

SEMESTER 1st to 3rd
MULTIDISCIPLINARY COURSES
HPM022I HORTICULTURE& PLANT MANAGEMENT

(CREDITS: 03)

Objectives: To make students understand the importance, cultivation and propagation of horticultural crops.

UNIT-I: FUNDAMENTALS OF HORTICULTURE

- Introduction and scope of horticulture in J&K.
- An overview of Horticulture crops of J&K (vegetable crops, fruit crops, ornamentals, medicinal & aromatic plants).
- Area, production and productivity of major horticulture crops in J&K.
- Concept of orchards, home gardens, floating gardens, and kitchen gardens for growing fruit and vegetable crops.
- Types of crops suitable for cultivation under poly-green houses.
- Plant propagation techniques – brief account of vegetative and sexual propagation.

UNIT-II: PLANT MANAGEMENT

- Brief account of propagation techniques with special reference to vegetable and fruit crops.
- Soil fertility and factors affecting soil fertility, fertilizer types and management for crop growth and yield. Types of irrigation facilities (Canal irrigation, Drip irrigation, sprinkler irrigation).
- Essential micro and macro elements that affect crop growth and yield. .
- Nutritional properties of important vegetable crops, importance of vegetables in human nutrition.
- Post-harvest management practices in major fruit and vegetable crops (grading, packaging and storage).

UNIT-III: CULTIVATION AND VALUE ADDITION

- Scope of cultivation of medicinal and ornamental plants. Advantages and constraints.
- Plant part used, medicinal properties of some medicinal plants of Kashmir (*Atropa acuminata*, *Artemisia absinthium*, *Sassurea lappa*).
- Commercial floriculture in J&K, concept and scope of cut flower technology, post-harvest management of cut flowers (examples- rose, marigold, chrysanthemum, tulip, gladiolus, and other locally important ornamentals).
- Value addition in important fruit and vegetable crops of J&K (preparation of Juices, Jams, jelleys, pickles, sauces etc.)
- Economic potential and employment opportunities in horticulture sector of J&K.

SUGGESTED READINGS

1. Adams, C.R. and M. P. Early. 2004. Principles of horticulture. Butterworth – Heinemann, Oxford University Press.
2. Bansil. P.C. 2008. Horticulture in India. CBS Publishers and Distributors, New Delhi.
3. Kumar, N. 1997. Introduction to Horticulture, Rajalakshmi Publication, Nagercoil.
4. Chadha, K.L. 2001, Handbook of Horticulture, ICAR, New Delhi.
5. Christopher, E.P. 2001. Introductory Horticulture, Biotech Books, New Delhi.
6. Edmond, J.B. T.L.Senn, F.S. Andrews and P.G. Halfacre, 1975. Fundamentals of Horticulture, Tata MC. Graw Hill Publishing Co. New Delhi.
7. George Acquaah, 2002, Horticulture-principles and practices. Prentice-Hall of India pvt. Ltd., New Delhi.