

AMPELOGRAPHY

(Specialization: Horticulture, 4th Year of study, 7th Semester)

Credit value (ECTS): 6

Course category: DS- , specialty course mandatory

Course holder: prof. Rotaru Liliana. PhD

Discipline objectives (course and practical works)

Theoretical and practical training of students in the field of ampelography, regarding: the methodology of description and recognition of the grape varieties and rootstocks; knowledge of the biological and agro-productive properties of the varieties cultivated in vineyards and wine centers in Romania; knowledge of valuable vine varieties from the main wine countries of the world.

Assimilation of the basic knowledge base necessary to understand and operate with the specific notions of the field of ampelography.

Building the capacity to identify, formulate and explain problems specific to the field of ampelography and to propose and interpret coherently solutions for solving them.

Formation of cooperation and communication skills through involvement in scientific debates specific to the viticulture field.

Knowledge of the principles of design, execution and operation of a vineyard plantation, in accordance with the constraints and socio-economic opportunities.

Contents (syllabus)

| Course (chapters/subchapters) |
|---|
| 1. INTRODUCTION TO AMPELOGRAPHY |
| 1.1 The purpose and content of ampelography, as a science. Research methods used in ampelography. Brief history of ampelography |
| 1.2 The variety, the biotype and the clone at the vine. Origin of vine varieties. Factors that modify the genetic structure of vine varieties |
| 2. METHODOLOGY OF DESCRIPTION AND RECOGNITION OF VARIETIES |
| 2.1 Ampelometric method |
| 2.2 Use of the morphological and phenotypic characters found in the main organs of the vines |
| 2.3 Use of ampelographic schemes for the description of the grape varieties and for the varieties of rootstocks |
| 2.4 Use of ampelographic descriptors, according to O.I.V. |
| 2.5 Use of modern methods (statistical-mathematical, biochemical, genetic) for the characterization of vine varieties |
| 3. STUDY OF ROOTSTOCK VINES |
| 3.1 The importance of rootstock vines. Classification of rootstock vines. Agrobiological properties of rootstocks |
| 3.2 The group of American rootstocks, obtained by clonal selection of the species: <i>Vitis riparia</i> , <i>Vitis rupestris</i> and <i>Vitis berlandieri</i> . Rootstocks in the Riparia x Rupestris group |
| 3.3 Rootstocks in the Berlandieri x Riparia group. Romanian rootstock selections, from the Berlandieri x Riparia group |
| 3.4 Rootstocks in the Berlandieri x Rupestris group |
| 3.5 European-American rootstocks |
| 3.6 Complex hybrid rootstocks. Zoning of rootstock vines |
| 4. VARIETIES OF TABLE GRAPES |

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| 4.1 Importance of table grapes varieties. The peculiarities of culture. Table grape varieties. Classification and placement of table grape varieties |
| 4.2 Table grape varieties with extra-early and early ripening. New creations of early ripening varieties |
| 4.3 Table grape varieties with medium ripening. New creations of medium ripening varieties. |
| 4.4 Table grape varieties with late and very late ripening. New creations of late ripening varieties |
| 5. SEEDLESS GRAPE VARIETIES |
| 5.1 The importance of seedless varieties and the particularities of the culture. Classification of seedless grape varieties |
| 5.2 Seedless varieties for raisins |
| 5.3 Seedless grape varieties for fresh consumption. New creations of seedless varieties |
| Practical works |
| 1. USE OF AMPELOGRAPHIC DESCRIPTORS |
| 1.1 The ampelographic characters of the leaf, in the vine |
| 1.2 The ampelographic characters of the shoots and cords |
| 1.3 The ampelographic characters of grapes |
| 1.4 Ampelometry of the leaf |
| 2. AMPELOGRAPHIC COLLECTIONS |
| 2.1 Organization of ampelographic collections. Scheme of organization of the ampelographic collection of the Faculty of Horticulture Iași |
| 2.2 The elaboration of the phenological observations files in the vine varieties. Practical applications in ampelographic collection |
| 3. RECOGNITION OF THE GRAPE VARIETIES AND OF THE ROOTSTOCKS SELECTIONS |
| 3.1 American rootstocks and Americo-American rootstocks |
| 3.2 European-American rootstocks |
| 3.3 Romanian selections of rootstock vines |
| 3.4 The complex hybrid rootstocks |
| 4. RECOGNITION OF TABLE GRAPE VARIETIES |
| 4.1 Varieties with extra-early and early ripening |
| 4.2 Varieties with medium ripening |
| 4.3 Varieties with late and very late ripening |
| 4.4 Romanian creations of table grapes varieties |
| 5. RECOGNITION OF SEEDLESS VARIETIES |
| 5.1 Old seedless varieties, for raisins |
| 5.2 Seedless varieties for fresh consumption |
| Year project |
| 1. The study of climatic and edaphic factors |
| 2. Orographic, hydrographic and vegetation study |
| 3. Choosing the grape variety and rootstocks |
| 4. Determination of the planting distances |
| 5. Choosing the trellising system and the type of cutting for the vines in the plantations |
| 6. Organization of the land in operating units |
| 7. The anti-erosion arrangement of the land for planting the vines |
| 8. Installation of the support system in the plantation |
| 9. The maintenance works of the vines in the I st , II nd , III rd , IV th years from the planting |
| 10 Creation of the technological files |

