

Crop science (IIIrd Year of study, Vth Semester)

Credit value (ECTS) 5

Course category

Domain (Compulsory)

Course holder:

Associate Prof. PhD. Aglaia MOGÂRZAN

Discipline objectives (course and practical works)

The aim of the course is to have students acquire knowledge on crop rotation, fertilizers used in agriculture, weeds, diseases and pests of field crops. Students will also follow acquiring knowledge necessary for the establishment of field crops.

Practical works seek to have students acquire knowledge on biological peculiarities field plants (anatomy, morphology) of their systematic classification (family, genus, species) requirements for vegetation factors (temperature, humidity, food, soil, light), their ecological zoning.

Contents (syllabus)

Course (chapters)
INTRODUCTION. Technology field crops: definition, object, research methods, relationship with other disciplines. The factors conditioning production.
CEREALS: - importance, spreading, biological particularities, systematic requirements for vegetation factors and cultivation technology.
Wheat, - importance, spreading, biological particularities, systematic requirements for vegetation factors and cultivation technology.
Rye, - importance, spreading, biological particularities, systematic requirements for vegetation factors and cultivation technology.
Triticale - importance, spreading, biological particularities, systematic requirements for vegetation factors and cultivation technology.
Barley - importance, spreading, biological particularities, systematic requirements for vegetation factors and cultivation technology.
Oats - importance, spreading, biological particularities, systematic requirements for vegetation factors and cultivation technology.
Maize - importance, spreading, biological particularities, systematic requirements for vegetation factors and cultivation technology.
Sorghum - importance, spreading, biological particularities, systematic requirements for vegetation factors and cultivation technology.
Millet - importance, spreading, biological particularities, systematic requirements for vegetation factors and cultivation technology.
Rice - importance, spreading, biological particularities, systematic requirements for vegetation factors and cultivation technology.

Buchwheat - importance, spreading, biological particularities, systematic requirements for vegetation factors and cultivation technology.

Practical works
Knowledge of rolling seeding and planting. Seed Quality Control: Sampling and sample preparation, shipment of samples to the laboratory.
Determination of the purity, seed weight, humidity and vitrescence, germination and viability.
Cereals biology: morphological, anatomical and biological features.
CEREALS – Wheat, Rye, Triticale, Barley, Oats, Maize, Sorghum, Millet, Rice, Buchwheat: morphological and systematic features.
Final colloquium of knowledge evaluation

Bibliography

1. Axinte M., Roman Gh.V., Borcean I., Muntean L. S., 2006 – *Fitotehnie*, Ed. “ Ion Ionescu de la Brad” , Iași.
2. Bîlteanu Gh.,1998 – *Fitotehnie*, vol.I, Ed. Ceres, București.
3. Bîlteanu Gh., și colab., 1991 – *Fitotehnie*, vol. II, Ed. Didactică și Pedagogică, București.
4. Zaharia M.S. , 2011 – *Tehnologia culturilor de câmp*. I.S.B.N. 978-973-147-094-8, Editura „Ion Ionescu de la Brad” Iași.
5. **Aglaia Mogârzan**, T. Robu, M. Zaharia, 2010 – *Fitotehnie – Îndrumător pentru lucrări practice*. I.S.B.N. 978-973-147-058-0, Editura „Ion Ionescu de la Brad” Iași.
6. Zaharia M.S., **Aglaia Mogârzan**, T. Robu, 2011 – *Fitotehnie – Lucrări de laborator*. I.S.B.N. 978-973-147-092-4, Editura „Ion Ionescu de la Brad” Iași.

Evaluation

Evaluation form	Evaluation Methods	Percentage of the final grade
Exam	Written 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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Crop science (IIIrd Year of study, VIth Semester)

Credit value (ECTS) 4

Course category

Domain (Imposed)

Course holder:

Prof. PhD. Teodor ROBU

Discipline objectives (course and practical works)

The aim of the course is to have students acquire knowledge on crop rotation, fertilizers used in agriculture, weeds, diseases and pests of field crops. Students will also follow acquiring knowledge necessary for the establishment of field crops.

