathological factors affecting storage and shelf life; Cause and site of loss; Standardization and inspection of fresh produce; Quality factors and analysis; prolonging shelf life; Post-harvest technologies.

Application

Application Requirements

This course is designed for research and extension workers, quality control personnel in the produce industry, and business, government or academic professionals interested in current advances in the postharvest technology of fruits, vegetables & horticultural crops. It is particularly of interest to technical professionals responsible for quality assurance, research and extension activities related to fresh produce quality, safety and marketability under the aegis of national or international organizations, institutions, universities, research institutes, civil society and the private sector. Good command of English (speaking and reading) is essential.

Application forms

Application forms may be obtained at the Ministry of Agriculture website at: [Click Here](#) or at the Agricultural Research Organization (Volcani Institute) website: [Click Here](#) Applications must be submitted on or before December 8th, 2019.

General Information

Arrival and Departure

Arrival date: February 1st
Opening date: February 2nd
Closing date: February 14th
Departure date: February 14-15th

Participants must arrive at the training center on the arrival date, and leave on the departure date. Early arrivals/late departures if required, must be arranged by the participants themselves, directly with the hotel/center, and must be paid for by the participant him/herself.

Location and Accommodation

The course will be held at the Volcani Agricultural Complex, Ministry of Agriculture and Rural Development in Rishon LeZion, situated 10 km east of Tel Aviv, Israel. Participants will be accommodated at a hotel in Tel Aviv in double rooms (two participants per room).

Fees

Tuition fee: \$US2962

Tuition fee covers lectures, field visits, full board accommodation in double rooms (two participants per room), and transportation from and to the airport, tourist sites, social activities, health insurance (see below) and registration fee. Further instructions for money transfer will be given after the initial registration and when a minimum number of participants is reached.

The fee does not cover airfare or a daily allowance.

Health Services

Medical insurance covers medical services and hospitalization in case of emergency. It does not cover the treatment of chronic or serious diseases, specific medications taken by the participant on a regular basis, dental care and eyeglasses. Health authorities recommend that visitors to Israel make sure they have been inoculated against tetanus in the last ten years. Subject to the full binding policy conditions. Participants are responsible for all other expenses.

About CINADCO

CINADCO, the Center for International Agricultural Development Cooperation is a unit within Israel's Ministry of Agriculture and Rural Development. Our goal is to enhance agricultural development and rural economic growth in developing countries through human capacity building by transfer of expertise and technologies.

CINADCO is involved in formulating, implementing and conducting international agricultural and rural development cooperation programs. We collaborate in developing bilateral and multilateral cooperation programs with governmental ministries and institutions, the international aid community and donor countries.

Our activities include: Agricultural training courses, workshops and study visits held in Israel, on-the-spot courses and workshops conducted overseas, planning agricultural and rural development demonstration projects aiming at technology transfer and capacity building, and consultancy missions supporting agricultural development projects.

About ARO-the Volcani Center

The Agricultural Research Organization (ARO) of the Ministry of Agriculture and Rural Development is the largest agricultural research institute in Israel, and is considered a world-leading facility. Its main functions are to assist Israeli farmers in maintaining high quality production for local and export markets, to conduct research and development in promising new agricultural fields and food sciences, and to plan, organize and implement agricultural research in Israel.

ARO website: [click here](#)

List of future courses:

- Integrated Pest Management
- Tilapia Lake Virus (TiLV) – Diagnostics and Regulations
- Intensive Vegetable Production
- Water Management & Modern Irrigation Technologies
- Intensive Agriculture in Arid & Semi-Arid Environment
- Agriculture & Environment in a Changing Climate - The Israeli Perspective
- Trans-Boundary Animal Diseases
- The 21st century Challenge- Improving Animal Husbandry
- The Role of Water and Nutrients in Agricultural Productivity

For further information, please contact the R&D International Agricultural Training Program:



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