Course Unit Descriptor

Study Programme: Agronomy

Course Unit Title: Nutrient Management in Organic Farming

Course Unit Code: ZDAI4118

Name of Lecturer(s): Manojlović, S., Maja

Type and Level of Studies: Doctoral studies

Course Status (compulsory/elective): Elective

Semester (winter/summer): Summer

Language of instruction: English

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

Number of ECTS Allocated: 10

Prerequisites:

Course Aims:

Acquisition of advanced knowledge about increasing / maintaining soil fertility and fertilization in organic farming.

Learning Outcomes:

Students will be able to apply their knowledge in the planning agricultural production system on the principles of organic agriculture, in advisory services for organic production, as well as in their research.

Syllabus:

Theory

Sources of nutrients for plants and losses. Soil quality, soil fertility. Organic matter in the soil. Measures to prevent loss of nutrients. Synchronization of mineralization of organic matter with the nutrients uptake. Measures to increase the organic matter in the soil. Crop rotation. Cover crops. Fertilization. Organic fertilizers of plant origin. Organic fertilizers of animal origin. Characteristics of organic fertilizers. Soil amendments. Commercial fertilizers. Microbial fertilizers. Increasing soil fertility in the conversion period from conventional to organic production. Legislation.

Practice

Indicators of soil quality. Assessment of mineralization ability of different organic materials. Synchronization of nutrient mineralization with nutrient uptake.

Required Reading:

1. Lampkin, N. H. (1994): Organic Farming. Farming Press, Ipswich, 1-540.
2. Altieri, M.: Agroecology: The Science Of Sustainable Agriculture, Second Edition. Westview Press, 1995.
3. Soil Organic Matter in Sustainable Agriculture. Ed. F. Magdoff and R.R. Weil. CRC Press, Florida, 2004.
4. Building Soil for Better Crops, 2nd edition. By F. Magdoff and H.van Es. U. Nebraska Press, Lincoln, NE, 2000.

Weekly Contact Hours:	**Lectures:** 4	**Practical work:** 0

Teaching Methods:

Classes are conducted with the use of modern technology (computer, video beam). Laboratory studies.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	**Final exam**	points
Active class participation		written exam	
Practical work		oral exam	50
Preliminary exam(s)		…….	
Seminar(s)	50		