

FR(N) 201: PLANTATION FORESTRY AND LAB WORK

SYLLABUS

Definition; Scope and impediments; Plantation forests- planting plan, plantation records, maps. Plantation establishment- legal title of land, survey, site selection; Site preparation- purpose and methods; Planting - layout, time of planting, planting pattern, spacing, gap filling, planting methods and direct seedling. Choice of species on ecological aspects - afforestation of dry land, wet land, other adverse sites, and taungya; Enrichment planting, nurse and cover crops; Intercultural operations; Plantation maintenance- weed control, climber cutting, staking, singling and pruning; Thinning- definition, objectives; Effects of thinning- physiological and mensurational; Effect of methods of thinning on stand development; Energy and industrial plantation - definition, scope, species, establishment, management and impact on environment; and Plantation economics

LAB WORK / FIELD EXERCISES

Herbarium Preparation: Techniques of preparing herbarium specimens; Species Selection: Selection of important fast growing, short rotational and multipurpose tree species: Indigenous (conifers and broad leaved- Chir-Pine, Deodar, *Cupressus* and *Quercus* species) and exotic species (*Poplar* and *Eucalyptus*); Site Preparation: Pit digging techniques and mulching methods; Energy Plantation: Tree species used for energy/fuel wood; Industrial Plantation: Tree species in paper, ply wood and match industries; Plantation at Different Problematic Sites: Selection of tree species planted in different problematic sites

Suggested Readings

1. *Plantation Forestry* by R. K Luna.
2. *Plantation Trees* by R.K. Luna.
3. *Principles and Practices of Silviculture* by L.S. Khanna.
4. *Propagation Practice of Tree Improvement in Indian Trees* by Ram Prakash, D.C. Chaudhary and S.S. Negi.
5. *Plantation Forestry In tropics* by J. Evans.
6. *Forestry in India* by A.P. Dwivedi.
7. *A Text Book of Silviculture* by A.P. Dwivedi.