AGRICULTURE
(UG DEGREE STANDARD)

SUBJECT CODE: 284

UNIT- I: 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 - Government Agricultural Policies – Agricultural development through NITI AYOG – import and export – role of NSC, FCI and PDS.

UNIT - II: FUNDAMENTALS OF 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 - Climate change and its impact – Minimal tillage practices – Stress mitigating technologies including microorganisms – Nanoparticles and their applications.

UNIT - III: NATURAL RESOURCE MANAGEMENT

UNIT - IV: CROP MANAGEMENT & ALLIED AGRICULTURAL ACTIVITIES


UNIT - V: CROP IMPROVEMENT


UNIT - VI: SEED SCIENCE AND TECHNOLOGY

Seeds - Importance of quality seeds in Agriculture – Nucleus, Breeder, foundation, certified and labelled seeds - Seed certification techniques and processing in Tamil Nadu - Seed testing – Seed testing laboratories-ISTA standards for seed testing - seed village concept Seed Act - Seed coating and priming technologies - Seed enhancement technologies.

UNIT – VII: CROP PROTECTION PRINCIPLES AND PRACTICES

Importance of pest, disease, nematodes and weed management in agriculture – categories of pests, diseases, nematodes and weeds - pest and disease surveillance and forecasting weather on pest and disease incidence - Symptoms of damages and control measures of pest, disease and nematodes of major crops in Tamil Nadu - Integrated pest, disease and nematode management in crop production - Pesticides and their use in IPM – mode of action - Pattern - plant protection equipments and their use - Plant quarantine. Storage pests, disease and nematodes and their
management. Importance of biological control in pest, disease and nematode management. Weeds - Major weeds and their control.

UNIT – VIII: FARM BUSINESS AND FINANCE MANAGEMENT

Farm business management - Principles of farm business management – Types and systems of farms-Classical Production Functions - Cost concepts - Management of resources - Farm Planning and budgeting - Investment analysis – Risk and uncertainties in Agriculture - Agricultural credit system in India - Multi credit delivery system - Role of nationalized banks, NABARD and Regional Rural Banks - Lead Bank Scheme - Service area approach - Scale of finance-Credit Worthiness-3 Rs,5Cs and 7Ps of credit- Crop Insurance - Kisan Credit Cards (KCC) - Agricultural Insurance Company.

UNIT – IX: AGRICULTURAL MARKETING AND MARKET INTELLIGENCE


UNIT - X: AGRICULTURAL EXTENSION: PRINCIPLES AND METHODS

Extension methods for transfer of technology - AV aids-Communication models - Use of ICT in transfer of technology-Diffusion and adoption- Pre and post independence rural development initiatives: key features, strength and weakness of individual programmes - Programme planning and evaluation methods- Rural sociology - key features of Indian rural system-value system-social change- rural migration. Role of women in Agriculture.