

<b>Study program:</b> Organic crop and livestock production			
<b>Type and level of study:</b> Bachelor academic studies			
<b>Course Title:</b> FERTILIZATION IN ORGANIC AGRICULTURE			
<b>Professors:</b> Dr. Olivera P. Nikolić, Associate Professor			
<b>Status:</b> Optional 1, semester V			
<b>ECTS:</b> 8			
<b>Prerequisite:</b> None			
<b>The goal of the course</b> The goal of the course is that students, within the broader concept of biological farming and sustainable crop production, acquire the basic legal standards related to the use of mineral fertilizers and other, productive potentials of this kind of cropping and its effects on the ecosystem. A part of the program is related to mineral nutrition, which is the basis for understanding the fertilizer as complex cultural practice in conventional and organic production.			
<b>The outcome of the course</b> For existing conventional cropping systems there are a whole series of problems, which are the result of intensive utilization of land, the application of fertilizers and various chemicals. It is therefore considered that, introduction to the basic assumptions of standard application of scientific farming methods and the possibilities of their adaptation requirements faced by modern crop production without drastic effects on the yield of the product, can significantly contribute to finding new technological solutions in the field. Ability of students in this area is a necessary precondition for serious consideration of practical issues and problems of organic crop production, which is imposed as necessity for modern man.			
<b>Syllabus</b> <i>Theoretical study</i> – Introduction. Basic concepts in the domain of organic farming. Cultural practices in organic production. Mineral nutrition, useful and necessary elements. Organs by which plants adopt ions, mechanism of ion transport, nutrient solutions. Physiological acid and alkaline salts. Indicators of mineral nutrition. Factors influencing the adoption and content of ions in the plant. Mineral nutrition and the environment. The role of mineral elements in the life cycle of plants. The movement of substances in the plant. Fertilization: History of Science of fertilization, fertilizers and fertilization, distribution of fertilizers, forms of fertilization - basic and additional fertilizing, factors affecting the determination of mineral fertilizers, fertilization in organic farming. Legislation related to organic production, humification, organic fertilizers. <i>Practical lessons</i> – Visiting the property where principles of organic production are applied - field exercise. Practice on certificated properties about composting and manure processing Composting in yard conditions			
<b>Literature</b> 1. Organic Manures, Dr. Krishan Chandra, 2005. <a href="http://ncof.dacnet.nic.in/Training_manuals/Training_manuals_in_English/Organicmanures.pdf">http://ncof.dacnet.nic.in/Training_manuals/Training_manuals_in_English/Organicmanures.pdf</a> 2. Composting, <a href="http://www.nswaienvi.nic.in/">www.nswaienvi.nic.in/</a> 3. Benefits and limitations of biofertilization in agricultural practices, J S Carvajal Muñoz and C E Carmona-Garcia, 2012. <a href="http://www.lrrd.org/lrrd24/3/carv24043.htm">http://www.lrrd.org/lrrd24/3/carv24043.htm</a>			
<b>Number of lectures: 6</b>			Other Lessons
Lectures: 3	Practices: 3	Other forms of teaching: Student research work:	
<b>Teaching methods:</b>			
Score (maximum 100 points)			
<b>Pre-commitments</b>	<b>Points</b>	<b>The final exam</b>	<b>Points</b>
Activity during lectures	10	Written exam	
Practical lessons	10	Oral examination	40
Preliminary exams	3 x 10 = 30		
Seminars	10		
<i>Total</i>	60		40