Things to look out for when planning an orchard

Once your trees are in the ground, they may be there for another century so careful planning now will really pay off! When looking at a patch of ground, whether it is on wild rolling hills or a more modest patch inside a housing estate, there are some key things we look out for to ensure the trees will thrive.

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Sun

Most fruit trees require 6-8 hours of sunlight for good growth and fruit ripening although as a general rule of thumb, cooking varieties require fewer hours. So, it's useful to know how much sun the site receives in the growing season and whether or not there are any shady spots.

Buildings and trees are the usual sources of shade. Having a map and compass with you will help you to determine where south is, and by being there at midday in the summer you can determine how sunny the sight is when the sun is at its highest point. Pre-planning using programmes like Google 'Sketch-up' can really pay off here. There are also simple sun compasses that can be printed and used. Try to identify useful microclimates, such as sunny vertical spaces for trained forms like fans.

*Remember - such microclimates in towns and cities offer the best chance for growing more tender fruits like peaches and apricots. Semi-shaded areas can be used for cooking fruit. Mark these areas out on your map before drawing on possible positions of trees. This will help you to remember good positioning on the day of planting which is likely to be up seven or eight months later.

Soil

The ideal soil for fruit trees is well-drained, un-compacted, loamy soil with a pH of 6 (slightly acidic). The best way to get an idea of what kind of soil is present is to take some random samples using a trowel or spade. Good soil should be easy to dig once the top layer of turf is removed. Simple soil tests can then be carried out for texture and acidity.

The key thing to remember is that most soils can be improved over time, and as the trees will be growing in the same spot for decades to come, we can improve this soil through ongoing additions of organic matter, namely in the form of mulch. In many urban situations in London, you'll find areas where builders or bomb rubble has been buried below a shallow layer of soil. Don't worry too much about this, you can remove some of it during planting, but less fussy rootstock like MM106 (semi-vigorous apple) may be able to deal with this, along with many of the stone fruits that like well-drained soils. Pears however, may not fare so well.

The more information you can get about the soil before the planting, the better idea you'll have of any specific improvements that'll need to be made in the future; this can form part of your group's overall strategy.

Soil depth

Ideally there should be at least 2ft of soil before you hit any solid substrate like rock, concrete foundations etc. Most of a tree's feeder roots will occur in the top 2 feet of soil. Trees planted in shallow soils may need staking permanently to stop them falling over in the wind, as will very dwarfing rootstocks. However, by selecting more vigorous rootstocks and hardy varieties, and be continued applications of organic matter as mulch, soil depth can be increased and success can be had. Creating raised mounds to plant into can be another way to deal with shallow and poor soils. Finally, there is always the option of planting into large containers so that the bulk of the root system remains above the soil.

Frost pockets and standing water

Ask people who know the site well if they can recall any areas that become flooded during the winter; those who have observed the site throughout the seasons for several or more years should have a good understanding. Most fruit trees do not like to be in for standing water for too long, so avoiding these areas is important. Frost pockets are areas where cold air can't escape, usually at the bottom of a slope where there is a wall or hedge. The cold air flows downhill and accumulates here and can't escape, meaning that they stay frosty long after other areas have thawed. This can damage fruit buds and these areas are best avoided. Those with good observation skills will know the areas which remain frosty or snow covered after the rest has thawed. Try to avoid planting in those spots.

Water source and collection

It is vital that the site has easy access to a water point. This is a key consideration as regular watering is crucial during the first few years of establishment and during times of drought thereafter. The local council or housing authority may be able to fit a new stand pipe and tap. Hoses going from neighbours outdoor and kitchen taps may also be an option, though access will have to be arranged and may be problematic when those people are away.

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Roof surfaces suitable for rainwater collection should be identified during the initial visit and the group encouraged to consider rainwater harvest; rain water is much better for the trees and the soil microorganisms vital to healthy tree growth (chlorine will damage mycorrhizas for example). The bigger water butt you can afford the better, as they soon run dry during warm periods.

Orchard Spacing and layout

The arrangement of the trees will largely be determined by the shape and features of the site, and will vary from site to site. Traditionally, orchards are planted in a grid formation, in rows of trees from North to South to maximise how much sun reaches each tree. Some open, sunny urban sites with good soil will allow for this (if indeed you desire this rather rigid, man-imposed order! Some prefer curves…). Others will be clusters of trees here and there where suitable ground allows (this is more typical of estates that have myriad pieces of grassy land scattered around).

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The most important thing is that each tree is positioned in a place that receives sufficient sun and soil depth, is well drained and is not too close to other trees or large shrubs. Spacing between fruit trees should be generous to allow for competition-free root and canopy growth. For MM106 trees we plant 5m apart, for M26 3.5-4m apart. This spacing then allows sufficient light to reach the ground so that guild species may then be planted in subsequent years if desired (herbs, soft fruit).

If planting close to an existing tree, the ultimate size of that tree must be considered i.e. a 4m tall oak is likely to grow much taller and wider, so planting 5m away is not likely to be sufficient. A certain level of prediction may be needed. If in doubt, always give more space than you think the tree will need.

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