

FRUIT ECOTECHNOLOGIES

(Specialization: Environmental engineering, 3rd Year of study, 2nd Semester)

Credits (ECTS): 6

Course category: Specialized discipline (mandatory)

Course holder: Lecturer Marius Constantin DASCALU, PhD

Objectives of the discipline:

The objective of the discipline is to prepare students from the specialization of Environmental Engineering regarding the cultivation of the main fruit trees species in the organic farming system under the romanian conditions .

Acquiring the specific knowledge regarding the choice of species and varieties, choosing and preparing the land, setting up organic fruit crops, plant care, harvesting and capitalizing the production.

Contents (syllabus)

Course (chapters/subchapters)
1. The purpose, importance and principles of the application of the organic farming system in fruit growing
2. Influence of environmental factors and conditions on the growth and fruiting of fruit trees species
3. Establishment of fruit orchards in ecological system
4. Maintenance technology of organic orchards and environmental protection issues.
5. Irrigation of organic orchards
6. Prevention and control of diseases, pests in organic orchards
7. Organic fruit harvesting
8. Apple culture in ecological system
9. Pear culture in ecological system
10. Sweet and sour cherry culture in ecological system
11. Apricot and plum culture in ecological system
12. Elements regarding the ecological culture of raspberries, blackberries, currants, barberry and strawberries

Practical activity
1. The influence of ecological conditions on the growth and fruiting of trees
2. Choosing the crown steering systems for increasing the efficiency of the use of climate resources
3. The effect of the use of the plant rotation and the different technologies in the process of producing the ecological planting material.
4. Efficient crowns - high efficiency use of climatic factors
5. Environmental pollution with pesticides and fertilizers in traditional and organic orchards
6. Integrated control of diseases and pests in organic orchards
7. Biological control of diseases and pests in organic apple orchards
8. Composting techniques used in organic fruit growing

9. The main fertilizers used in organic farming
10. Erosion processes, landslides, methods of combating them, methods of land planning.
11. The main apple varieties suitable for culture in ecological system
12. The main pear varieties suitable for culture in ecological system
13. The main cherries variety suitable for culture in ecological system
14. The main apricot and plum varieties suitable for culture in ecological system

Bibliography

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3. Ceapoiu N., (1994) - Înființarea unei plantații pomicole, Ed. Ceres, București.
4. Cepoiu N. și colab., (1996) - Curs de pomicultură biologică, U.S.A.M.V. București.
5. Grădinaru G., Istrate M., Dascălu M., (1998) - Pomicultură, Ed. Moldova.
6. Grădinaru, G. (2002) – Pomicultură specială. Editura „Ion Ionescu de la Brad”, Iași.
7. Gh. Cimpoieș, V. Bucarciuc, I. Caimacan 2001 – Soiuri de măr. Intreprinderea Editorial Poligrafică Știința Chișinău.
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9. Volf Irina, (2005) – Ecotehnologii, ecoproduse, ecoservicii, Ed. Ecozone, Iasi.
10. Lampkin N. (2001) – Organic Farm Management – Handbook, Farming Press, Miller Freeman UK Ltd.
11. Cubison Stella (2009) – Organic fruit production and viticulture, Ed. The Crowood Press.
12. xxx -Revista de Horticultură
13. xxx - Lucrări științifice ale I.C.P.P. Pitești – Mărăcineni.
14. xxx – Lucrari stiintifice USAMV Iasi, seria Horticultura
15. www.gardenorganic.org.uk.
16. http://nysipm.cornell.edu/organic_guide/
17. xxx – Cercetari agronomice in Moldova

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Evaluation

Evaluation form	Evaluation Methods	Percentage of the final grade
Final exam	Written / oral examination	60
Evaluation of the activity during the semester	Written and oral assessments during the semester	40

Contact

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