Course Unit Descriptor

Study Programme: Phytomedicine

Course Unit Title: Pesticides

Course Unit Code: 19.FT2008

Name of Lecturer(s): Full Professor Maja U. Meseldžija, Full Professor Slavica M. Vuković

Type and Level of Studies: Undergraduate academic study

Course Status (compulsory/elective): Compulsory

Semester (winter/summer): Winter

Language of instruction: English

Mode of course unit delivery (face-to-face/distance learning): Face-to face

Number of ECTS Allocated: 4

Prerequisites: Basis of Phytopharmacy

Course Aims:
The aim of the course is to provide basic knowledge for students about pesticides (herbicides and fungicides), biological effects, efficacy, phytotoxicity, risk assessment as well as strategies for their implementation.

Learning Outcomes:
The acquired knowledge will contribute to a better knowledge of plant protection products as an area, or one part of toxic substances, and certainly the ability to work in the field of environmental protection with its preservation and recognition of safe products.

Syllabus:
Theory
Classification of pesticides by their purpose. Efficacy, selectivity and persistence. Application of herbicides and fungicides, in the protection of agricultural products and on non-agricultural areas. Mode and mechanism of action of herbicides and fungicides. Methods and application conditions, the possible effects and assessment as well as the consequences of pesticides application. The importance of mixing pesticides, as well as pesticides (herbicides and fungicides) and non-pesticides substances different in purposes (compatibility). The application of non-pesticides. Chemical and natural substances as a substitute for herbicides. Mode of action of biocides on weeds. Crop sensitivity to herbicides, tolerant and herbicide-resistant crops (GMO crops). Development and implementation of strategies for use of herbicides and fungicides. Law regulations and compliance with EU regulations. Change in the sensitivity of harmful organisms to herbicides and fungicides, and anti-resistance strategy.

Practice
Properties and effects of herbicides and fungicides, in relation to the mechanism of action. Assessment of efficacy, selectivity and toxicity of pesticides (fungicides, herbicides). Phytotoxicity. Possibilities of mixing pesticides, as well as pesticides and non-pesticides, compatibility. Methods for bioassay. Determination of changes in susceptibility (resistance) of harmful organisms to herbicides and fungicides.

Required Reading:

1. Janjić, V.: Fitofarmacija. Društvo za zaštitu bilja Srbije, Beograd, 2005.
2. Janjić, V.: Mehanizmi delovanja pesticida, Društvo za zaštitu bilja Srbije, Beograd, 2009.
3. Inđić, D., Vuković, S.: Praktikum iz Fitofarmacije (fungicidi, zoocidi), Poljoprivredni fakultet, Novi Sad, 2012.
4. Kolektiv autora: Pesticidi u poljoprivredi i šumarstvu u Srbiji 2018, Društvo za zaštitu bilja Srbije, Beograd, 2018.

Weekly Contact Hours: 4+2	**Lectures:** 60	**Practical work:** 30

Teaching Methods:
Lectures – oral presentation and direct communication; visual (presentations, illustrations); Practical classes (laboratory-experimental methods and demonstration).

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	points
Active class participation	5	written exam	40
Practical work	5	oral exam	30
Preliminary exam(s)	20	…….	
Seminar(s)			

The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.