

## DEGREE STANDARD

### 1. IMPORTANCE OF AGRICULTURE

Importance of Agriculture in Indian Economy and its sectoral relationship - Agricultural Development through five year plans in India and Tamil Nadu - Growth pattern of crops in India and Tamil Nadu in terms of area, production and productivity.

### 2. CROP PRODUCTION

Factors of Production - Agricultural seasons of India and Tamil Nadu - Cropping patterns in India and Tamil Nadu - package of practices of different crops - Agro-Climatic zones of India and Tamil Nadu and their features - Weather and Climate - Weather forecasting. Soil - Soil structure - Factors influencing soil structure - Physical and Chemical properties - Effect of nutrient availability and plant growth - Problem soils and their management - Soil survey - its objectives and scope - Soil fertility and productivity - Organic manures, green manures, bio fertilizers - Balanced usage - integrated nutrient management - Physiological disorders in crop plants and their management - Dry farming - Rainfed agriculture - Conservation of soil and water - Watershed and waste land development.

### 3. CROP IMPROVEMENT

Principles of breeding - Breeding methods - Modern tools in crop improvement - Hybrid production - Latest varieties of major crops in Tamil Nadu - Application of bio technology in Agriculture - Tissue culture & its significance - Transgenic Plants.

Seeds - Importance of quality seeds in Agriculture - Nucleus, Breeder, foundation, certified and labelled seeds - Seed certification techniques and processes in Tamil Nadu - Seed testing - Seed village concept.

### 4. CROP PROTECTION

Importance of pest, disease and weed management in agriculture - pest and disease surveillance and forecasting weather on pest and disease incidence - Symptoms of damages and control measures of pest and diseases of major crops in Tamil Nadu - Integrated pest and disease management in crop production - Pesticide and their use - Pattern - plant production equipments and their use - Plant quarantine.

Storage pests and disease and their management. Importance of biological control in insect management. Weeds - Major weeds and their control.

### 5. CROP MANAGEMENT

Land use pattern and planning - Size and distribution of holdings - types and systems of farming - Water resources development and management - Irrigation management of different crops - Command area development - Ground water Development and Conjunctive use - Water use efficiency - Quality of irrigation water - Its effect in soil and crops - Management of poor quality water for crop growth.

Cropping system and integrated farming - Recycling of agricultural waste - Mushroom cultivation, bee keeping, silkworm rearing etc., Energy in Agricultural production - Sources - Solar, wind, animal, biomass and biogas - Mechanisation in agriculture - Tractors & tillers - Agricultural implements and Machineries and their usage.

Farm management - Principles of farm business management - Cost concepts - Management of resources - Farm Planning and budgeting - Investment analysis - Agricultural credit system in India - Multi credit delivery system - Role of nationalised banks and Regional Rural Banks - Lead Bank Scheme - Service area - approach - Scale of finance.

## Agriculture

Marketing - Agricultural marketing and price policy of Agricultural commodities - Market structure - Warehouses & rural godowns - Post harvest technologies - Agri business management - Marketing Institutions.

Policies for agricultural development - Economic liberalisation - WTO and its impact on agricultural export. Extension methods for transfer of technology - Agriocultural Information technology - Role of women in Agriculture.