

Taflen Wybodaeth Glasu / Glasu Information Sheet – Rhif 3 / No. 3 PLANNU A STANCIO / PLANTING AND STAKING

Choosing the best planting site

When you decide to plant a fruit tree, the likelihood is that it will remain in that position for many years. The productive life of an apple or plum tree is at least 50 years and could be twice that. A pear grafted onto seedling pear rootstock, the most vigorous of all the pear rootstocks, could crop for 200 years. Therefore great care should be taken in the choice of planting site.

These are the factors to consider:

1. Apples, pears and plums are all very hardy and their trunks and branches are rarely damaged by cold weather. Tough as they are, fruit trees will not thrive in waterlogged ground. Their roots need oxygen to operate successfully. This is in short supply in wet ground.
2. Fruit blossom is very delicate and sensitive to weather conditions. Frost can easily damage the blossom by rupturing the cells. Cold windy weather discourages the activity of pollinating insects. When pollination is poor, few fruits will develop.

Keeping these factors in mind will help you to choose a site. These are the ideal conditions for orchard planting:

1. Gently sloping ground running towards the south. This type of site will receive the maximum benefit from the sun's rays. Sloping ground is also less likely to have drainage problems.
2. Protected from prevailing winds by windbreaks, hedges or buildings. These structures will help reduce the cooling effect of the wind, making the site warmer.
3. Soil and subsoil of a reasonable depth to allow the penetration of the root system. A well anchored root system will prevent the trees blowing over or rocking loose.
4. Good air drainage through the site so that cold air can flow down and off the orchard. This reduces the risk of frost damage to the blossoms.

Evaluating your soil

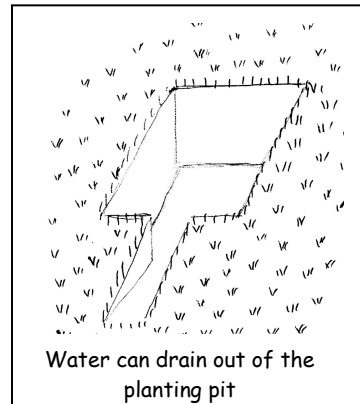
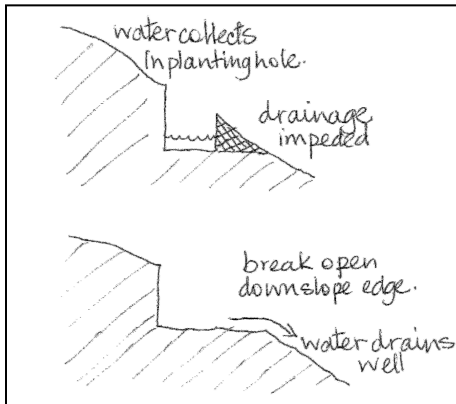
A good strategy for investigating the soil condition of a potential planting site is to dig a 'soil profile pit'. This is a hole similar to the holes you will dig for planting the trees, about 1 metre square and 75 cms deep. The hole should be left unfilled for at least a week. If this hole fills with water and it remains there all week, the site is probably too waterlogged for planting fruit trees.

If the site is a sloping one and the pit is waterlogged, there is a technique you can use to overcome the problem. When you excavate your planting pits, you should break open the down-slope edge with a narrow trench 10-15 cms wide. This will allow the water to flow out of the pit and downhill even after it is back-filled with soil.

As well as giving a good idea of the water movement in the soil, the soil profile pit also enables you to see the type of soil on the site. A very sandy soil doesn't hold nutrients very well. Trees on the most vigorous rootstocks will help to overcome this problem. Clay soils are very fertile soils. Provided that drainage is good, trees will grow vigorously on these soils. The ideal soil has a balance of both sand and clay particles and is called a loam.

(Immediately after excavating a soil profile pit, it is sensible to put a strong cover over the top to prevent people or animals falling in.)

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Before planting

The best time of year for planting both bare root and containerised trees is from the beginning of December to the end of March. The optimum period is the month of December. This is because the soil is likely to be warm from heat trapped in the autumn. Some root repair will take place if the soil is sufficiently warm. This is very valuable to the successful establishment of a tree because some root damage is inevitable whenever a tree is planted. From January to March, the soil will become increasingly colder and root establishment slower. Containerised trees are marketed as being available for planting 12 months of the year. However they transplant most successfully in the periods described above.

A bare rooted tree is at risk of the roots drying out all the time they are uncovered. Roots exposed to the air on a dry windy day can be severely damaged in minutes, therefore they must be kept covered and damp all the time they are out of the ground. If you receive a delivery of bare-rooted trees and are not ready to plant them immediately, they should be planted temporarily to keep the roots moist. This operation is known as 'heeling in'.

The best way of ensuring that the trees are transplanted with the minimum of stress to them is to prepare the planting holes in advance. Orchards were traditionally planted in rows with regular spacing between both trees and rows. This was for ease of maintenance by horse-drawn cultivation equipment and to give each tree the optimum amount of light and room for growth. Planting schemes which are grant-aided are likely to require you to follow traditional planting plans.

