

„IN VITRO” CULTURES
(IIInd Year of study, IIIrd Semester)

Credit value (ECTS): 8

Course category:
Thoroughgoing study (Imposed)

Course holder:
Lecturer Dr. Lucian Emil CRETU

Discipline objectives (course and practical works)

The aim of the course is to have students acquire theoretical and practical knowledge on genotypes modelation (vegetals and animals) which are bioproductive and performance, the "in vitro" cultivation technique of vegetal tissues and cells and also the regeneration and differentiation of plants from tissue and cell cultures.

Practical works seek to familiarize students with technical work in hereditary manipulation, based on molecular biology and valorification of proper propagations techniques of plants for seed production and plant breeding.

Contents (syllabus)

Course (Chapters)
The „in vitro” cultivation techniques of plant tissues and cells
"In vitro" cultures initiation
The plants differentiation from tissues and cells cultures
The plants regeneration from tissues and cells cultures

Practical works
The "in vitro" cultures laboratory organization
The "in vitro" cultures medium sterilization
The laboratory and biological material sterilization
The preparation of culture medium
"In vitro" propagation of some horticultural species (strawberry, grape vine etc.)
"In vitro" propagation of some fruit trees species (raspberry, Hippophae rhamnoides etc.)
"In vitro" propagation of some ornamental species

Bibliography

1. Crăciun, T. - Geniul genetic și ameliorarea plantelor. Edit. Ceres, București, 1983.
2. Raicu, P. și colab. - Culturi de celule și țesuturi vegetale, Aplicații în agricultură. Edit Ceres, București, 1984.
3. Raicu, P. și colab. - Biotehnologii moderne. Edit. Tehnică, București, 1990.

Final evaluation

Evaluation form	Evaluation methods	Percentage of the final grade
Exam	Oral examination	60%
Activity appreciation during the semester	Oral assessment during the semester, verification tests and final laboratory colloquium	40%

Contact

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