

Seed and seedling production (IVth Year, VIIIth Semester)

Credit value (ECTS) 4

Course category

Speciality (Compulsory)

Course holder

Lecturer PhD Violeta Simioniuc

Discipline objectives (course and practical works)

The aim of the course is to help the students to acquire knowledge regarding the particularities of seeds/plant material production for the main agricultural species

Practical works seek to familiarize students with the special works in the fields for seeds production.

Contents (syllabus)

Course (chapters/subchapters)
1. GENETICAL BASIS OF SEEDS AND PLANT MATERIAL PRODUCTION 1.1. Importance 1.2. Terminology 1.3. Seeds category 1.4. Biological value of the seeds
2. BASIC CONCEPTS IN SEEDS AND PLANT MATERIAL PRODUCTION 2.1. Seeds production and multiplication 2.2. Reproduction and multiplying of crop plants 2.3. Types of polenisation 2.4. Isolation of the fields for seeds production 2.5. Conditions for facilitating the self or cross pollination 2.6. Essential compounds of the activity of seeds and plant material production 2.7. Romanian and European laws in seeds and plant material production
3. GENETIC STRUCTURE OF CULTIVARS AND DISRUPTIVE FACTORS 3.1. Genetic structure at self pollinated cultivars 3.2. Genetic structure at cross pollinated cultivars 3.3 Genetic structure at cultivars with vegetative multiplication
4. PHENOMENA INVOLVED IN SEEDS AND PLANT MATERIAL PRODUCTION 4.1. Heterosis 4.2. Androsterility 4.3. Self incompatibility 4.4. Poliploidy 4.5. Haploidy
5. SPECIFIC ASPECTS REGARDING SEEDS AND PLANT MATERIAL PRODUCTION 5.1. Seeds production at self polinated lineal sorts 5.2. Seeds production for parental lines designed for hybrids production 5.3. Plant material production at the vegetative multiplication cultivars
6. SPECIFIC TECHNOLOGIES IN THE FIELDS FOR SEEDS AND PLANT MATERIAL PRODUCTION

7. THE CONTROL, CERTIFICATION AND TRADING OF THE SEEDS AND PLANT MATERIAL
Practical works
Seeds sampling
Evaluation of the biologic quality of the seeds
Evaluation of the quality of the seeds
Seeds field control
The certification of seeds fields
The traceability and trading of seeds and planting material
Special works in seeds fields I
Special works in seeds fields II
Unconventional methods in seeds and plant material producing
Test

Bibliography

Crețu A. și colab., 2000 – *Ameliorarea plantelor, producerea și multiplicarea semințelor și materialului săditor*, Ed. Ion Ionescu de la Brad Iași.

Haș I., 2006 – *Producerea semințelor la plantele agricole*, Ed. AcademicPress, Cluj-Napoca.

Păcurar I., 2007 – *Producerea semințelor de cereale, leguminoase pentru boabe și plante tehnice*, Ed. Phoenix, Brașov.

*** <http://seedbiology.osu.edu>, 2012, Contreras S., Fundamentals of seed production I: Genetics, breeding and seed production.

*** <http://istis.ro/blogs/ro/pages/catalog.aspx>, 2011, 2012 - Catalogul Oficial al soiurilor de plante de cultură din România pentru anii 2011 și 2012.

*** <http://incs.ro/incshome.htm>, 2014 - LEGEA Nr. 266/2002 republicată privind producerea, prelucrarea, controlul și certificarea calității, comercializarea semințelor și a materialului săditor, precum și testarea și înregistrarea soiurilor de plante.

*** <http://incs.ro/incshome.htm>, 2012 - ORDIN nr. 59/2011 pentru aprobarea procedurilor privind cerințele specifice pentru producerea, certificarea și comercializarea semințelor de cereale, plante oleaginoase și pentru fibre și plante furajere în România.

*** <http://incs.ro/incshome.htm>, 2012 - ORDIN nr. 149/2010 privind comercializarea semințelor de cereale.

*** <http://incs.ro/incshome.htm>, 2012 - ORDIN nr. 150/2010 privind comercializarea semințelor de plante oleaginoase și pentru fibre.

*** <http://incs.ro/incshome.htm>, 2012 - ORDIN nr. 155/2010 privind producerea în vederea comercializării și comercializarea semințelor de plante furajere.

Evaluation

Evaluation form	Evaluation Methods	Percentage of the final grade
Exam	Writing and oral examination	60%

Appreciation of the activity during the semester	Oral assessment during the semester, verification tests	40%
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Contact

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