Experimental technique: (IV-sd Year of study, VIII-th Semester)

Credit value (ECTS) 3

Course category
Domain (Mandatory)

Course holder:
Lecturer dr. Violeta Simioniuc

Discipline objectives (course and practical works)

The analytical program aims to acquire by students the knowledge on how to place experiments with horticultural species and statistical processing of experimental results..

The specific objectives refer to:

- knowledge of how to organize experiments with horticultural plants;
- knowledge of the sizing of an experimental field and the factors that influence the accuracy of experimental results;
- presentation of the most used methods of location of experiments with horticultural plants and the way of statistical capitalization of the results obtained in these types of experiments;
- knowledge of how to interpret and graphically represent experimental results

Conținutul disciplinei

Course (chapters/subchapters)
1. INTRODUCTION
1.1. The object of the experimental technique
1.2. Links with other disciplines
1.3. Terminology used in experimental technique
1.4. The main symbols in experimental technique
1.5. Classification of experiences with horticultural plants
2. METHODS OF PLACING PLOTS IN FIELD EXPERIENCES WITH HORTICULTURAL PLANTS
2.1. Old methods of setting experiences
2.2. Modern methods of setting experiences
3. CHARACTERISTICS OF THE EXPERIMENTAL METHODOLOGY
3.1. Choosing the ground for the field of experience
3.2. Factors influencing the accuracy of experimental results
4. ORGANIZATION OF EXPERIENCES IN THE FIELD
4.1. Choice of placement method
4.2. Sizing a field experience
4.3. Necessary inventory for experimental fields
4.4. Picketing experiences
4.5. Sowing or planting of experimental biological material
4.6. Crop maintenance in experimental fields
4.7. Organizing observations and determinations during the growing season and at harvest
4.8. Harvesting experiences
Practical works
Capitalizing on the results of experiments based on old placement methods
The stages of capitalization of the experimental results to the experiments based on modern methods, with the help of the analysis of variance; testing the significance of differences using limit differences (LD)
Testing the significance of differences using the Duncan test (multiple comparison method) and the "t" test (Student)
Valorization and interpretation of the results obtained in single-factor field experiments based on the randomized block method
Valorization and interpretation of the results obtained in the bifactorial field experiments placed according to the method of split plot design

Analysis of the relationship between two variables using the correlation coefficient (r); establishing the significance of the values of the correlation coefficients
Analysis of the relationship between two variables using regression; simple linear regression and quadratic regression; graphical representation of experimental results. Testing.

References

Leonte C., 1997 – Ameliorarea plantelor horticole şi tehnică experimentală. Caiet de lucrări practice. Lito, Uz intern, U.A.M.V. Iaşi.
LEONTE C., Simioniuc Violeta, 2018 – Metode şi tehnici utilizate în cercetarea agronomică. Ed. Ion Ionescu de la Brad, Iaşi.

Evaluation

Forme de evaluare	Modalităţi de evaluare	Procent din nota finală
Course	Exam	50
	Presence	20
Practical works	Test	30

Contact

Lecturer dr. Violeta Simioniuc
Faculty of Agriculture - USAMV Iaşi
Aleea Mihail Sadoveanu nr. 3, Iaşi, 700490, Romania
telefon: 0232407536 USAMV office, fax: 0040 232 407506
E-mail: vsimion@uaiasi.ro