Practical works seek to have students acquire knowledge on biological peculiarities field plants (anatomy, morphology) of their systematic classification (family, genus, species) requirements for vegetation factors (temperature, humidity, food, soil, light), their ecological zoning.

Contents (syllabus)

Course (chapters/subchapters)
III Pod-bearing plants: importance, spreading, biological particularities, systematic requirements for vegetation factors and cultivation technology.
2.1 Importance, spreading, biological particularities;
2.2 Peas (<i>Pisum sativum</i> L.)
2.3 Bean (<i>Phaseolus vulgaris</i> L.)
2.4 Soya (<i>Glycine max</i> (L.) Merr.)
2.5 Gram cik-pea (<i>Cicer arietinum</i> L.)
2.6 Lupine (<i>Lupinus sp.</i> L.)
2.7 Lens (<i>Lens culinaris</i> L.)
2.8 Peanut (<i>Arachis hypogea</i> L.)
2.9 Grain (<i>Vicia faba</i> L.)
2.10 Cowpea (<i>Vigna sinensis</i> L.)
2.11 Peavine (<i>Lathyrus sativus</i> L.)
III Oil plant: importance, spreading, biological particularities, systematic requirements for vegetation factors and cultivation technology.
3.1 Importance, spreading, chemical composition.
3.2 Sunflower (<i>Helianthus annus</i> L.)
3.3 Raps (<i>Brassica sp.</i> L.) and mustard (<i>Sinapis sp.</i> L.)
3.4 Common crown and mixed (<i>Linum sp.</i> L.)
3.5 Poppy (<i>Papaver somniferum</i> L.)
3.6 False saffron (<i>Carthamus tinctorius</i> L.)
3.7 Other oil plant (sesame (<i>Sesamum sp.</i> L.), false flax (<i>Camelina sp.</i> L.), perilla)

Practical works
General characters to leguminous plants;
Morphological, biological and systematic features to leguminous paripinnate leaf (peas, peavine, grain, peanut) and pinnate leaf (gram cik-pea);
Morphological, biological and systematic features to leguminous plant with tripinnately compound leaf (bean, soya, cowpea);
Morphological, biological and systematic features to plants with palmate leaf (lupine);
Spring crops sowing;
Sunflower: morphological and systematic features;
Raps and mustard: morphological and systematic features;
Common crown and mixed: morphological and systematic features;
Other oil plant (sesame, false flax, perilla);
Checking knowledge in laboratory and field;
Final colloquium of knowledge evaluation.

Bibliography

1. Axinte M., Roman Gh.V., Borcean I., Muntean L.S., 2006 – *Fitotehnie*, Ed. Ion Ionescu de la Brad, Iași.
2. Mogârzan Aglaia și colab., 2012 – *Fitotehnie*, Ed. Ion Ionescu de la Brad, Iaș
3. Muntean L., 1995 – *Mic tratat de Fitotehnie, vol. I – Cereale și leguminoase pentru boabe*, Ed.Ceres
4. Mureșan T. și colab., 1975 – *Cultura porumbului*, Editura Ceres.
5. Olaru C., 1982 – *Fasolea*, Ed.Scrisul Românesc, Craiova.
6. Roman Gh., V. Și colab., 2011 și 2012 – *Fitotehnie*, Vol. I,II, Editura univ., Buc.
7. Salontai Al., și colab., 1988 – *Certificarea și controlul calității semințelor și materialului săditor la culturile de câmp*. Ed.Dacia, Cluj-Napoca.
8. Stănescu Z, Rizescu Gh., 1976 – *Sfecla pentru zahăr*, Editura Ceres, Buc.
9. Vrînceanu Viorel, 2000 – *Floarea-soarelui hibridă*, Editura Academiei.
10. Zaharia Marius și colab., 2011 – *Fitotehnie*, Lucrări de laborator, Ed. Ion Ionescu de la Brad, Iași.
11. Zamfirescu N., 1977 – *Bazele biologice ale producției vegetale*, Ed.Ceres.

Evaluation

Evaluation form	Evaluation Methods	Percentage of the final grade
Exam	Written 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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