AGRICULTURE

Agriculture, its importance in national economy factors determining agro-ecological zone and geography distribution of crop plants.

Important crops of India, cultural practices for cereal pulses, oilseed, fibre, sugar and tuber crops and the scientific basis for these crop rotation, multiple and relay cropping intercropping and mixed cropping.

Soil as a medium of plant growth and its composition, mineral and organic constituents of the soil and their role in crop production, chemical, physical and microbiological properties of the soils essential plant nutrients, their functions, occurrence and cycling in soils, principles of soil fertility and its evaluation for judicious fertilizer use. Organic manures and bio-fertilizers, straight, complex and mixed fertilizers manufactured and marketed in India.

Principles of plant physiology with reference to plant nutrition absorption, translocation and metabolism of nutrients. Diagnosis of nutrient deficiencies and their amelloration photosynthesis and respiration, growth and development auxins and harmones in plant growth.

Elements of Genetics and Plant breeding as applied to improvement of crops, development of plant hybrids and composites, important varieties, hybrids and composites of major crops.

Importants fruit and vegetable crops of India, the package of practices and their scientific basis, crop rotation, intercropping and companion crops, role of fruits and vegetables in human nutrition, post harvest handling and processing of fruits and vegetables.

Serious pests and diseases, affecting major crops principles of pest control, integrated control of pests and diseases, proper use and maintenance of plant protection equipments.

Principles of economics as applied to agriculture.

Farm planning and resource management for optional production, Farming systems and their role in regional economics.

Philosophy, objectives and principles of extension. Extension organisation at the stations and responsibilities. Methods of communication, Role of farm organisation in extension service.