The distance apart depends on the eventual size of the mature tree. Trees on vigorous rootstocks (e.g. apples on MM111 and M25, pears on Seedling Pear and plums on Brompton) should be planted at least 10 metres apart. Semi-vigorous trees can be planted 5 metres apart. Mark out the site using string lines and pegs.

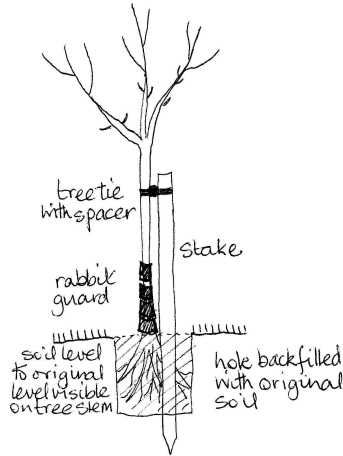
Excavating the planting hole

The hole needs to be able to accommodate the root system of the trees comfortably without cramping. Do not trim the roots off to fit the hole. Tree holes are best excavated using hand tools but on a large scheme machine excavation is an acceptable alternative. Do not use a post hole borer to dig tree holes. The sides of the hole can become smeared and compacted. This will make root penetration through the sides difficult.

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If excavating on grassland, first skim the turf off an area of 1 metre round the marker peg. Place the turf to one side of the hole. Next dig the soil out and place it on the other side of the hole. Excavate to a depth sufficient to allow the trees to sit at the same height as they did before purchase. This is usually visible as a change of colour on the lower stem of the tree. The point where the colour darkens represents the part previously below ground. When you have taken all the soil out, loosen the bottom of the pit with a garden fork. This will assist root penetration.

Staking



All newly planted fruit trees need to be staked. This enables the root system to establish and anchor the tree. Peeled, round, soft-wood, pressure treated stakes are ideal. The stake should be long enough to penetrate the bottom of the planting pit by 50 cms and to reach to just under the first branches of the tree's head. For example a standard tree with a 2 metre clear stem will need a stake 2.5 - 3 metres long. The stake should be placed on the windward side of the tree. This is so that the tree will be blown away from the stake rather than against it. This avoids damage from the tree rubbing against the stake.

Planting

Do not plant if the ground is frozen with frost or snow conditions. Ideally choose a day when it is not windy. Take the trees out to the planting site keeping their roots covered at all times. Plastic bags or wet sacking are ideal for this purpose. Take the tree out of its bag and try it in the hole to see if the roots fit comfortably. Hold a stake up to the tree to find the best position for siting them both. Then replace the tree into its bag and drive the stake into the ground until it is firm. The best piece of equipment for this is a 'drivall'. This is a heavy metal, cylindrical tube with one end sealed which fits over the stake. Handles at either side allow it to be used by one or two operatives. When driving stakes you should always wear a safety helmet.

Once the stake is in place, position the tree close to it, but without the trunk actually touching. Start to back fill over the roots using only the soil excavated from the hole. Do not put any fertilizer, rotted manure or tree planting compost into the hole. All these materials can have an adverse effect on the successful establishment of the tree. As the soil goes into the planting hole, lift the tree up and down a few times to shake the soil round its roots. When the root system is covered, tread the soil firmly into position using the heel of your boot. Next fit a plastic spiral rabbit guard around the bottom of the tree's stem. Other materials such as wire netting can be used as an alternative, but it is vital that the tree is protected immediately after planting. The next day will probably be too late! Then tie the tree to the stake using a purpose-made tree tie and spacer. Other fastenings can be used, but in all cases there should be a gap of at least one centimetre between the trunk of the tree and the stake.

After planting replace the turf grass side down round the base of the tree. This will help to suppress weed growth and act as a mulch. Extensive trials by the Forestry Commission have proved that the best way to establish a tree is to keep an area of about 1 metre square free from all other vegetation for about 5 years. This is more important than adding any fertilizers or compost to the planting hole.

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It is not necessary to water a newly planted fruit tree if it is planted between December and March. A mulch of well rotted manure, compost or a 'mulch mat' is useful placed round the base of the tree. This will help the soil remain moist during the first few months after planting.

Aftercare

If the spring following planting is dry and windy it might be necessary to water the roots of the trees. Check for signs of stress by looking at the newly emerging shoots. If they droop and wilt this is a sign of water shortage. When watering give several gallons to each tree. If the watering has been successful the drooping shoots should straighten out.

Check trees regularly for physical damage and signs of disease or pests. Tree ties can damage a tree as the trunk swells. Check trees, guards and ties at least at three monthly intervals. If the ties are very tight, loosen them. Replace any broken ones. Check for rabbit damage at the base of the trees and make sure that the guards are not biting into the swelling trunk. Never use a strimmer round the base of trees unless the strimmer is fitted with a tree guard.

Keep trees staked for about 5 years. Trees on dwarfing rootstocks (e.g. apples on M27, M26 and M9 and plums on Pixie) may need their stakes for their entire lives.