

TEACHING DISCIPLINE: Phytotechny (Horticulture th Year of study III, th Semester VI)

Credit value (ECTS): 2

Course category: mandatory

Course holder: Prof. dr. Teodor ROBU

Discipline objectives (course and practical works):

Acquiring and understanding the theoretical basis specific to Phytotechnics, the skills to apply theoretical knowledge in practice, as well as the formation of the ability to act autonomously to observe, analyze, interpret and provide solutions to concrete problems in production.

The Phytotechnical discipline, in accordance with the analytical program, aims to:

- to endow the future specialists with a baggage of knowledge regarding the biological particularities of the field plants (anatomy, morphology), their systematic classification (family, genus, species, varieties), the requirements towards the vegetation factors (temperature, humidity, food, soil, light), their ecological zoning;

-to endow future specialists with a wealth of knowledge on rotation, fertilizers and amendments used in agriculture, about weeds, diseases and pests in crops.

- to train students in practical skills regarding the main technological links in field crops (rotation, fertilization, soil work, seed and sowing, care work, harvesting).

Contents (syllabus)

Course	Chapters	Subchapters	Specifications
1.	1.INTRODUCTORY NOTIONS. 2.CEREALS	2.1. Importance, spread, biological peculiarities	Importance, spread of biological, systematic features, requirements for vegetation factors and cultivation technology (rotation, fertilization, soil work,).Cultivation technology (seed and sowing, care work, harvesting
		2.2. Wheat	
		2.3. Rye and triticale	
		2.4. Barley and barley	
		2.5.Oats	
		2.6. Corn	
2.		2.7. Sorghum	
3.	3.GRAIN VEGETABLES	3.1.Importance, spread, general characters	Importance, spreading biological, systematic features, requirements for vegetation factors cultivation technology (rotation, fertilization, soil work, seed and sowing, care work, harvesting).
		3.2. Peas	
		3.3. Beans	
		3.4. Soy	
4.	4.OILY PLANTS	4.1. Importance, spread, general characters	Importance, spread, biological, systematic features, requirements for

		4.2. Sunflower	vegetation factors and cultivation technology (rotation, fertilization cultivation technology (seed and sowing, care work, harvesting
		4.3. Rape	
5.	5. TEXTILE PLANTS	5.1. Flax for fiber	Importance, spread, biological, systematic features, requirements for vegetation factors and cultivation technology (rotation, fertilization cultivation technology (seed and sowing, care work, harvesting
		5.2. Hemp for fiber	
6.	6. PLANTS PRODUCING TUBERS AND ROOTS	6.1. Importance, distribution, general characteristics	Importance, biological features, requirements for vegetation factors, cultivation technology (rotation, fertilization, soil work, planting material and planting, care work and harvesting).
		6.2. Potato	
		6.3. Sugar beets	
7.	7. TECHNICAL PLANTS	7.1. Tobacco 7.2. Hops	Importance, spread, biological features, requirements for vegetation factors, seedling production, cultivation technology.

Practical works

Knowledge of sowing and planting material.

Seed quality control: taking and forming samples, sending to the laboratory, determining the purity.

Determination of seed mass.

Determination of seed moisture and glassiness.

Determination of germination and viability.

Germination reading. Establishing the seed quality class. Calculation of the seed norm / ha.

Cereal biology: morphological, anatomical, biological features.

Knowledge of the laboratory of the Territorial Inspectorate for the Control of Seeds and Planting Material Ia i and how to store seeds

Wheat: morphological features, systematic features (species, varieties, varieties). Estimation and evaluation of wheat production.

Rye and triticale: morphological and systematic features. Production estimation and evaluation.

Barley and barley: morphological and systematic features. Production estimation and evaluation.

Corn: morphological features, varieties, varieties, cultivated hybrids. Estimation and evaluation of maize production.

Sorghum, rice, millet, buckwheat - morphological and systematic features.

Annual legumes for grains. General peculiarities. Peas, beans, soybeans: morphological and systematic features. Production estimation and evaluation. Bob, chickpeas, lentils, peanuts: morphological and systematic features. Production estimation and evaluation.
Sunflower, rapeseed, mustard, castor, in pt. oil: morphological and systematic features. Production estimation and evaluation. Textile plants: flax for fibers, hemp, cotton - morphological and systematic features.
Potato: morphology, anatomy, systematics. Production estimation and evaluation. Beets for sugar: morphology, anatomy, systematics. Quality analysis. Tobacco and hops: morphology, systematics.

Bibliography

- Axinte M., Roman Gh.V., Borcean I., Muntean L. S., 2006 - Phytotechnics**, “Ion Ionescu de la Brad” Publishing House, Ia i.
- Bilteanu Gh., 1998 - PHYTOTECHNICS**, vol. I, Ceres Publishing House, Bucharest.
- Bilteanu Gh., Et al., 1991 - PHYTOTECHNICS**, vol. II, Didactic and Pedagogical Publishing House, Bucharest.
- M.S. Zaharia, 2011 - Field crop technology**. I.S.B.N. 978-973-147-094-8, „Ion Ionescu de la Brad” Publishing House, Ia i.
- CEREALS AND TECHNICAL PLANTS (magazine)
- AGRONOMIC RESEARCH IN MOLDOVA (journal)
- SCIENTIFIC WORKS - Annual publications of the Agronomic Universities of Ia i, Bucharest, Cluj-Napoca, Timi oara, Craiova.
- ANALLE ICCPT - FUNDULEA
- AGRONOMY JOURNAL - USA
- JOURNAL OF AGRONOMY - Italy
- THE STATISTICAL YEARBOOK OF ROMANIA
- Aglaia Mogârzan, T. Robu, M. Zaharia, 2010 - Phytotechnics - Guide for practical works**. I.S.B.N. 978-973-147-058-0, „Ion Ionescu de la Brad” Publishing House, Ia i.
- M.S. Zaharia, Aglaia Mogârzan, T. Robu, 2011 - Phytotechnics - Laboratory works**. I.S.B.N. 978-973-147-092-4, „Ion Ionescu de la Brad” Publishing House, Ia i.

Evaluation

Evaluation form	Evaluation Methods	Percentage of the final grade
Course	Exam	60%
	presence	20%
Practical works	Tests + cours and practical	20%

Contact

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