Study program: Ecological agriculture

Type and level of study: Master academic studies

Course Title: Sustainable agricultural systems

Professors: Dr. Olivera Nikolić, Associate Professor

Status: Compulsory, semester I

ECTS: 6

Prerequisite: None

The goal of the course

The goal of the course, sustainable agricultural systems is to introduce students to learning about development and importance of sustainable farming systems as a basis for sustainable managing agricultural production and a quality life style.

The outcome of the course

By acquiring the knowledge of the principles of development and multi functionality of sustainable agricultural systems, students can exhibit significant impact on biodiversity, development and conservation of ecosystems and improvement of the quality of life. The system of precision farming, management and sustainability of agroecosystems are main characteristics of sustainable agricultural systems, which form the basis of commitment to a way of agricultural production. By applying economic, social and ecological principles, students will be able to organize and manage various types of sustainable agriculture.

Syllabus

Theoretical study - Sustainable development (principles and aims), agricultural systems (traditional, conventional, sustainable agriculture), the concept and classification system of sustainable agriculture - sustainable agriculture (good agricultural practices, integrated agriculture, organic, biological and biodynamic production, alternative agricultural systems). Themes: sustainable land and water managing, agricultural production technology, crop protection, livestock production, animal health, livestock welfare, collection of products, processing and storage on the farm, energy management and waste, the benefits of human health and safety, wildlife and landscape. Economic goals of sustainability in various agricultural systems (traditional, industrial, good agricultural practices, integrated and ecological agriculture). Social goals of sustainability in various agricultural systems (traditional, industrial, good agricultural practices, integrated and ecological agriculture). Standards and quality systems in agriculture (ISO standards, HACCP, EuroGAP, GlobalGAP. EU Directive, NOP, Codex Alimentarius for organic agriculture, The Law on Organic Production, private standards. Multifunctional agriculture, the concept and importance, role – ecological control gaseous emission, transformation and recycling toxic matters, planning settlements, roads, industrial facilities, landfill, development of non-production sector, various types of tourism in rural areas, old crafts, cultural and other events. Protection of brands and products in geographical areas

Practical lessons– Analysis of application, compliance with the principles of sustainability and standards in different agricultural systems, consideration of procedures in certification of products.

Field Exercise: Visiting Eco farms and bio gardens.

Literature

1. FAO/WHO: Codex Alimentarius Organiculy Produced Foods (2007)
2. Good Agricultural Practises, SARD, (2002): www.fao.org/wssd/sard/documents/faogapen.doc.
3. Europ GAP: Guideline, Group Protection Product and Water Quality Information Sources (2004).
4. E.F. Boller, J. Avilla, E. Jörg, C. Malavolta, F. Wijnands & P. Esbjerg, Ed.(2004): Integrated Production: Principles and Technical Guidelines, 3rd edition,WPRS Bull. Vol. 27 (2),. 50 pp.

Number of lectures: 4				Other Classes
Lectures: 2	Practices: 2	Other forms of teaching:	Student research work:	

Teaching methods: Lectures, discussions with students, experimental exercises, preparation and public defense of practical applied work.

Score (maximum100 points)

Pre-exam commitments	**Points**	**Final exam**	Points
Activity during lectures	10	Written exam	
Practical classes	10	Oral examination	40
Preliminary exam	20		
Seminars	20		
Total	**60**		**40**