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**CORNWALL
COUNCIL**

Planting new apple trees

Plant selection

There are numerous local varieties in existence and an increasing number are becoming available through nurseries. Choice of varieties will depend upon the required use for the apples and personal taste. Information about some of the older or less common varieties is limited but most nursery catalogues give some information. Additionally some varieties will be listed and described in reference books. We have produced a list of recommended local and national varieties that should grow well in Cornwall (available to download from the Council website).

Traditional orchards are formed with standard trees and it is therefore important to select vigorous rootstocks such as M25 and M111. These have the added advantage that they are less susceptible to disease problems than the dwarfing rootstocks used to produce garden trees.

Plant size

Maiden trees establish well but will need careful pruning and training to produce a useful tree (see 'Formative pruning'). The amateur may prefer to select well-trained standards, but stability is better with a younger tree.

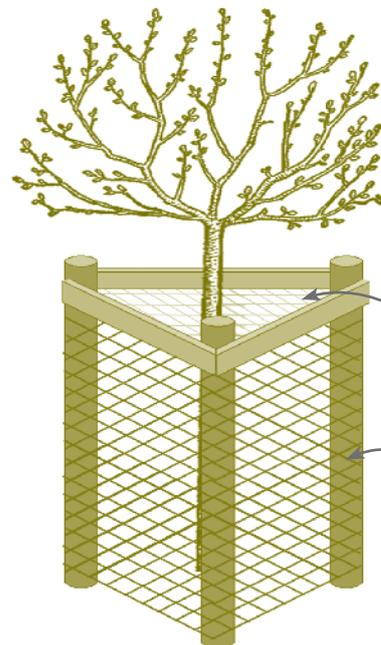
Site selection

Orchards prefer free draining, sheltered sites with an adequate rooting depth. If the site is not naturally sheltered consider planting a traditional hedge or shelterbelt to provide shelter without shading the site too much. However it is surprising where orchards are found in Cornwall and shelter is always relative. Crops will be reduced on exposed sites due to damage to buds, flowers and fruit.

Frost pockets should be avoided.

Spacing

Standard orchards are normally planted at 8 - 10m centres. The better the site, the wider the spacing. Spacing can be as little as 6m on exposed sites where growth is expected to be significantly reduced.



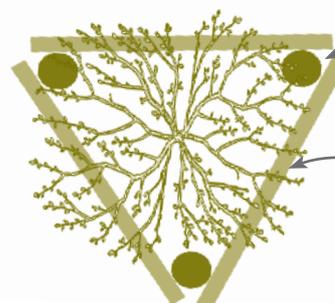
Three 50mm x 20mm x 600mm battens

Three 50mm (min) x 2m treated stakes

Fig's 1 & 2.

Suitable tree guard to protect young tree from sheep

300mm diameter x 1.5m tall guard



Three 50mm (min) x 2m treated stakes

Three 50mm x 20mm x 600mm battens

Protection

All trees must be protected from stock. Stockproof fences should be maintained to control grazing.

Light grazing by sheep and/or poultry can be tolerated if individual tree guards are erected (Figs 1 & 2).

Grazing by horses and cattle is not normally recommended because of the high cost of fencing and the high risk of damage by stock.

Spiral guards are useful to protect young trees from damage by rabbits.

Fasten guard with wire ties to allow access for pruning.

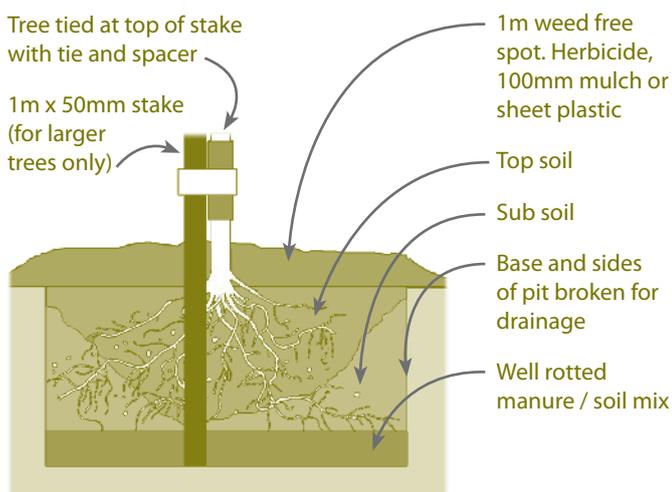
Individual tree guards may be required where deer populations may cause damage.

