Variability and germplasm studies (III year, VIth semester)

Credit value (ECTS) 3

Course category
Complementary (optional)

Course holder
Lecturer PhD. Violeta Simioniuc

Discipline objectives (course and practical works)
The aim of the course is to help the students to aquire knowledges regarding the methods of identification and studies of the plant germplasm variability and the skills training to use the modern techniques in evaluation and selection of germplasm.

Contents (syllabus)

Course (chapters/subchapters)
1. Introduction 1.1. The importance of the germplasm variability of plant species 1.2. The methods of variability induction in the sources of germplasm of crops 1.3. Examination the components of productivity , quality , precocity and resistance to stress germplasm sources 1.4. Terminology used in germplasm studies 1.5. Examination of the germoplasm sources in the field and laboratory
2. THE METHODS OF GERMPLASM STUDIES 2.1. Classical methods 2.2. Modern methods
3. THE METHODS OF SETLLEMENT OF EXPERIENCES 3.1. Old methods 3.2. Modern methods
4. THE CHARACTERISTICS OF THE EXPERIMENTAL METHODOLOGY 4.1. The site selection for experimental fields 4.2. The factors that influencing accuracy of experimental results
5. THE ORGANIZING OF FIELD EXPERIENCES
6. THE METHODS OF GERMPLASM STUDIES IN LABORATORY 6.1. The examination of productivity 6.2. The examination of quality 6.3. The examination of the resistance trait to pest and diseses 6.4. The examination of the resistance trait to unfavorable climatic factors
7. THE METHODS OG GENETIC ENGINEERING USED IN GERMOPLASM STUDIES
Practical works
The steps of statistics procedures in the modern field experiences: the variance analysis and testing of differences semnifications with LD limits
Capitalization and interpretation of the results obtained in monofactorial field experiences placed in randomised block design
Capitalization and interpretation of the results obtained in bifactorial field experiences placed in split plot design
The analysis of two variables link with correlation coefficient and his significance
The analysis of two variables link with linear and quadratic regression. Test.

Bibliography

Leonte C., 1997 – Ameliorarea plantelor horticole şi tehnică experimentală. Caiet de lucrări practice, U.A.M.V. Iaşi.
Săulescu N.A., Săulescu N.N., 1967 – Cîmpul de experienţă. Ed. Agro-Silvică, Bucureşti.
Străjeru Silvia şi colab., 2001 – Conservarea şi utilizarea resurselor genetice vegetale. Ed. Universităţii Suceava.

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 and final laboratory colloquium.	40%

Contact

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