AGRO 101 - PRINCIPLES OF AGRONOMY AND AGRICULTURAL METEOROLOGY

1. Agriculture – Definition – Importance and scope - Branches of agriculture - Evolution of man and agriculture – Development of scientific agriculture - National and International Agricultural Research Institutes.
2. Indian agriculture - Indian economy – National income – per capita income – Agricultural income in GDP - Women in agriculture and empowerment
3. History of agricultural development in the world and India. Agriculture heritage – Agriculture in ancient India
4. Stages of agriculture development - Era of civilization- Importance of Neolithic civilization
5. Chronology of Agricultural technology development in India
6. Kautilya's Arthasasthra - Sangam literature - rainfall prediction – ITK -Tamil Almanac.
7. Agronomy – definition – meaning and scope. Agro-climatic zones of India and Tamil Nadu – Agro ecological zones of India
8. Crops and major soils - Classification – Economic and agricultural importance in India and Tamil Nadu
9. Factors affecting crop production – climatic – edaphic - biotic- physiographic and socio economic factors
10. Tillage – Definition – objectives – types of tillage - modern concepts of tillage – main field preparation
11. Seeds - Seed rate - Sowing methods - Germination - Crop stand establishment - Planting geometry
12. Role of manures and fertilizers in crop production – agronomic interventions for enhancing FUE - Inter cultivation - Thinning - Gap filling and other intercultural operations
13. Irrigation - Time and methods - Modern techniques of irrigation - Drainage and its importance
14. Planting Geometry and its Effect on Growth and Yield
15. Cropping pattern and cropping system - Intensive cropping- Sustainable agriculture – IFS
16. Organic / eco-friendly agriculture - Dry farming - Concepts and principles
17. Agro-climatic zones of India
18. Agro meteorology
19. Weather and climate, micro-climate
20. Weather elements and their influence on different crops
21. Monsoon
22. Clouds
23. Weather aberrations
24. Weather forecasting
25. Weather modification -Artificial rain making and cloud seeding
26. Remote sensing.