

Syllabus for B.Sc. (Hons) Agriculture Year – I (Sem. II)

Subject Code: 16AS0215

Subject Short Name: SEC. 2.3

Subject Name: Seed Production Technology

Objective:

1. To understand the principles and techniques of seed production for various crops
2. To learn about seed testing methods to ensure seed quality and viability
3. To explore the regulations and standards governing seed production and testing
4. To develop skills to manage seed production processes effectively, from planting to harvesting and testing, to ensure the availability of high-quality seeds for farmers

Credits Earned: 2 Credits (0+2)

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

- To acquaint with scope and importance of seed technology in agriculture and the role of officials and legislation, seed act and seed order in quality of seed production.
- To develop an understanding of various seed production techniques for different field crops, the importance of maintenance of purity of crop varieties and factors causing deterioration of variety.
- To execute various phases of seed certification, field inspection and seed purity testing.
- To analyze the factors related to genetic and physical purity of seed and its health status of seeds of a variety during seed processing

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)	
0	0	4	2	0	30	20	25	25	100

Practical Content:

Unit	Topics	Contact Hours
1	Basics of Seed, seed structure and seed production	2
2	Seed sampling	2

3	Seed test (Germination, Vigour, Viability, GOT, Health <i>etc.</i>)	4
4	Seed treatment	2
5	Hybrid seed production	6
6	Field inspection and rouging	6
7	Seed harvesting and processing	2
8	Seed packaging and storage	6
9	Economics of seed production	4
10	Seed certification and law enforcement	4
11	Visit to seed production plot	2
12	Visit to Seed testing laboratory	2
	Total	40

Reference Books:

- Agrawal, R. L. (1996). Seed Technology, Oxford and IBH Publicity Company, New Delhi.
- Bhale, M. S. (2013). A handbook of Seed Certification, Vardhman Books and Periodicals.
- Joshi, A. K. and Singh, B. D. (2003). Seed Science and Technology, Kalyani Publishers, Ludhiana.
- Sen, S. and Ghosh, N., (2002). Seed Science and Technology, Kalyani Publishers, Ludhiana.
- Tunwar, N. S. and Singh, S. V. (1988). Indian Minimum Seed Certification Standards. Central Seed Certification Board, New Delhi.
- Singhal, N. C. (2002). Hybrid Seed Production, Kalyani Publishers, Ludhiana.
- Kulkarni, G. N. (2002). Principles of Seed Technology, Kalyani Publishers, Ludhiana.

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.