

19AG203 PRINCIPLES OF HORTICULTURAL CROPS AND PLANT PROTECTION

Hours Per Week :

L	T	P	C
1	0	2	2

Total Hours :

L	T	P	W/RA	SSH/HSH	CS	SA	S	BS
15	-	30	10	20	4	-	4	-



Source :

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COURSE DESCRIPTION AND OBJECTIVES:

This course deals with the production principles of fruits and vegetables. The objective of this course is to enhance the ability of students to know the requirements for the production of fruits and vegetables and the protective measures to get more yield.

COURSE OUTCOMES:

Upon completion of the course, student will able to achieve the following outcomes:

COs	Course Outcomes	POs
1	Understand, discuss and describe different type of horticultural crops, fruits and vegetables and floricultural crops.	---
2	Apply their basic knowledge to select site for horticultural crops or improve varieties for horticultural crops.	1
3	Analyse the problems which take place during preparation of nursery bed or seed rate calculation or during propagation methods.	4
4	Evaluate the trend and current scenario of develop new idea about fertilizer application and irrigation methods.	4
5	Apply and develop different process equipments for grading, packaging and post harvest management.	3
6	Creative the existing problems which happen due to pest infestation or infestation and find out new era to get rid of all these problems.	6,7,11

SKILLS:

- ✓ Various cultivation practices for fruits and vegetables.
- ✓ Develop plant growing structures.
- ✓ Apply various post harvest techniques to improve yield.

UNIT - I	L-3
Scope of horticultural: Soil and climatic requirements for fruits, vegetables and floriculture crops, improved varieties, Criteria for site selection.	
UNIT - II	L-3
Layout and planting methods: Nursery raising, commercial varieties/hybrids, sowing and planting times and methods, seed rate and seed treatment for vegetable crops; macro and micro propagation methods.	
UNIT - III	L-3
Plant growing structures: Pruning and training, crop coefficients, water requirements and critical stages, fertilizer application, fertigation, irrigation methods.	
UNIT - IV	L-3
Harvesting: Grading and packaging, post harvest practices, Garden tools, management of orchard, Extraction and storage of vegetables seeds.	
UNIT - V	L-3
Major pests and diseases and their management in horticulture crops.	

LABORATORY EXPERIMENTS

LIST OF EXPERIMENTS

TOTAL HOURS: 30

1. Judging maturity time for harvesting of crop.
2. Study of seed viability and germination test.
3. Identification and description of important fruits.
4. Identification and description of important flowers.
5. Identification and description of important vegetable crops.
6. Study of different garden tools.
7. Preparation of nursery bed.
8. Practices of pruning and training in some important fruit crops.
9. Visit to commercial greenhouse/ polyhouse.
10. Cultural operations for vegetable crops (Sowing and fertilizer application).
11. Cultural operations for vegetable crops (Mulching, irrigation and weed control).
12. Seed extraction techniques.
13. Identification of important pests and their control.
14. Identification of diseases and their control.
15. Practical examinations.

TEXT BOOK :

1. S. Prasad and U. Kumar. 2010, "Principles of Horticulture". Agrobios, New Delhi.

REFERENCE BOOKS :

1. S.S. Singh. 1985, "Principles and Practices of Agronomy". Kalyani Publishers, Ludhiana.
2. T. R. Gopalakrishnan. 2007, "Vegetable Crops. New India Publishing Agency", Pitampura, Delhi.
3. T. Radha and L. Mathew. 2007, "Fruit Crops. New India Publishing Agency", Pitampura, Delhi.
4. T. Yellamanda Reddy and G.H. Shankar Reddy. 1995, "Principles of Agronomy". Kalyani Publishers, Ludhiana.