

Grassland management and technology (III-rd Year of study, V-th Semester)

Credit value (ECTS) 4

Course category

Domain (Imposed)

Course holder:

Assistant Prof. PhD. Mihai STAVARACHE

Discipline objectives (course and practical works)

The course aims at transmitting knowledge, training skills and competencies regarding the management of permanent and temporary meadows: knowing the floristic composition and assessing the quality of meadows, establishing the most appropriate measures for improvement and rational use, organizing rational grazing, preparing and storing hay.

The practical works aim at transmitting knowledge regarding the morphology and biology of the main species in the flora of permanent grasslands, the creation of mixtures of grasses and perennial legumes for the establishment of temporary grasslands and the organization of rational grazing.

Contents (syllabus)

Course (chapters/subchapters)
Chapter 1. Forages production worldwide and in our country 1.1. Forages: definition, classification, sources 1.2. Grasslands: definition, classification, distribution, importance and productions 1.3. Characterization of the main groups of species
Chapter 2. The main types of grasslands in our country 2.1. Zonal grasslands 2.2. Intrazonal grasslands 2.3. Inventory and mapping of grasslands 2.4. Pastoral value
Chapter 3. Grasslands improvement technology 3.1. Surface measures 3.2. Radical measures
Chapter 4. Establishment of temporary grasslands 4.1. Temporary grasslands instead of permanent degraded grasslands 4.2. Temporary grasslands in arable land
Chapter 5. Grasslands uses 5.1. Grasslands use through grazing 5.2. Grasslands use by mowing
Chapter 6. Preservation, storage and quality of fibrous feed

Practicum
L1 - Morphology and biology of grasses from meadow flora; study of spike grasses from the genera: <i>Nardus</i> , <i>Lolium</i> , <i>Agropyron</i> ;
L2 - Grasses with spike and spiciform panicle: <i>Cynodon</i> , <i>Beckmannia</i> , <i>Brachypodium</i> , <i>Bothriochloa</i> , <i>Phleum</i> , <i>Anthoxanthum</i> , <i>Alopecurus</i> , <i>Cynosurus</i> ;

L3 - Panicle grasses of the genera: <i>Agrostis</i> , <i>Typhoides</i> , <i>Calamagrostis</i> , <i>Stipa</i> , <i>Arrhenatherum</i> , <i>Holcus</i> , <i>Deschampsia</i> , <i>Trisetum</i> , <i>Koeleria</i> ;
L4 - Panicle grasses: <i>Dactylis</i> , <i>Festuca</i> , <i>Briza</i> , <i>Poa</i> , <i>Bromus</i> , <i>Puccinellia</i> . Study of the seeds and fruits of the main grasses from the meadows;
L5-L6-L7 - Study of the main legumes from the flora of meadows from the genera: <i>Medicago</i> , <i>Melilotus</i> , <i>Trigonella</i> , <i>Trifolium</i> , <i>Lotus</i> , <i>Onobrychis</i> , <i>Galega</i> , <i>Coronilla</i> , <i>Anthyllis</i> , <i>Vicia</i> , <i>Lathyrus</i> . Fruits and seeds of cultivated perennial fodder legumes;
L8-L9 - Study of <i>Cyperaceae</i> , <i>Juncaceae</i> and plants from other botanical families;
L10 - Grassland vegetation research methods - field experiment;
11 - Composition of mixtures of perennial grasses and legumes for the establishment of temporary meadows;
L12-L13 - Rational grazing organization;
L14 - Test for the recognition of the main species and seeds/fruits of fodder plants.

References

1. Ionel Adrian, Vîntu Vasile, 1999 - Cultura paștilor și a plantelor furajere-îndrumar practic. Editura „Ion Ionescu de la Brad” Iași.
2. Ionel Adrian, 2003 - Cultura paștilor și a plantelor furajere. Editura A92, Iași.
3. Vîntu Vasile, 2002 - Posibilități de îmbunătățire a paștilor permanente degradate din Depresiunea Jijia-Bahlui. Ed. „Ion Ionescu de la Brad”, Iași.
4. Vîntu Vasile, Moisuc Alexandru, Motcă Gheorghe, Rotar Ioan, 2004 - Cultura paștilor și a plantelor furajere. Ed. „Ion Ionescu de la Brad” Iași.
5. Vîntu Vasile, Samuil Costel, **Stavarache Mihai**, 2017 - Cultura paștilor și a plantelor furajere - îndrumător de lucrări practice, Editura „Ion Ionescu de la Brad”.
6. Samuil Costel, Vîntu Vasile, **Stavarache Mihai**, 2019 - Producerea și conservarea furajelor. Editura „Ion Ionescu de la Brad” Iași.
7. *** - „Fourrages” science journals collection.
8. *** - „Lucrări științifice ale U.S.A.M.V. Iași” science journals collection.
9. *** - „Grassland science in Europe” science journals collection.

Evaluation

Evaluation form	Evaluation Methods	Percentage of the final grade
Exam	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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