

# INTEGRATED WEED MANAGEMENT (1<sup>st</sup> YEAR, 1<sup>st</sup> SEMESTER)

**Credit value (ECTS) 5**

## **Course category**

Domain (Imposed)

## **Course holder:**

**Prof. PhD. Costică AILINCĂI**

## **Discipline objectives (course and practical works)**

”Integrated Weed Management” discipline, in accordance with the course syllabus, focuses on: building expertise in all aspects related to integrated weed management in order to choose the most suitable methods to limit the damage weed provokes.

- Developing the professional competences for recognizing the main weeds in crops and their seeds;
- Enhancing and mastering the practical knowledge on applying methods of weed control;
- Counselling and consultancy on integrated weed management.

## **Content (syllabus)**

<b>Course (chapters/subchapters)</b>
INTRODUCTIONS: What are weeds and what is the danger of green pollution?
WEED IN CROPS 1.1. Damages provoked by weeds. 1.2. Factors that influence the damages produced by weeds. 1.3. Sources of weed spreading on crops. 1.4. Biological features of weed. 1.5. Possibilities of valuing weeds. 1.6. Classification of weeds. 1.7. Economic damage threshold. 1.8 Weed mapping.
WEED MANAGEMENT METHODS 2.1. Integrated weed management concept. 2.2. Preventive methods. 2.3. Agro-technical methods. 2.4. Physical – mechanical methods. 2.5. Biological methods. 2.6. Chemical methods.
HERBICIDES AND THEIR USE 3.1. General considerations on herbicides. 3.2. Herbicide classification. 3.3. Absorption, translocation, and action of the herbicides in plants. 3.4. Herbicide translocation in plants. 3.5. Herbicide action in plants. 3.6. Herbicide selectivity. 3.7. Metabolism of herbicides in plants. 3.8. Herbicide penetration into plants. 3.9. Physiological, anatomical, and morphological changes of some species of weed under the influence of herbicides. 3.10. Persistence of herbicides in soil. 3.11. Herbicide residue in plants. 3.12. Environment pollution as a result of using herbicides. 3.13. Herbicide applying methods. 3.14. Rules for using herbicides. 3.15. Possible mistakes in herbicide applying. 3.16. Labour protection measures when using herbicides. 3.17. Used herbicides, dosage and application way in main crops.
<b>Practical works</b>
Recognizing the main weeds in crops
Recognition of weed seeds
Weed mapping
Preparing and applying mixtures for spraying
Technical requirements to machinery for the administration of herbicides
Introducing herbicide programme in crop rotation

## **Bibliography**

1. Gerard Jităreanu, Denis Țopa, Costică Ailincăi, Anca Elena Calistru și colab., 2020 – *Tratat de Agrotehnică*, Ed. “Ion Ionescu de la Brad” Iași, ISBN: 978-973-147-353-6.

2. Gerard Jităreanu, Costică Ailincăi, 2016 – *Agrotehnica*, Ed. “Ion Ionescu de la Brad” Iași, ISBN: 978-973-147-183-9.

3. Ailincăi Costică, Gerard Jităreanu, Lucian Răus, Denis Țopa, 2013 – *Tehnologii de cultură și metode de protecție a solului*. Editura “Ion Ionescu de la Brad”, Iași. ISBN 978-973-147-121-1

4. Șarpe N., 1987 – “Combaterea integrată a buruienilor din culturile agricole”. Editura Ceres, București.

## Evaluation

Knowledge Assessment Way:

Assessment criteria	No. of points	%
Course attendance	1	10
Attendance to practical assignments, seminar	0.5	5
Direct activity during practical assignments, seminar	1.5	15
Practical assignments final test	2	20
Interactive examination	5	50
Final grade (maximum)	10 p	100%

## Contact

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