Agroforestry Third stage

Forestry Department

**Home gardens**

This constitutes a variant of multistrata system. The distinction between home gardens and forest gardens is not clear-cut (Salafsky, 1994). Home gardens are smaller, are located close to the homestead and provide a large number of different plant and animal products that are primarily for household consumption; forest gardens provide a narrower range of tree products, which are mainly marketed.

**Boundary planting (Line Planting)**

This is planting of trees along field boundaries or other borders, e.g. along footpaths or irrigation channels. Under this system, tree species are planted in single or double rows, at an inter-tree spacing of 1-4 m, on the farm and field boundaries, approach paths, water channels etc.

**Trees Suitable for Line Planting**

Eucalyptus (*Eucalyptus hybrid*), Poplar (*Populus deltoids*), Melia(*Meliacompacta*), Albizzia(*Albizzialebbeck*, A. *procera*).

**Biomass transfer**

This is also called cut-and-carry mulching or tree-litter mulching. The trees are grown as a separate block, possibly on less fertile parts of the farm. Leaf matter is cut from the tree, transported and added to the soil of the cropland. The trees may be natural forest or planted and may have other productive functions. This system minimizes tree-crop competition, as there may be no tree-crop interface at all.

**Entomoforestry**

This consists of combinations of trees with insects. The main systems are:

1. Apiculture, the use of trees often (*Acacia* species) to raise bees for honey
2. Silkworm culture, using mulberry trees (*Morus* spp.)
3. Production of shellac, based on a parasitic insect-tree relationship. In that the trees remain permanently, there are likely to be favourable effects on soils

**Aquaforestry**

This is aquaculture which includes trees. The main subtypes are:

1. Marine aquaforestry – management of mangroves to combine production of wood with fish or shellfish;
2. Freshwater aquaforestry – planting of trees around fishponds, so that the litter enriches the water. Clearly, the effects on the soils of both types are highly distinctive.

**Block planting**

Farmers with large holdings, small farmers with alternative source of income, absentee land-lords, and industrialists owning plots near cities have resorted to block planting of Eucalyptus, Poplar and other trees. Here the preference is for closer planting of trees (1m x 1m to 2m x 2m) in case of Eucalyptus and (2m x 2m to 3m x 3m) in case of Poplars in the entire field / block.

**Suitable Trees Species for Block Planting**

Eucalyptus *(Eucalyptus spp)*

Poplar *(Popuus spp)*

Melia (*Melia azadirachta*)

Acacia (*Acacia nilotica*var, *indica*).