

Syllabus for B.Sc. (Hons) Agriculture Year – III (Sem. V)

Subject Code: 16AS0513

Subject Short Name: Agron. 5.7

Subject Name: Weed Management

Objective:

1. To teach students about principles of weed science
2. To impart practical knowledge of weed management in field and horticultural crops

Credits Earned: 2 Credits (1+1)

Course Outcomes: After completion of this course, Students will be able to

- Identify the various weed species.
- Know different weed control techniques.
- Find problems of weed infestation on farmers field to solve their problems to decrease weed efficiency.
- Know the interaction effect with various field crops.

Teaching Scheme (Hours)			Credits	Theory Marks			Tutorial/ Practical Marks		Total Marks
Theory	Tutorial	Practical		ESE (E)	Mid Sem (M)	Progressive Assessment (PA)	Viva (V)	Term work (TW)	
1	0	2	2	40	20	20	10	10	100

Theory Content:

Unit	Topics	Contact Hours
1	Introduction to weeds, characteristics of weeds, their harmful and beneficial effects on ecosystem	1
2	Classification, reproduction and dissemination of weeds, crop-weed completion, factors of competition, factors affecting growth and development.	1
3	Studies on weed seed bank and weed shifts.	1

4	Concepts of weed management, principles and methods & integrated weed management	1
5	Implements for weed control, robotic weed control, weed management in organic/ natural farming	1
6	Herbicide classification and properties of important herbicides	1
7	Concept of adjuvants and surfactants,	1
8	Herbicide formulation and their use, Nano herbicides, precision weed management	1
9	Mode of action of herbicides and selectivity phenomenon	1
10	Concept of herbicide mixture and utility in agriculture, Herbicide compatibility with agro-chemicals and their application, Herbicide resistance and its management	2
11	Weed management in different field and horticultural crops	1
12	Aquatic weed management, weed management in cropping systems	1
	Total	13

Practical Content:

Unit	Topics	Contact Hours
1	Techniques of weed preservation	2
2	Weed identification and losses caused by weeds	2
3	Biology of important weeds	2
4	Study weeds in different situations	2
5	Study of herbicide formulations and mixture of herbicide	2
6	Study methods of herbicide application, Herbicide application equipment- their parts, use, maintenance and calibration	2
7	Weed control implements	2
8	Calculation of herbicide doses and requirement	2
9	Weed control efficiency, weed index and Phytotoxicity of herbicides	2

10	Weed management in fallow lands, Management of problem and parasitic weeds	2
	Total	20

Reference Books:

- Crafts, A.S. and Robbins, W.W. 1973. Weed Control. Tata McGraw-Hill Publishing Co. Ltd., New Delhi.
- Gupta, O.P. 1984. Scientific Weed Management. Today and Tomorrow Printers and Publishers, New Delhi.
- Gupta, O.P. 2015. Modern Weed Management. Agro Bios (India), Jodhpur.
- Rao, V.S. 2000. Principles of Weed Science. Oxford & IBH Publishing Co., New Delhi.

Suggested Theory distribution:

The suggested theory distribution as per Bloom's taxonomy is as per follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process.

Distribution of Theory for course delivery and evaluation					
Remember	Understand	Apply	Analyze	Evaluate	Create
25%	25%	20%	10%	10%	10%

Instructional Method:

1. The course delivery method will depend upon the requirement of content and need of students. The teacher in addition to conventional teaching method by white board may also use any of tools such as demonstration, role play, quiz, brain storming, MOOCs etc.
2. The internal evaluation will be done on the basis of continuous evaluation of students in the class-rooms.
3. Practical examination will be conducted at the end of semester for evaluation of performance of students in laboratory/ field.
4. Students will use supplementary resources such as online videos, NPTEL videos, e-courses, Virtual Laboratory.