

# **Organic farming technologies in crop production**

(ENVIRONMENTAL ENGINEERING, IVth Year of study, VIIIth Semester)

**Credit value (ECTS) 2**

**Course category**

Optional

**Course holder:**

Lecturer. PhD. Cristina SLABU

**Discipline objectives (course and practical works)**

The aim of the course is to have students acquire knowledge about the importance of ecological farming, of crop rotation, fertilizers and amendments, weeds and disease control in organic farming, as well as the ability to put this knowledge into practice.

**Contents (syllabus)**

<b>Course (chapters/subchapters)</b>
<b>INTRODUCTION TO ORGANIC FARMING</b> Organic farming - definition, history, trends; comparisons with different types of agriculture; the opportunity for organic farming
<b>CROP ROTATION</b> History of crop rotation, importance; rotation schemes used in organic farms.
<b>CROP FERTILIZATION</b> The role of biological activity in the soil on fertility; physico-chemical properties of the soil; use of organic manure, garbage and compost
<b>WEED CONTROL</b> Weed control management by direct and indirect methods.
<b>PLANT PROTECTION</b> Principles of plant protection in organic farming; plant protection in different agricultural crops
<b>PLANT CULTIVATION TECHNOLOGIES</b> Cultivation technology for cereals, legumes, oilseeds and technical plants

<b>Practicum</b>
Comparative analysis of the main types of agriculture; Comparison of the current state of organic farming in EU countries
Drawing up a rotation scheme in an ecological farm.
Development of a strategy for maintaining soil fertility in an organic farm
Development of a plant protection scheme for cereals, grain legumes, oilseeds, potato and sugar beet
Final colloquium of knowledge evaluation

## References

- Davidescu Dumitru, Davidescu Velicica, 1994 – *Agricultura biologic – o variantă pentru exploatarea mică și mijlocii*. Editura Ceres, București.
- Lampkin N., 1994 – *Organic farming*. Farming Press, U.K.
- Morar Maria Virginia, Rusu Teodor, Albert Imre, 2005 – *Ghid de combatere a buruienilor în agricultura ecologică*. Editura Risoprint, Cluj Napoca.
- Toncea I, Stoianov R., 2002 – *Metode ecologice de protecția plantelor*. Editura științelor Agricole
- Toncea, I., Simion, E., Ionișiu, E., Alexandrescu, D., & Toncea, V. A., 2016 - *Manual de agricultură ecologică* (suport de curs). <http://agriculturadurabila.ro/wp-content/uploads/2016/06/manual.pdf>
- Zaharia M., 2010 – *Structurarea fermelor ecologice*, Editura “Ion Ionescu de la Brad”, Iași.
- Zaharia M., 2011 – *Tehnologia culturilor de câmp*, Editura „Ion Ionescu de la Brad” Iași.
- \*\*\* Ghidul Consultantului în Agricultură Ecologică. <http://projects.ifes.es/pdfs/eco/ara3.pdf>
- \*\*\* Legislația europeană și românească în domeniul

## Evaluation

Evaluation form	Evaluation Methods	Percentage of the final grade
Exam	Oral examination	60%
Appreciation of the activity during the semester	Oral assessment during the semester, verification tests and final laboratory colloquium.	40%

## Contact

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