Bibliography

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3. Dobrei Alin, Rotaru Liliana, Morelli Silvano, 2008 – *Ampelografie*. Editura “Solness”, Timișoara, ISBN 978-973-729-120-2.
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10. X X X, 1958-1970 – *Ampelografia R.P.R., volumele I-VIII*, Editura “Academiei R.P.R.” Bucuresti.

Evaluation

| Evaluation form | Evaluation Methods | Percentage of the final grade |
|-----------------|--------------------|-------------------------------|
| Course | Exam | 60% |
| | Presence | 10% |
| Practical works | Tests | 30% |

Contact

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TEACHING DISCIPLINE: AMPELOGRAPHY (Specialization: Horticulture, 4th Year of study, 8th Semester)

Credit value (ECTS): 4

Course category: mandatory / specialty course

Course holder: prof. Rotaru Liliana, PhD

Discipline objectives (course and practical works)

Knowledge of the biological, ecological, agrotechnical and managerial bases of the cultivation of vines in a certain wine-growing area.

Acquiring the theoretical and practical knowledge regarding the strategy of the correct use of genetic resources in viticulture, in order to obtain quality productions.

Development of a unitary system of knowledge through the coherent use and interpretation of principles and models from the field of rational use and exploitation of genetic viticultural resources; integration of the knowledge regarding the culture of vines in the context of the sustainable development of humanity.

Contents (syllabus)

| Course (chapters/subchapters) |
|--|
| 1. WINE GRAPE VARIETIES |
| 1.1 Importance of wine grapes varieties. The agrobiological characteristics, the cultural particularities and the technological properties of the wine grapes varieties. Classification of the wine grapes varieties |
| 1.2 Local grape varieties for white table wines (current consumption). Foreign varieties for white table wines, grown in Romanian vineyards. New varietal creations for white table wines |
| 1.3 Local varieties for white quality wines. Foreign varieties for white quality wines. New varietal creations for white quality wines |
| 1.4 Local and foreign varieties for rose and red table wines (current consumption). New creations of varieties for rose and red table wines. |
| 1.5 Local and foreign varieties for red quality wines. New creations of varieties for red quality wines. |
| 1.6 Varieties for aromatic wines. New creations of varieties for aromatic wines |
| 2. DIRECT PRODUCER HYBRIDS |
| 2.1 General considerations on direct producer hybrids |
| 2.2 Classification of direct producer hybrids |
| 2.3 The agrobiological and technological peculiarities of the direct producer hybrids |
| 2.4 The particularities of culture of the direct producer hybrids. |
| 2.5 Main direct producer hybrids |
| Practical works |
| 1. RECOGNITION OF WHITE WINE VARIETIES |
| 1.1 Local grape varieties for white table wines (current consumption) |
| 1.2 Foreign varieties for white table wines (current consumption) |
| 1.3 Local varieties for white quality wines |
| 1.4 Foreign varieties for white quality wines |
| 2. RECOGNITION OF RED WINE VARIETIES |
| 2.1 Local and foreign varieties for rose and red table wines (current consumption) |
| 2.2 Local varieties for red quality wines |
| 2.3 Foreign varieties for red quality wines |
| 3. RECOGNITION OF AROMATIC WINE VARIETIES |
| 3.1 Local varieties for aromatic wines |

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| 3.2 Foreign varieties for aromatic wines |
| 4. RECOGNITION OF DIRECT PRODUCER HYBRIDS |
| 4.1 Old direct producer hybrids |
| 4.2 New direct producer hybrids |
| 4.3 Grape varieties with biological resistance |

Bibliography

1. Dobrei A., Rotaru Liliana, Dobrei Alina, 2017 - *Viticultură, Ampelografie, Oenologie*, Editura Solness, Timișoara, ISBN 978-973-729-523-1
2. Damian Doina, Rotaru Liliana, Nechita Anuța, Savin Costică, 2011 - *Ampelografie - Metode și metodologii de descriere și recunoaștere a soiurilor de viță de vie*. Editura Pim, Iași, ISBN 978-606-130-618-3.
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8. X X X, 1958-1970 – *Ampelografia R.P.R., volumele I-VIII*, Ed. “Academiei R.P.R.” Bucuresti.

Evaluation

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