

2.9 31609 SOIL AND FERTILITY MANAGEMENT FOR HORTICULTURAL CROPS

UNIT-1 THEORY

- 1.1 Soil- definition- components- pedology- Edaphology.
- 1.2 Physical properties of soil- Colour, Texture, structure, Bulk density, Particle density, Pore space; soil water, soil air, soil temperature and their significance in crop production.
- 1.3 Soil chemical properties- Soil reaction, EC and CEC.
- 1.4 Soil Organic Matter and its importance on soil properties- Essential nutrients for crop plants- Major, secondary and micro nutrients- Soils of Tamil Nadu.
- 1.5 Manures and fertilizers- Types- Straight, Complex, Compound, Mixed, Fortified and chelated fertilizers and their reactions in soil.
- 1.6 Techniques to enhance fertilizer use efficiency.
- 1.7 Soil fertility- INM and IPNS- Problem soils- acid, saline and alkaline soils- their formation, reclamation and management

UNIT-2 PRACTICAL

- 2.1 Soil sampling- Analysis of soil for pH and EC, Texture by feel method, Determination of soil moisture- Identification and application methods of manures, fertilizers and biofertilisers.
- 2.2 Working out fertilizer requirement- Foliar application of fertilizers
- 2.3 Identification of nutrient deficiencies/disorders in crops
- 2.4 Preparation of enriched FYM& MN mixtures, Visit to compost yard and local problem soil areas- Determination of irrigation water quality.

References Book:

1. T. Biswas, M.S. Mukherjee 2001. A text book of Soil Science

