

LAND PREPARATION

Poor land preparation and inappropriate layout possess recurring problem. Therefore, selected fields should be deeply ploughed and then harrowed to root out the perennial weeds, roots of perennial bushes and heavy clods. Under hillocks and steep sloppy



land (30-40% slope), contour trenching instead of deep ploughing should be done. This operation provides congenial tilth to young roots for their healthy development. After harrowing, proper levelling of land is done and a gentle slope is provided in one direction to facilitate irrigation as well as drainage of excess water during rains. The soils which have drainage problems should be provided with adequate trenching from the very beginning to avoid serious damage to young plants due to water stagnation.

On sloping land with a gradient up to 10 per cent, it is advisable to plant the trees on mounds or in trenches. This facilitates management operations and improves drainage. Where the land is more steeply sloping, terraces should be established, although this makes ploughing considerably more difficult. It is also advisable to have grass or stone-lined irrigation ditches to prevent soil erosion.

Deep ploughing of the land in dry weather prior to planting will ensure uniform growth and is essential in previously cultivated soils where a compact layer has usually been formed. It is desirable, but not essential to use cover crops prior to planting and continuing the same for the first 3 or 4 years. They will prevent weed growth, act as a windbreak for the young trees and provide a source of “*in situ*” mulching.

Soil Reclamation

- In normal as well as alkali soil, plants do not require liming however, if the soil analysis show the lower pH than required (5.6-6.0), lime should be applied and if there is magnesium deficiency, dolomite, should be used to improve the soil pH.
- If the soil is very acidic, heavy lime applications may be necessary.
- Two-third of the recommended quantity of lime must be scattered over the planting area, mixed with the top soil and then ploughed as deep as possible, at least 9 to 12 months before planting.
- If a lighter lime application (2-4 t/ha) is required, the lime can be applied into the soil at least three months before planting.

The lime should only be applied when the pH is lower than the target soil (water) pH