



STATE OF ISRAEL

**R&D Division**

**Course On:**

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

**18 June – 2 July, 2013**



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



**CINADCO**  
Center for International  
Agricultural Development  
Cooperation  
Ministry of Agriculture and  
Rural Development



**ARO**  
Agricultural Research  
Organization

**MASHAV – Israel's Agency for International Development  
Cooperation, and CINADCO - Center for International Agricultural  
Development Cooperation, in cooperation with the ARO – Agricultural  
Research Organization, the Institute for Postharvest and Food Sciences,**

**Food Quality and Safety department,**

**invites professionals to participate in the course on:**

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

**which will take place in CINADCO's Training Centre,**

**Volcani Agricultural Complex, Israel**

**18 June – 2 July, 2013**

## 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.

### Qualifications

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 good command of the English language is essential.

## **Application forms**

Application forms and other information may be obtained at the nearest Israeli mission and at Israel's Ministry of Foreign Affairs website: <http://mashav.mfa.gov.il> (in Contact Us → Information and Registration), or at Volcani website at [www.agri.gov.il](http://www.agri.gov.il) (Administration → International R&D Courses). Completed application forms, including the medical form should be sent to the Israeli mission in your area and also faxed or e-mailed to CINADCO Training Center in Israel: Fax no: +972 3 9485771 / e-mail: [sigalp@moag.gov.il](mailto:sigalp@moag.gov.il) .

MASHAV will award scholarships covering tuition fees, full board accommodation (two participants share a room), basic medical insurance and transportation to and from the airport. Scholarships do not include international airfare and per diem.

## **General Information**

### **Location and accommodation**

The course will be held at the Volcani Agricultural Complex, situated 10 km east of Tel Aviv, Israel.

### **Transportation**

Participants will be transported from and to Ben Gurion airport, without charge, by Tal Limousine Company, which is located on the mezzanine level at the Arrivals Hall. Participants are requested not to take any other transport company.

### **Clothing**

The course will be held in the Summer Season. Temperatures may vary between 25°C and 35°C. It is recommended to bring light clothing, suitable footwear for field trips and swimwear.

### **Insurance**

Participants are medically insured by a health insurance policy. This policy does not cover the treatment of chronic or serious diseases, dental care, eyeglasses, pregnancy and specific medication taken by the participant on a regular basis. Participants are required to bring with them their usual medication. No insurance of personal belongings like money, video cameras, laptops or jewelry will be provided.

### **About MASHAV**

Israel's Agency for International Development Cooperation (MASHAV) was founded in 1958 as part of Israel's Ministry of Foreign Affairs. MASHAV is responsible for initiating and implementing Israel's development cooperation programs worldwide. MASHAV aims at transferring to developing countries the expertise and technologies that have assisted Israel on its own path to development. Today, Israel cooperates with over 140 countries, providing training in Israel and abroad, and operates on-site long-term demonstration projects. MASHAV is active in fields ranging from agriculture to health and from community development to entrepreneurship. <http://mashav.mfa.gov.il>

## 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. <http://www.cinadco.moag.gov.il/cinadco>

## 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: <http://www.agri.gov.il>

### **For further information please contact:**

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