

**THEORY**

Agronomy of field crops – Economic importance - origin - soil and climatic requirement - area, production and productivity in World, India and Tamil Nadu – System of cultivation – crop management - season - varieties - seed rate - seed treatment - sowing - density and geometry - growth stages - critical stages - nutrient, irrigation, weed management - after cultivation - harvest and processing - cropping systems – yield estimation – byproducts utilization.

Oilseeds	Groundnut, Sesame, Sunflower, Rapeseed and Mustard, Castor, Safflower, Niger and Linseed
Sugar crops	Sugarcane, Sugarbeet, Sweet sorghum
Fibre crops	Cotton, Jute, Mesta, Sunnhemp, Agave
Narcotics	Tobacco

**LECTURE SCHEDULE****THEORY**

1. Importance of oilseeds, sugar crops, fibres and narcotics in trade and utility
2. Area, production and productivity of oilseeds (groundnut, sesamum, rapeseed and mustard, sunflower, safflower, castor, niger and linseed)
3. Groundnut - importance - origin and distribution - soil and climatic requirements, season - varieties - field preparation - sowing under irrigated and rainfed condition - plant density
4. Groundnut - manures and manuring - weeding – irrigation- cropping system - after cultivation, harvest and storage - Rainfed groundnut cultivation
5. Sesame - origin and distribution - soil and climatic requirements, season - varieties - field preparation - sowing - manures and manuring - weeding - irrigation – cropping system - after cultivation, harvest - Rice fallow and rainfed sesamum cultivation.
6. Rapeseed and Mustard - importance - origin and distribution - soil and climatic requirements, season - varieties - field preparation - sowing - manures and manuring – weeding - irrigation - cropping system - after cultivation, harvest and post harvest technology
7. Sunflower – importance - origin and distribution - soil and climatic requirements, season - varieties - field preparation - sowing - manures and manuring – weeding - irrigation

8. Sunflower – cropping system - after cultivation - techniques to improve seed setting – harvest and post harvest technology– Rainfed sunflower cultivation.
9. Safflower - importance - origin and distribution - soil and climatic requirements, season - varieties - field preparation - sowing - manures and manuring - weeding - irrigation - cropping system - after cultivation, harvest and post harvest technology.
10. Castor - importance - origin and distribution - soil and climatic requirements, season - varieties - field preparation - sowing - manures and manuring - weeding - irrigation - after cultivation - cropping system- harvest and post harvest technology.
11. Niger - importance - origin and distribution - soil and climatic requirements, season - varieties - field preparation - sowing - manures and manuring - weeding - irrigation - after cultivation - cropping system- harvest and post harvest technology.
12. Linseed - importance - origin and distribution - soil and climatic requirements, season - varieties - field preparation - sowing - manures and manuring - weeding - irrigation - after cultivation - cropping system- harvest and post harvest technology.
13. Area, production and productivity of Sugar crops (sugarcane, sugarbeet and sweet sorghum)and fibre crops (cotton, jute, mesta and agave) in India and Tamil Nadu
14. Sugarcane – economic importance - origin and distribution - soil and climatic requirements, season - important varieties
15. Sugarcane - main field preparation - preparation of setts for planting - sett treatment - methods of planting – manures and manuring - crop logging
16. Sugarcane - weed management – irrigation - after cultivation – cropping system
17. Mid-Semester examination
18. Sugarcane – time of harvest - juice extraction and post harvest technology ( sugar and jaggery manufacture) and management of ratoon sugarcane.
19. Sugarbeet – economic importance - season - varieties - sowing / planting - manures and manuring - weeding – irrigation - after cultivation,- cropping system- harvest and post harvest technology.
20. Sweet sorghum - economic importance – origin and distribution – soil and climatic requirements -season - varieties - sowing - manures and manuring - weeding - irrigation – after cultivation - cropping system- harvest and post harvest technology.
21. Cotton – economic importance - origin and distribution - soil and climatic requirements, season - species / varieties - field preparation - methods of sowing
22. Cotton – manures and manuring - seed rate - seed treatment - sowing - weeding - irrigation – after cultivation - cropping system - harvest
23. Rice fallow cotton - season - important varieties - field preparation - seeds and sowing - seed treatment - manures and manuring - weeding - after cultivation - harvest

24. Problems in cotton cultivation - terminologies associated with cotton- post harvest technology- quality characters - cotton seed oil - utility - importance
25. Jute – economic importance - origin and distribution - soil and climatic requirements, season – field preparation - sowing - manures and manuring - weeding and after cultivation
26. Jute – irrigation- cropping system- harvest and post harvest technology- fibre extraction (retting)
27. Mesta and sunnhemp – economic importance - season - varieties - sowing - manures and manuring - weeding - after cultivation - irrigation – cropping system- harvest and post harvest technology- fibre extraction
28. Agave –economic importance –origin and distribution- climatic requirements – season- varieties/ types - cultural practices – harvest and post harvest technology - fibre extraction
29. Tobacco – economic importance - origin and distribution - area, production and productivity in India and Tamil Nadu - soil and climatic requirements - season - varieties - nursery preparation - seed rate - seed treatment and sowing
30. Tobacco - main field preparation - planting - manures and manuring - weeding - irrigation - after cultivation -
31. Tobacco – cropping system -harvest and post harvest technology and curing of tobacco
32. Yield estimation – pertaining to oilseeds viz., Groundnut, Sesame, Sunflower , Rapeseed and Mustard, Castor, Safflower, Niger and Linseed
33. Yield estimation – pertaining to sugar crops (sugarcane and sugarbeet), fibre crops (cotton, Jute, Mesta, Sunhemp and Agave) and narcotics (Tobacco)
34. Byproduct utilization from oilseeds, sugar crops, fibres and narcotics

## **PRACTICAL**

Visit to crop cafeteria - Identification of crop plants - varieties and seeds - Acquiring skill in different operations for various crops - nursery preparation - sowing - seed treatment - preparation of main field - method and depth of sowing / planting - use of sowing equipment - maintenance of plant density and geometry, time and method of application of manures and fertilizers - irrigation, weed management - after cultivation - assessment of maturity - harvest and processing. Cost of cultivation and economics - Observations on growth and yield estimation - Topping in cotton. Detrashing and propping of sugarcane. Topping, desuckering and curing in tobacco. Study of jaggery manufacture and visit to sugar factory / Ginning factory / Tobacco curing centres.

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