

AGRICULTURE (HONS./PG) [CODE -01]

Basic Concepts of Crop Husbandry:

Classification of field crops-origin and distribution of major cereals, pulses, oilseeds, fibre crops, sugarcane and starch crops, spices and condiments, and narcotics, Climatic requirements and adaptation of these crops. Quality seeds: production and preservation.

Tillage and Tillage Operations:

Objects and Principles of tillage, types of tillage, prerequisites for tillage operations, factors influencing tillage, seed bed and nursery bed preparation, tillage of sowing seeds and transplantation of seedlings, intercultivation use of traditional and improved farm implements and their comparative efficiencies.

Soil and Soil Management:

Definitions of soil, soil formation factors, soil profile development, physical, chemical and biological properties of arable soil, soil organic matter, soil groups of India and their distribution and cropping pattern. Soil management for cultivation of crops. Problem soils of India and their management. Soil erosion and conservation.

Nutrient Management:

Essential elements and their functions in crops, important organic manures, biofertilizers and commercial fertilizers, preparation of organic manures and biofertilizers. Amount of application, time and method of application in different crops. Use of soil amendments. Compound fertilizers, their properties and use. Mixed fertilizers and their preparation. Integrated nutrient management.

Water Management:

Importance of water in crops, forms of soil water, soil water at field capacity, wilting point and available water, factors affecting water holding capacity. Water requirement, irrigation requirement and scheduling of irrigation water, Methods of irrigation, minor and major irrigation projects in India. Drainage and its importance, systems of drainage of excess water. Water conservation methods. Watershed management: its concept and utilities.

Crop protection:

Nature of damage caused by pests, diseases and weeds, and their control measures, stored grain pests and their control, protection against rodents. Integrated pest management. Precautions required to handle agro-chemicals.

Agronomic Practices of Field Crops :

Selection of crops according to soil type and climate conditions, regional infrastructure and marketing channels. Preparation of land for sowing and transplantation, selection, preparation of seeds for sowing. Methods and time of sowing and /or transplantation, intercultural operations, manures and fertilizers management, irrigation management. Harvesting, processing and storage of crops. Cost of cultivation.

The above items be studied on major cereals, pulses, oil seeds, fibre crops, sugarcane, narcotics etc.

Cropping Systems and Patterns:

Crop rotation, objectives and factors affecting crop rotations inter/ mixed cropping. Dryland farming and selection of crops.

Operations Barga:

Principles, objectives and advantages / disadvantages.