

**Development of Sustainable Date Palm Production
Systems in the GCC Countries of the Arabian Peninsula
The Regional Training Course on
Crop Protection and Agricultural Statistics**

26 February-2 March 2017

Venue: Hotel Muscat Holiday - Oman

1. Objectives:

- a. To get acquainted with IPM principles and practices,
- b. To learn about surveillance guidelines and methods of how to design, plan and conduct surveys of insect pests and diseases of date palm.
- c. To learn about management methods of insect pests and diseases of date palm
- d. To learn how to design and analyze IPM data from experiments on date palm pests and diseases
- e. To learn about the geotagging of the field data, data fusion and spatial analysis

2. Learning Outcomes:

At the end of this course, participants should be able to do the following:

- a. Plan, design, and carry out surveys and IPM trials of insect pests and diseases of date palm
- b. Design and analyze IPM data from experiments on date palm pests and diseases

3. Schedule:

Sunday 26 February, 2017		
08:00 - 08:30	Registration	Lecturer/ Organizer
08:30 - 09:00	Opening Ceremony	
09:00 - 09:30	Coffee Break	
09:30 - 10:30	IPM (Definition, Pillars, Economic Threshold and Economic Injury Level)	Dr. M. El Bouhssini
10:30 - 11:30	Guidelines for Pests' Surveillance	Dr. El Bouhssini, Dr. S. Al-Khatri
11:30 - 13:00	IPM of Red Pam Weevil	Dr. S. Al-Khatri
13:00 - 14:00	Prayer and Lunch break	
14:00 - 15:00	Management of Fungal Diseases of Date Palm (1)	Dr. Q. Al-Ma'wali
15:00 - 16:00	Management of Fungal Diseases of Date Palm (2)	Dr. Al-Ma'wali

Monday 27 February, 2017		
08:30 - 09:30	Role of Habitat Management in Enhancing Natural Enemies	Dr. El Bouhssini
09:30 - 10:30	IPM of Dubas bug	Dr. S. Al-Khatri
10:30 - 11:00	Coffee Break	
11:00 - 12:00	IPM of Borers	Dr. S. Al-Khatri
12:00 - 13:00	IPM of Lesser Date Moth	Dr. S. Al-Khatri
13:00 - 14:00	Prayer and Lunch break	
14:00 - 15:00	Management of Bacterial Diseases of Date Palm (1)	Dr. Al-Ma'wali
15:00 - 16:00	Management of Bacterial Diseases of Date Palm (2)	Dr. Al-Ma'wali
Tuesday 28 February, 2017		
08:00-10:00	Statistical Designs and Analysis of IPM data of Date Palm Pests (Basics, RCBD and Incomplete Block Designs)	Mr. K. El Shamaa
10:00-10:30	Coffee break	
10:30-13:00	Statistical Designs and Analysis of IPM data of Date Palm Pests (Simple and Multiple Regression, Generalized Linear Models)	Dr. K. El Shamaa
13:00 - 14:00	Lunch break	
14:00-16:00	Statistical Designs and Analysis of IPM data of Date Palm Pests (Dose - binary response relationship for Probit analysis, LD50)	Dr. K. El Shamaa
Wednesday 1 March, 2017		
8:00-16:00	Field visit to date palm farms (the whole team): 1. Group discussion to develop IPM programs for key insect pests of date palm 2. Group presentations of IPM programs for key date palm pests	Dr. M. El Bouhssini, Dr. Al-Khatri
Thursday 2 March, 2017		
8:00 - 10:00	Geoinformatics application in mapping and management of pests and diseases	Dr. C. Biradar
10:00-10:30	Coffee break	
10:30-12:30	Geoinformatics application in mapping and management of pests and diseases	Dr. C. Biradar
12:30 - 13:00	Closing Ceremony	
13:00-14:00	Lunch	
Afternoon	Departure	



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