

Study program: Ecological agriculture
Type and level of study: Master academic studies
Course Title: Specifics of organic crop production
Professors Dr. Olivera P. Nikolić, Associate Professor
Status: Optional 3, semester II
ECTS: 6
Prerequisite: None
<p>The goal of course The aim of this course is to acquire knowledge about the principles of field crop species in an organic cropping system and the ability of detecting substantial differences compared to conventional farming.</p>
<p>The outcome of the course Enabling students for independent and professional implementation of principles in organization of organic crop production, with the proper selection of adaptable varieties and hybrids, GMO, and in according to specific agro-ecological conditions and in accordance with the requirements of a consumer market and the expected financial effects. An important place in crop production organizing is period of conversion including education, adaptability, evidence as well as just certification. This course makes ability for further research in improvement of crop production.</p>
<p>Syllabus <i>Theoretical study -</i> Ecological guidelines for managing sustainable agroecosystems. Organic agriculture within system of sustainable agriculture. The principles and goals of sustainability of organic agriculture. Conversion from conventional organic crop production (control and certification). The concept and characteristics of organic crop production (field history, selection of plots and location, selection of previous crop, selection of plant species, hybrids and genotypes). Technology of organic crop production, depending on the biological characteristics of species and varieties of organic and microbial fertilizers, soil traits and its fertility. Sowing crop plants and reproductive material in organic system. Plant nutrition, irrigation, crop protection, harvesting and storage of products, the possibility of using organic products. Basic principles of organic farming conditions, the importance of biological properties of soil for plants and plant requirements under environmental conditions (temperature, water, aeration, mineral nutrition). Organic production of cereals (maize, sorghum, millet), pseudo-cereals (buckwheat, amaranth), grain legumes (soybean, peas, beans, lentils, Vigna, chickpeas, peanuts), oil crops (sunflower, poppy seed oil, black mustard, safflower, marigold), energy types (canola), sugar beet, yarn (textile) plants (hemp, flax) and root-tubers (potatoes, Jerusalem artichokes, chicory). Control and certification of organic agricultural production, the principles of Serbian Organic Agriculture regulations and EU regulations 834/2008, the Codex Alimentarius for organic production in 2007. The methods of production, processing, storage, transportation, marking, labelling and market of organic products, certification and re – certification, control and revision, import of organic products. <i>Practical lessons–</i> The evaluation of agritechnics of treatment and their impact on some soil traits. Completing crop rotation. Analysis of some procedures in certification. The morphology of crop species, the characteristics of varieties for different purposes of use, less cultivated species in our field exercise; tour of producers, organizations and institutes in the field.</p>
<p>Literature Lampkin, N. H. (1994): Organic Farming. Farming Press, Ipswich, 1540. Soil fertility and fertilizers, Havlin J.L. et al., Pearson education, Inc. Upper Saddle River, New Jersey, 2005 Kirchmann, H., Bergstrom, L. (2008): Organic Crop Production – Ambitions and Limitations. Springer Science+Business Media B.V. Sweden. Goldammer, T. (2016): Organic Crop Production. Management Techniques for Organic Farming. Apex Publishers. Charles, L. M., Johnson, S. E. (2009): Crop Rotation on Organic Farms - a planning manual. NRAES. ORGANIC CROP PRODUCTION OVERVIEW, George Kuepper and Lance Gegner, 2004. file:///C:/Users/User/Downloads/organiccrop.pdf Guide for Organic Crop Producers, Pamela Coleman, 2012. https://www.ams.usda.gov/sites/default/files/media/Guide-OrganicCropProducers.pdf FAO/WHO Codex Alimentarius commission: Codex Alimentarius. Organically Produced Foods, 2007.</p>

Number of lectures: 4				Other Classes
Lectures: 2	Practices: 2	Other forms of teaching:	Student research work:	
Teaching methods: Practical teaching in the field, oral explanation and practical introduction to the agroecological work operations and work on performing research and development research.				
Score(maximum100 points)				
Pre-exam commitments	Points	Final exam	Points	
Activity during lectures	10	Written exam	50	
Practical classes	10	Oral examination		
Preliminary exam	2 x 10 = 20			
Seminars	10			
<i>Total</i>	50		50	