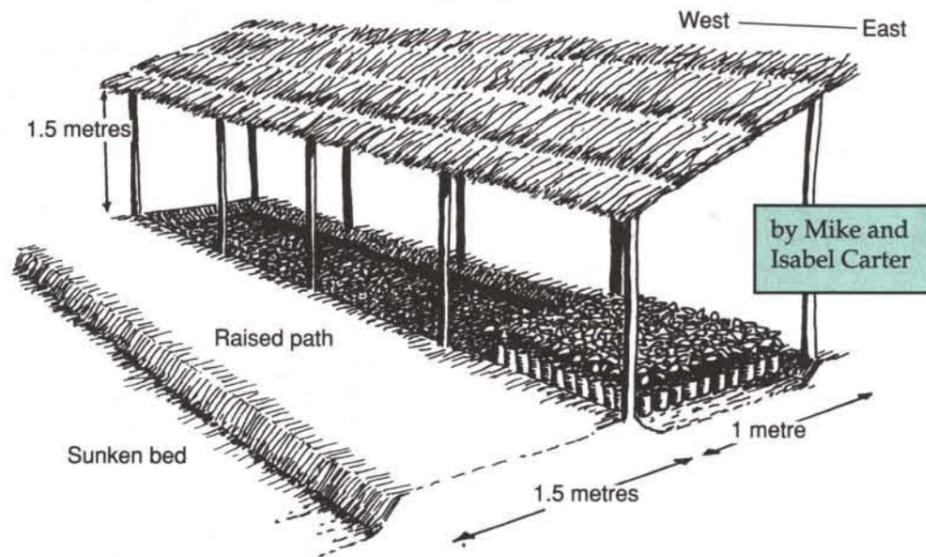


TREE NURSERIES



Take care when choosing a site for a tree nursery. It should be close to a permanent supply of water. Remember the nursery will be full of seedlings during the dry season. The site must be on well drained land that does not flood, with a supply of fertile soil nearby. It will need to be protected from animals.

1 PREPARATIONS



TOOLS

You will need a hoe, machete or large knife, shovel and watering can (you could make one from a large tin with holes in the base). A wheel barrow would be very useful.



SOIL MIXTURE

Mix together well with a shovel: 4 parts fine topsoil, 2 parts sand, 1 part old manure.



CONTAINERS

Plastic forestry bags (6cm x 15cm) are ideal. (Larger ones may be needed for fruit trees.) These can be open-ended in wet areas and closed-ended in dry areas. If you cannot get these, try using tins with holes for drainage, or milk containers. Alternatively, use nursery beds and wooden boxes.



SEEDS

Collect ripe seeds from many trees, but only from the best ones. Also ask for seed from other nurseries or Government forestry workers. Store seed in air-tight containers with clear labels.

2 CARE OF YOUNG SEEDLINGS

Many tree seedlings need about four months in a nursery before planting out. Plan your sowing so seedlings will be ready during the rainy season. Very hard seeds, such as Acacia and Leucaena, should be soaked overnight in very hot water (not boiling) to help germination.



SOWING SEED IN BAGS

Fill bags or containers, shaking down the soil. Place in groups of 100. Water very well. With large seeds sow 2 or 3 seeds in each bag.



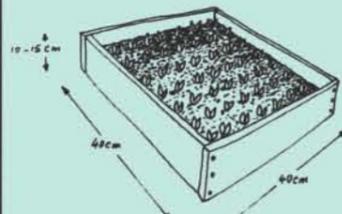
NURSERY BEDS

These are used for very fine seed, or if you have no bags or containers. Soak bed with plenty of water before sowing. Cover with fine soil.



PRICKING OUT

The young seedlings need to be pricked-out. Loosen soil. Lift up seedlings gently and place in container. Plant out into bags, boxes or beds. Make sure the roots have plenty of room. Press soil firmly around seedling.



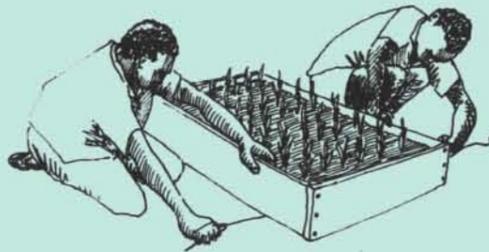
BOXES AND SWAZILAND BEDS

If you have no bags, but plenty of wood is available make small, movable boxes with bases, for 49 trees. If there is little timber, build Swaziland Beds. These have no base and can be as large as necessary. Paint timber with old engine oil to protect against termites.



PRUNING

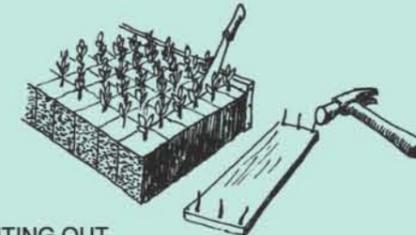
Keep seedlings shaded and water regularly. Prune roots to encourage strong root growth. To do this simply move the bags each month. With boxes cut the soil into squares. Use strong wire (e.g. a fine guitar string!) to prune the roots under Swaziland Beds.



3 PLANTING OUT

HARDENING OFF

This means teaching the seedlings how to survive outside the nursery. 4 - 6 weeks before planting out, gradually remove the shading in the nursery. Begin to reduce watering.



PLANTING OUT

Water boxes well. Remove sides, cut squares again and carefully place the seedlings into trays or boxes to carry to the planting site.



Prepare large planting holes. If possible, break up the hard rocky subsoil in the bottom of the hole and add a little manure. Place seedling in hole at the right level. Now remove bag or container. Replace soil and press down firmly.



If rainfall may be low, make a small hollow around the tree to catch water.



If trees are planted on a slope, make V shaped ridges to catch rainwater.



Protect well with thorns from livestock. Water, if possible, during very dry periods until established.



For tree seedlings near the house during dry periods, fill a bottle with water. Quickly turn upside-down and press into soil near roots. The water will slowly seep into the soil. Or use a clay jar that allows water to seep through.