

Horticultural machinery (IIIrd Year of study, VIth Semester)

Credit value (ECTS) 5

Course category

Domain (Imposed)

Discipline code

A.EMIAIA.S.306

Course holder

Vlad Nicolae ARSENOAIA

Discipline objectives (course and practical works)

Within the course and practical works, the aim is for students to acquire the theoretical and practical foundation regarding horticultural machinery.

Contents (syllabus)

Course (chapters/subchapters)
General considerations regarding the subject of the discipline. Concepts related to the operation and optimization of horticultural machinery aggregates. Construction and operation of specialized plows used in horticulture. Construction and operation of machines for deep loosening, land leveling, and soil shaping. Construction and operation of soil digging machines and hole digging machines. Construction and operation of agricultural rotary tillers used for seedbed preparation. Construction and operation of harrows, cultivators, combiners, and rollers. Construction and operation of machines for applying fertilizers and amendments specific to horticultural crops. Construction and operation of sowing and planting machines for horticultural crops. Construction and operation of equipment and machines for plant protection in horticultural crops. Construction and operation of combines for harvesting seed crops in horticulture. Construction and operation of machines for harvesting grapes and fruits. Construction and operation of machines for harvesting potatoes and vegetables.
Practical works

Construction and adjustments of plows used in horticulture.
 Construction and adjustments of machines for deep loosening, land leveling, and soil shaping.
 Construction and adjustments of soil digging machines and hole digging machines.
 Construction and adjustments of agricultural rotary tillers used for seedbed preparation.
 Construction and adjustments of harrows, cultivators, combinators, and rollers used in horticulture.
 Construction and adjustments of machines for applying fertilizers and amendments.
 Construction and adjustments of sowing and planting machines for horticultural crops.
 Construction and adjustments of equipment and machines for plant protection used in horticulture.
 Construction and adjustments of combines used for crop harvesting.
 Construction and adjustments of machines for harvesting grapes and fruits.
 Construction and adjustments of machines for harvesting potatoes and vegetables.

References

1. Mircea Badescu, Sorin Boruz 2015 - Masini agricole si horticole, Edit. Sitech
2. Arsenoiaia Vlad, 2023 – Masini de recoltat. Editura Ion Ionescu de la Brad, Iași
3. Cazacu Dan, Rosca R., 2015 - Construcția tractoarelor , editia I. Editura Ion Ionescu de la Brad

Evaluation

Evaluation form	Evaluation Methods	Percentage of the final grade
Exam	Written examination	80%
Appreciation of the activity during the semester	Oral assessment during the semester, verification tests and final laboratory colloquium.	20%

Contact

Nicolae ARSENOAIA

Faculty of Agriculture - USV Iași

Aleea Mihail Sadoveanu nr. 3, Iași, 700490, Romania