

Course Unit Descriptor

Study Programme: Phytomedicine			
Course Unit Title: Fungicides			
Course Unit Code: 19.FT1005			
Name of Lecturer(s): Full Professor Slavica 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: Basics of Phytopharmacy			
Course Aims:			
The aim of the course is to provide students with knowledge about: fungicide properties (physical-chemical, biological spectrum of action, side effects, risk assessment of resistance), the assessment of biological effects (toxicity, efficacy, phytotoxicity) and strategies in the application of fungicides.			
Learning Outcomes:			
Acquired knowledge will contribute to training of individuals for work in the field of contemporary applications of fungicides in the production of crops, vegetables, fruits and wine and horticulture.			
Syllabus:			
<i>Theory</i>			
The history, significance, systematization and application, inorganic fungicides for plant treatment (copper, sulphuric compounds). Synthetic fungicides – physical-chemical and biological properties, mechanism and spectrum of action of triazoles, benzimidazoles, imidazoles, strobilurins, dithiocarbamates, dicarboximides, acilalanins, anilinopirimidins, phthalimides, guanidins, anilides, phenylimidazolinons, dinitrophenols, phenilpyrrols, phosphonates, quinones, carbamates, morpholins, oxazolindions, piperazines, pyrimidines, spiroketalamines, sulphamids; Biofungicide, significance, division and conditions for application; Monitoring of resistance of phytopathogenic fungi to fungicides, causes and strategies to overcome resistance, with emphasis on prophylactic measures; Plant protection programs against diseases of small grains, maize, industrial plants, vegetables; stone fruit, grapes, berries and nuts, medicinal, ornamental and forage crops, stored products; Possibilities of preparing fungicide preparations by mixing several compounds; Application of fungicides in conventional, integral and organic agriculture.			
<i>Practice</i>			
Methods of fungicide application; fungicide efficacy assessment; toxicity-LD50 or LC50, LT50 of fungicides; probyt analysis (p-ld, lc-p lines and the level of toxicity); effects of preparations for seed treatment; testing the difference of effects of fungicides; systemic effect of fungicides; prophylactic and curative effects of fungicides in fruit; phytotoxicity tests; effect of biofungicides; development of programs for protection of cultivated plants from diseases.			
Required Reading:			
<ol style="list-style-type: none"> 1. Inđić, D., Vuković, S.: Praktikum iz Fitofarmacije (fungicidi, zoocidi), Poljoprivredni fakultet, Novi Sad, 2012. 2. Kolektiv autora: Pesticidi u poljoprivredi i šumarstvu u Srbiji 2018, Društvo za zaštitu bilja Srbije, Beograd, 2018. 3. Janjić, V.: Fitofarmacija. Društvo za zaštitu bilja Srbije, Beograd, 2005. 4. Copping, L.G.: The Manual of Biocontrol Agents, BCPC, UK, 2009. 5. MacBean, C. (Ed): The Pesticide Manual, Sixteen Edition. British Crop Protection Council, Farnham, 2012. 			
Weekly Contact Hours: 4+2		Lectures: 60	Practical work: 30
Teaching Methods:			
Lectures, Practical classes, Research work			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Active class participation	5	written exam	30
Practical work	5	oral exam	30
Preliminary exam(s)	20	

Seminar(s)	10		
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The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, **project presentation, seminars, etc.**