

PRODUCTION OF FRUIT TREES PLANTING MATERIAL I

(Horticultural Seed and Planting Material Production, 1st Year of study, 1st Semester)

Credit value (ECTS): 4

Course category: Further study (mandatory)

Course holder: Prof. Mihai ISTRATE, PhD

Objectives of the discipline (course and practical activity)

To acquire the principles and methodologies, which are the basis of the production of fruit planting material.

Knowing the most modern technological sequences for the production of tree planting material.

To provide theoretical and practical knowledge, regarding the technical project for the establishment and maintenance of the fruit trees nursery.

Contents (syllabus)

Course (chapters/subchapters)
ORIENTATIONS AND PERSPECTIVES IN ROMANIA FRUIT CULTURE 1.1 The current and prospective situation of fruit growing. 1.2 The evolution of the nursery sector in Romania. 1.3 Current and prospective priorities in the field of fruit tree planting material production.
BIOLOGICAL BASES OF TREE SEEDLING MATERIAL PRODUCTION 2.1 Organization, specialization and endowment of nurseries. 2.2 The influence of ecological factors on grafting and the growth of tree planting material. 2.3 Grafting compatibility and relationships between rootstocks and grafts. 2.4 Terminology used in the production of tree planting material. 2.5 Rapid methods for determining adventitious rooting capacity and vegetative sprouting capacity. 2.6 Propagation by meristem cultures.
ROOTSTOCK MULTIPLICATION TECHNOLOGY 3.1 Rootstocks of the main tree species used in Romania and worldwide. 3.2 Methods of vegetative propagation of rootstocks. 3.3 Organization and exploitation of seed plantations. 3.4 Production of seedlings rootstock in the seedling school.
THE TECHNOLOGY OF OBTAINING GRAFT TREES IN THE TREE SCHOOL 4.1 The range of fruit trees allowed for propagation. 4.2 Production of grafted branches. 4.3 Establishment and maintenance of I st field of the tree school. 4.4 Specific maintenance works in the II nd field of the tree school. 4.5 Peculiarities of fruit tree species production and growth of planting material

Practical activity
The biological peculiarities of fruit tree planting material production.
Propagation by meristem cultures.
Characterization of seeds and kernels of generative rootstocks.
Current works in the nursery school.
Maintenance work in the vegetative rootstock mother field (stooling).
Methods of grafting with detached bud

Bibliography

1. *Braniște N. și colab* – Catalog de soiuri și material săditor pomicol-Ghid pepinieristic, Ed. Ceres, București, 2002, ISBN 973-85903-8-8
2. *Grădinariu G., Istrate M., Dascălu M.*, - Pomicultură, Ed. Moldova, 1998, ISBN

3. *Hoza D.*, - Ecofiziologia speciilor pomicele, Ed. Elisaváros, București, 2000.
4. *Parnia P. și colab.*, - Pepiniera pomicolă, Ed. Ceres, București, 1984.
5. *Parnia P. și colab.*, - Producerea, păstrarea și valorificarea materialului săditor pomicol și dendrologic, Ed. Ceres, București, 1992.
6. *Stănică FL.*, - Microînmulțirea plantelor horticole și alte tehnici de cultură “în vitro”, Ed. Grand, București, 1999.
7. *Șișcanu Gh., Drată AL.* – Investigații în domeniul fotosintezei cireșului, Ed. Știința, Chișinău, 1995.
8. *Voiculescu N.*, - Ecopedologia speciilor pomicele, Ed. Academiei Române, București, 1999.
9. **xxx** -Revista de Horticultură
10. **xxx** - Lucrări științifice ale I.C.P.P. Pitești - Mărăcineni.

Evaluation

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

Contact

Prof. Mihai ISTRATE, PhD

Faculty of Horticulture, IULS

3 M. Sadoveanu Alley, Iasi, 700490, Romania

Tel: 0232407429

E-mail: mihai.istrate@iuls.ro

PRODUCTION OF FRUIT TREES PLANTING MATERIAL II

(Horticultural Seed and Planting Material Production, 1st Year of study, 2st Semester)

Credit value (ECTS): 4

Course category: Further study (mandatory)

Course holder: Lecturer PhD Marius Constantin DASCALU

Objectives of the discipline (course and practical activity)

Theoretical and practical knowledge of all the works for setting up and maintenance of an orchard nursery. Knowledge and proper use of the notions specific to the discipline of fruit growing.

Contents (syllabus)

COURSE (chapters/subchapters)
PRODUCTION OF GRAFTED TREES IN PROTECTED SPACES 5.1 Production of tree planting material by table grafting. 5.2 Production of tree planting material by green grafting. 5.3 Containerized production of planting material.
SPECIFIC PRODUCTION OF WALNUT SEEDLING MATERIAL. 6.1 Peculiarities and methods of propagating the walnut by seed. 6.2 Production of grafted walnut.
TECHNOLOGY OF PROPAGATION OF STRAWBERRY AND FRUIT BUSHES 7.1 Strawberry propagation technology. 7.2 Production technology of blackcurrant planting material. 7.3 Technology of production of raspberry planting material.
TECHNOLOGY FOR DISEASES AND PESTS CONTROL IN THE NURSERY. 8.1 Program of phytosanitary treatments. 8.2 Production of planting material L.T.V. 8.3 Production of planting material L.P.V. 8.4 Herbicide in the nursery.
CONTROL, CERTIFICATION AND CIRCULATION OF SEEDS AND TREE PLANTING MATERIAL
Practical activity
Methods of grafting with a detached branch.
Grafting in green.
Grafting at the table.
Works specific to the mother plantation of graft branches.
Establishment and maintenance works of the I st field.
Field maintenance works in the II nd field.
Extraction, classification and certification of planting material.

Bibliography

1. *Grădinariu G., Istrate M., Dascălu M.*, - Pomicultură, Ed. Moldova, 1998.
2. *Hoza D.*, - Ecofiziologia speciilor pomicele, Ed. Elisaváros, București, 2000.
3. *Parnia P. și colab.*, - Pepiniera pomicolă, Ed. Ceres, București, 1984.
4. *Parnia P. și colab.*, - Producerea, păstrarea și valorificarea materialului săditor pomicol și dendrologic, Ed. Ceres, București, 1992.
5. *Stănică Fl.*, - Microînmulțirea plantelor horticoale și alte tehnici de cultură "în vitro", Ed. Grand, București, 1999.
6. *Șișcanu Gh., Drată Al.* – Investigații în domeniul fotosintezei cireșului, Ed. Știința, Chișinău, 1995.
7. *Voiculescu N.*, - Ecopedologia speciilor pomicele, Ed. Academiei Române, București, 1999.
8. **xxx** - Lucrări științifice ale I.C.P.P. Pitești - Mărăcineni.

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Evaluation of the activity during the semester	Written and oral assessments during the semester	40

Contact

Lecturer PhD Marius Constantin DASCALU

Faculty of Horticulture - IULS

3 M. Sadoveanu Alley, Iasi, 700490, Romania

Tel: 0232407513, fax:

E-mail: marius.dascalu@iuls.ro