



The Hebrew University of Jerusalem

Syllabus

PESTICIDE APPLICATION AND PEST MANAGEMENT - 71512

Last update 07-10-2021

HU Credits: 3

Degree/Cycle: 1st degree (Bachelor)

Responsible Department: Agroecology & Plant Health

Academic year: 0

Semester: 1st Semester

Teaching Languages: Hebrew

Campus: Rehovot

Course/Module Coordinator: prof abraham gamliel

Coordinator Email: agamliel@volcani.agri.gov.il

Coordinator Office Hours: by appointment

Teaching Staff:

Prof Gamliel Abraham,
Prof Dani Shtienberg

Course/Module description:

Approaches and methods for pest control in agriculture. The course will emphasize the overall approach of applying intelligent and efficient interface with pest and safe use of poisons. The course includes principles for Disease Control, the application of the principles of pest control and soil pest control -fumigation. The course introduces the student the broad field of pest control in agriculture.

Course/Module aims:

approaches and methods for pest control in agriculture. The course will emphasize the overall approach of applying intelligent and efficient interface with pest and safe use of poisons. The course includes principles for Disease Control, the application of the principles of pest control and soil pest control -fumigation.

Learning outcomes - On successful completion of this module, students should be able to:

recognize and know various pesticide application methods and technologies
Choose the right pesticide method and sprayer
Pest control of plant diseases in a thoughtful approach
Save in pesticides

Attendance requirements(%):

100

Teaching arrangement and method of instruction: lectures

Course/Module Content:

Opening ; Development pesticides ; types ;
Integrated Pest management - IPM
Pest control methods Agrotechniques
Understanding the factors affecting the efficacy of pest, depending on intact,
purpose , and environmental conditions
Behavior of aerosols , cement transfer mechanisms and survival sprays on target
Methods for creating aerosols, spray equipment

air conduction Spraying
 Conditioning, fields and orchards
 Injectors spraying methods and transport methods sprays
 Advanced systems for effective implementation of technologies spraying pesticides
 from the ground and from the air
 Sprayers and spraying methods , methods of testing efficiency spray coverage
 Automatic application on greenhouse, landscape crowded application and residue
 application preparations marketed produce toxins vegetative reproductive material
 disinfectant (bulbs, seeds) advanced methods
 Pest control soil pests - Soil disinfection
 Systems to predict the development of epidemics
 Pest control soil pests - Soil disinfection

Required Reading:

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Additional Reading Material:

- פרנקל ה. 1986. יישום חומרי הדברה. מתוך י. אלפר (עורך) מכונות חקלאיות עקרוניות לשימושים הוצאת מסדה, גבעתיים
- רותם, י., פלטי, י. ובן-יפת, י. 1998. מחלות צמחים בישראל. הוצאת מינהל המחקר החקלאי. 533 ע
- Bateman R P. 2004. Pesticide Application, Aspects of Applied Biology vol 71 AAB Press.
- Cross J. V. 2000. Pesticide Application, Aspects of Applied Biology vol 57 AAB Press.
- Cross J. V. 2002. Pesticide Application, Aspects of Applied Biology vol 66 AAB Press.
- Masters, K. 1976. Spray drying. John Wiley & Sons New York.
- Matthews, G.A. 1979. Pesticide application methods. 1st Edition Longman, London.
- Matthews, G.A. 1992. Pesticide application methods. 2nd Edition. Longman, London
- Matthews, G.A. 2000. Pesticide application methods. 3rd Edition. Blackwell Science Oxford
- Matthews, G.A. 1992. Application of Pesticide to crops. 1999. Imperial College Press. London
- Ross G. J. 1963. Crop Protection. Leonard Hill, London
- Scopes, N. and M. Ledley. 1979. Pest and disease control handbook. B.C.P.C Publishers, London.
- Southcombe, E.S.E. (Ed). 1987. Application and biology. Monograph No. 28, B.C.P.C Publishers, London.

ריסוסי נפח זעיר וטיפות מבוקרות גודל

- Controlled droplet application 1978. Monograph No. 22 BCPC, Publisher, London

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- Mass V. 1971. *ULV application and formulation techniques*. Philips - Duphar, Amsterdam
 - Fraser R. P. 1968. *Fluid kinetics of pesticide application* in R. L Metcalf (ed). *Advances in pest control research Vol 2*. Interscience publisher, New York.

עיתונים

□ ניר ותלם

□ *Crop protection*

□ *J. Agric. Engineering Res. (Biosystem engineering* (כיום

□ *Transaction of the ASBAE*

Course/Module evaluation:

End of year written/oral examination 100 %

Presentation 0 %

Participation in Tutorials 0 %

Project work 0 %

Assignments 0 %

Reports 0 %

Research project 0 %

Quizzes 0 %

Other 0 %

Additional information:

The studied topic require knowledge in Physics, engineering and pesticide chemistry.