

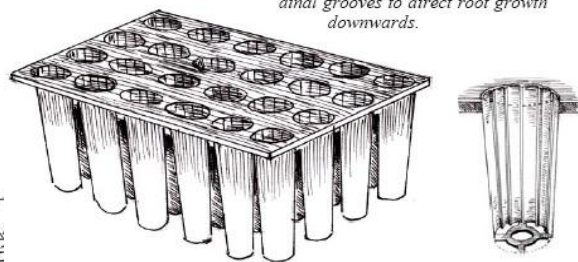


# POTTING SEEDLINGS

## What containers to use?

Containers must be big enough to let long, dense root systems to develop. They need holes for drainage, be lightweight, inexpensive and readily available. Black plastic bags are strong, lightweight, cheap and effective and have been used by FORRU-CMU for many species. However the bags can bend easily and damage the root ball, root spiralling may occur, and roots can grow through the drainage holes. FORRU has techniques to avoid these problems. Root trainers are rigid plastic pots with grooves down the sides to direct root growth down. They are more expensive but can be reused many times.

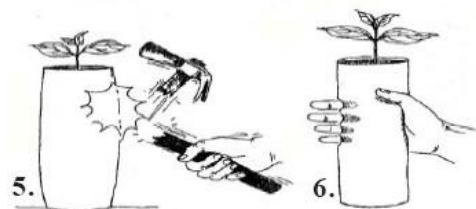
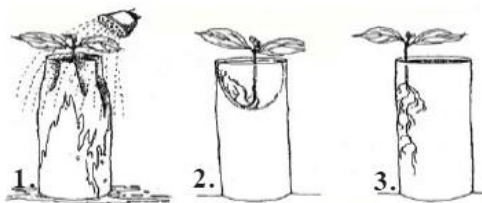
REX tray root trainers have deep longitudinal grooves to direct root growth downwards.



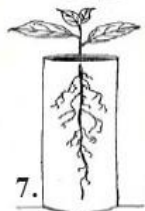
Black plastic bags (9 x 2 1/2 inches) are cheap but not reusable and can cause root curling.



Tube root trainers allow air pruning.



Problems with Potting



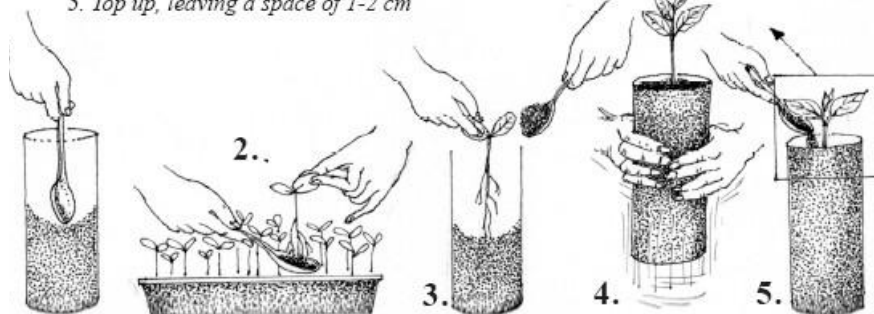
1. Medium has settled; rim of plastic bag collapses, blocking watering.
2. Curled roots will make the adult tree susceptible to wind throw.
3. Seedling not placed centrally.
4. Medium too soft.
5. Medium compacted.
6. Excellent medium consistency.
7. The perfectly potted seedling!

## What makes a good potting medium?

Potting medium needs solid particles with pores between them for aeration and drainage. It must support growing trees and supply roots with oxygen, water and nutrients. Forest soil alone is unsuitable as it easily compacts and prevents free drainage, suffocating roots. Good drainage is essential, but the medium must also retain water to supply the plants between waterings. Some forest soil should always be included in the medium, as it has spores of mycorrhizal fungi that help tree seedlings to grow. To prevent compaction, mix forest soil with bulky organic matter e.g. rice husk charcoal, coconut husk, peanut husks or coarse sand or try making your own compost from locally available organic waste. These will improve drainage and aeration. Materials should be locally available throughout the year and cheap. Sieve the materials to remove large lumps and stones and mix together on a hard, flat surface using a shovel, keeping the medium moist. FORRU-CMU uses a mix of forest soil, peanut husk and coconut husk, mixed in the ratio of 2:1:1 for many species. Never reuse the potting medium, to prevent the spread of diseases.

## Pricking-out

1. Make space for the roots.
2. Lift seedling gently by the leaves.
3. Place seedling in container and fill in with medium.
4. Settle the medium.
5. Top up, leaving a space of 1-2 cm



The seedling's root collar should be at or just below the medium surface.

## How do I fill containers with potting medium?

Use moist, not wet medium. For pricking-out small seedlings, fill containers to the brim with medium. Bang the container on the ground a few times to allow the medium to settle. Then top up containers with more until they are full again. The bags should stand up straight and unsupported, but not be too compact. Check for correct consistency by firmly grasping the bag. The impression of your hand should remain after you let go.

**What is "pricking out"?** Transferring seedlings from germination trays to containers is called "pricking out". Young seedlings are very delicate, so handle them carefully to prevent damaging the stem and drying the roots. Make a hole in the moist medium big enough for the seedling's roots without bending them. With the index finger and thumb, gently grasp a leaf (not the stem) of a seedling and prize it out of the germination tray with a spoon. Place the seedling's root in the hole and add more medium to fill it. Bang the container on a hard surface a few times to settle the medium. Top up with medium until the medium surface is 1-2cm below the rim. Gently press the medium to make sure the seedling is upright and centrally placed.