Planting

Prepare the planting site well and take time over the planting and maintenance.

1. Excavate a good size hole taking care to keep the topsoil separate from subsoil. (1m x 1m x 500mm deep is ideal, 400mm x 400mm x 300mm is a minimum).
2. Remove large stones, rubble and other unsuitable soil.
3. Break up the bottom and sides of the pit to ensure good drainage and rooting.
4. On exposed sites or where larger trees (1.5m +) are planted you may need to stake and tie the tree for the first growing season. Stakes should be sunk into the middle of the base of the pit and should extend 300mm - 500mm above the ground (e.g. 1m stake). **Avoid staking if possible.**
5. Backfill with a good amount of well rotted manure or compost (if available) and incorporate with about half of the excavated soil.
6. Plant the tree ensuring the roots are spread out and at the correct depth
7. Backfill remaining soil (topsoil around roots and on top) firming the ground as you proceed and ensure that the final soil level is at the level of the root collar (identified by change of colour and swelling).
8. Apply a layer of mulch over the entire planting pit to prevent weeds establishing. Plastic sheets 1m² or a 100mm layer of wood chips, bark or straw etc. is ideal. Cut and uncut grass will kill or starve young trees.
9. Place a plastic spiral guard or similar around base of stem to prevent damage by rabbits.

Fig 3. Pit planting for fruit trees



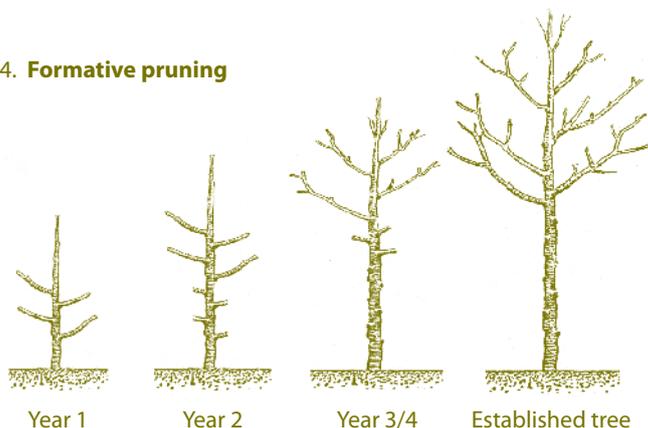
Maintenance

1. Remove stake and tie, if used, at beginning of second growing season.
2. Maintain a 1m diameter weed free area around each tree for three growing seasons.
- N.B. If using mulch check for weed growth. Remove weeds and replenish mulch as necessary during first three growing seasons.
3. Carry out formative pruning to produce a suitably shaped tree and encourage fruit production. (see below)
4. Avoid damage to tree by strimmers and mowers.

Formative pruning

1. In first summer cut back side shoots to 50mm - 75mm (two to three buds).
- N.B. In second and subsequent summers, cut back new side shoots to 50mm - 75mm (two to three buds) and cut back previously pruned shoots to the stem until the desired clear stem is achieved.
2. When the leading shoot has grown well beyond the desired height of clear stem required, cut back to encourage side shoots.
3. Progressively remove side shoots from ground level to crown over two to three years to give a clean stem to the desired height.
4. As crown develops carefully thin the crown to achieve open habit (wine glass shape).
- N.B. Some trees naturally form a bushy tree. Go with the natural habit.
5. Do not reduce the crown all over as this encourages vigorous, non-fruiting growth.
- N.B. There are many methods of pruning for fruit production. The advice above can be modified to suit the method preferred but the aim is to allow light and air to reach the fruiting branches and to encourage fruiting branches (generally more horizontal) and discourage vigorous vegetative growth (generally the more vertical growth).

Fig 4. Formative pruning



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