

**STUDY TOUR TO SPAIN- APRIL 2005**

**HOSTED BY: UNIVERSIDAD DE ALMERIA, SPAIN**

**UNIDO/TURKISH DELEGATION**

**PROJECT NUMBER:MP/TUR/01/214**

**SUBJECT: METHYL BROMIDE ALTERNATIVES IN PROTECTED HORTICULTURE**

**TIMING: 3<sup>rd</sup> APRIL-10<sup>th</sup> APRIL 2005**

Dr. E. J. Fernandez

Dr. J.C. Tello

Dr. F. Camacho

Dr. A. Lacasa

Dr. F. Dianez

**Focal Point:**

Dr. E. J. Fernandez

e-mail: [ejfernan@ual.es](mailto:ejfernan@ual.es)

Phone:+34 95 00 15 338

Fax: +34 95 00 15 156

**TURKISH DELEGATION:**

**Ayhan KOÇ:** Minister of Agricultural and Rural Affairs, Western Mediterreanean

Agricultural Research Institute, Director Vice.

**Zübeyir DEVRAN:** Minister of Agricultural and Rural Affairs, Western Mediterreanean

Agricultural Research Institute, Researcher- Nematologist

**Fatih ARSLAN:** Agricultural Engineer, Agricultural Consultant and Grower

**Mehmet Sait GÜÇİN:** Agricultural Engineer, Agricultural Consultant

**Ali YALÇINKAYA:** Agricultural Engineer, Dealer

**Mustafa SATICI:** Antalya Exporter Union, Chairman

**WORKING PROGRAMME:**

**03/04/05**

Group Reception. Almeria Airport. Transport to Hotel Vinci Mediterraneo

**04/04/05**

Visit to :

- Sociedad Cooperativa Agricola San Isidro (CASI)

- Coprohnijar: It is the most important cooperative specialized on IPM Production of Almeria

- Greenhouse and understand Almeria's horticultural model

Enarenado soil system

- Greenhouse growing model
- Micro-climate management
- Cropping systems&field timing
- Use of compost on commercial production of enarenado
- Use of grafted material as commercial production
- methyl bromide alternatives in tomato
  - Soil solarization
  - Soil solarization with biofumigation with manure
  - Soil solarization with biofumigation with compost
  - Soil solarization with metham sodium
  - Soil solarization with Dicloropropene
  - Grafting
- Zeta Seeds Experimental Stations: Breeding of Horticultural Crops.

### **05/04/05**

Visit to:

- Almeria University. Vegetable Production Department.
- Phytopathology Laboratory and Technical Research Services
- Residu Laboratory

Interview with Dr. Tello on Methyl bromide Alternatives in Protected Horticulture

- Soil solarization
- Soil solarization with biofumigation with manure
- Soil solarization with biofumigation with compost
- Soil solarization with metham sodium
- Soil solarization with Dicloropropene
- Soil solarization with Dicloropropene +cloropicrin
- Seminar on biofumigation, biosolarization research and grafting
- Video projection on biofumigation techniques

### **06/04/05**

Visit to:

- Murcia Region
- Instituto Murciano de Investigaciones Agrarias trials on methyl bromide alternatives in sweet pepper crops.
  - Biofumigation
  - Soil solarization with metham sodium
  - Soil solarization with Dicloropropene
  - Soil solarization with Dicloropropene +cloropicrin
  - Grafting
- Ecological practices (especially IPM) in sweet pepper
- Private companies specialized on fertilization, irrigation and greenhouse automation

### **07/04/05**

Visit to :

- Private companies specialized on soilless culture, and packing sytem
  - Greenhouse treasure (rock wool & heating tomato specialities production)
- Compost Firm specialized on plants residue

**08/04/05**

Monitoring of trace marketing to Sociedad Cooperativa Agricola San Isidro (CASI): One example of concentration of greenhouse production: The Auction

Visit to :

- Commercial Nursery specialized on grafting in watermelon crops
- Fualnecoop: R&D Experimental Station of University of Almeria and Anecoop Group  
Research projects on tomato, grafted watermelon and melon
- Dialer

**09/04/05**

Trip to Granada

**10/04/05**

Return to Turkey

## **RESULT**

We visited Almeria and Murcia regions. In this region, they grow vegetable especially tomato and sweet pepper. We followed methyl bromide alternatives in protected horticulture. Also we visited Almeria University and Private Companies. We monitored the vegetable auction in Almeria. We saw various soil solarizations. These are; Soil solarization with biofumigation including manure, soil solarization with biofumigation including compost. The other most important alternative in protected horticulture is grafting. They use also chemical alternatives according to soil and plants. We had a chance to learn about agricultural structure of Almeria ve Murcia regions. In the future we could collaborate with them.

The Program was excellently organized by Dr Eduardo Fernandez.. We were all pleased.

The time was suitable for the study tour. We saw all the alternatives that used in protected horticulture. Also the duration of the study tour was fine. We thank for UNIDO' s support in this study tour.