



STATE OF ISRAEL



Israel's Agency for International  
Development Cooperation  
Ministry of Foreign Affairs



CINADCO - Centre for  
International Agricultural  
Development Cooperation,  
Ministry of Agriculture and  
Rural Development



ARO – Agriculture Research  
Organization, Ministry of  
Agriculture and Rural  
Development

**MASHAV - Israel's Agency for International  
Development Cooperation**

**with**

CINADCO - Centre for International Agricultural  
Development Cooperation, Ministry of Agriculture & Rural  
Development and the ARO – Agriculture Research  
Organization, Ministry of Agriculture & Rural Development

invite professionals  
to participate in the

**International Course:**

**– Food Security & Grain Storage  
Technologies and Management**

**In cooperation with the Institute of Postharvest and Food  
Sciences**

**4-22 June, 2017**



## About the Course

### Background

Grain is still the main basis for human consumption and animal feed, especially in developing countries. The on-going effects of the food crisis are caused in part by very high losses of grain during storage, which in turn has resulted in the starvation of 925 million people worldwide (FAO), including people who suffer from undernourishment.

Post-harvest grain and dry food losses caused by insects, mold and other bio-agents range from 10%-40%. Under sub-optimal storage conditions, harmful microorganisms and mycotoxins may develop which could cause severe damage to human and animal health. These biological factors can also cause reduction in the nutritive value of stored products. Post-harvest losses can include not only loss of the crop itself, but also damage to the environment, a lack of return on the resources and labor needed to produce the crop and a decrease in the livelihood of individuals involved in the production process. When 30 percent of a harvest is lost, the same percentage of the factors contributed to producing the crop is also wasted. Israeli scientists have developed new methods, technologies and compounds for safe storage and pest management of grain crops. Their successful implementation has reduced post-harvest losses in Israel to as low as 0.1- 0.5%.

“Stored product insect pest control” is based mainly on the use of highly effective fumigants and protectants. However, increased health, environmental and social concerns and the consequent demand for pesticide-free food, have led to the development of non-chemical and integrated strategies for stored pest management.

The Course will significantly increase the awareness and knowledge of the participants regarding all aspects of food security and grain storage, with an emphasis on methods that can replace the use of methyl bromide. Participants will be exposed to the latest developments, methods and technologies for food security and for insect pest control in stored grains. The knowledge acquired will assist course participants in the implementation of methods that can substitute for the use of methyl bromide in their respective countries.

It is envisaged that the participants will serve as a core for a reservoir of specialists in issues related to food security and grain storage in developing regions and countries. During their time together, delegates with responsibilities in food security and grain storage issues will be able to create a basis for developing expertise in their respective countries, as well as a communication network with authorities and experts from other participating countries.

### Aims

To understand the ecosystem of stored grain and dry food. To learn the influence of biotic and abiotic factors on stored product and their interaction during storage. To learn food security and grain storage technologies with an emphasis on phasing out the use of methyl bromide, which will reduce grain losses while meeting the requirements for food quality and safety. To transmit the knowledge and experience of Israel's scientists and specialists in grain storage to developing countries. To assist specialists from developing countries in the implementation of relevant technologies.

### Main Subjects

General properties of bulk grain. Ecosystems of stored grain and dry food. Effect of biological and environmental factors on stored products. Insect pests in stored grain and their management. Methyl bromide alternatives. Non-chemical control of grain insect pests. Molds and mycotoxins. Grain trade and quality.

# Application

## Application Requirements

This course is designed for professionals from the academic and extension services who are involved in grain storage and food security projects under the aegis of national or international organizations, institutions, universities, research institutes, municipalities and/or the private sector. Course participants must have a relevant academic degree and at least three (3) years of practical work experience in related fields. A very good command of the English language is essential.

### Application forms

Application forms and other information may be obtained at the nearest Israeli mission or at MASHAV's website: [click here](#).

Completed application forms, including the medical form, should be sent to the relevant Israeli mission in the respective country by or before **April 9<sup>th</sup>, 2017**.

## General Information

### Arrival and Departure

Arrival date:	June 4 <sup>th</sup>
Opening date:	June 5 <sup>th</sup>
Closing date:	June 21 <sup>st</sup>
Departure date:	June 22 <sup>nd</sup>

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

**MASHAV** awards a limited number of scholarships. The scholarship covers the cost of the training program including lectures and field visits, full board accommodation in double rooms (two participants per room), health insurance (see below) and transfers to and from the airport. Airfares and daily allowance are not included in the scholarship.

### 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.

The course will be held at **the Volcani Agricultural Complex**, situated **10 km east of Tel Aviv, Israel**. Participants will be accommodated at **City Prima Hotel** in double rooms (two participants per room).

## About MASHAV

MASHAV – Israel’s Agency for International Development Cooperation is dedicated to providing developing countries with the best of Israel’s experience in development and planning. As a member of the family of nations, The State of Israel is committed to fulfilling its responsibility to contribute to the fight against poverty and to the global efforts to achieve sustainable development. MASHAV, representing Israel and its people, focuses its efforts on capacity building, sharing relevant expertise accumulated during Israel's own development experience to empower governments, communities and individuals to improve their own lives.

MASHAV’s approach is to ensure social, economic and environmental sustainable development, and is taking active part in the international community’s process of shaping the Post-2015 Agenda, to define the new set of the global Sustainable Development Goals (SDGs).

MASHAV’s activities focus primarily on areas in which Israel has a competitive advantage, including agriculture and rural development; water resources management; entrepreneurship and innovation; community development; medicine and public health, empowerment of women and education. Professional programs are based on a “train the trainers” approach to institutional and human capacity building, and are conducted both in Israel and abroad. Project development is supported by the seconding of short and long-term experts, as well as on-site interventions. Since its establishment, MASHAV has promoted the centrality of human resource enrichment and institutional capacity building in the development process – an approach which has attained global consensus.

<http://mashav.mfa.gov.il>

[MASHAV Facebook](#)

## About CINADCO

The Center for International Agricultural Development Cooperation (CINADCO) is a part of the Israel Ministry of Agriculture and Rural Development. Since 1958, CINADCO has been in charge of the International Agricultural program conducted by MASHAV in Israel and abroad. CINADCO's activities consist of: International and country “tailor-made” courses in Israel, on-the-spot courses, long- and short-term projects and advisory missions. Israeli experts have also been sent to different locations around the world to conduct projects and to share their expertise in various aspects of agricultural production, extension and project planning. [For more information about the course](#)

[CINADCO Facebook](#)

**For further information, please contact:**

**CINADCO**

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## About ARO

The Agricultural Research Organization (ARO) is the research arm of the Ministry of Agriculture and Rural Development and is responsible for most of the agricultural research conducted in Israel. The scientists of the ARO collaborate with the regional R&D Stations and with the Agricultural Extension Service of the Ministry of Agriculture. Research at the ARO aims to improve existing agricultural production systems and introduce new products, processes and equipment on which Israel's future agricultural efforts will be based. ARO website: [click here](#)