INTRODUCTION

The term "top fruit", in horticulture, refers to apples and pears. Plums, damsons, etc are known as stone fruit. Top fruit production has been declining in recent years and wholesale prices can be poor. However, direct marketing through farm shops, pick-your-own (PYO) and farmers' markets does offer a significant niche for this crop. Direct marketing also allows more variety choices to be made by the grower.

In Wales, the season for top fruit production is mid-August to Christmas. The season can be extended to allow all year marketing through the use of storage techniques such as cold storage and controlled atmosphere.

An alternative to direct marketing is to tie-in with a supermarket supplier. This method can also offer reasonable prices and has the advantage of being suitable for large volumes. Growers must be aware that supermarkets are very demanding in their quality requirements. Produce has to be blemish free and grown to a high specification.

Further to these markets for primary produce, apples and pears offer many opportunities for adding value. For example, they can be used as fillings in home-made pies; as ingredients in puddings; for fresh juices; and, possibly, cider. These products can be produced on-farm and require varying levels of sophistication of equipment. Vigo offer a range of equipment for processing top fruit (info@vigoltd.com).

Orchards represent a fair commitment so much care is needed in their planning to ensure success over a lifespan of 12 or more years.

THE SITE

This has to be chosen with care. Ideally it should be less than 150m above sea level and should offer shelter, especially from prevailing winds. If there is no natural shelter, be prepared to plant shelter belts at the same time as the fruit. Avoid frost pockets where cold air drains down to low places, for example at the bottom of slopes.

Generally speaking pears are fussier than apples as they flower very early in the year (and so are vulnerable to frost damage) – flowering can be as early as the end of March in mild springs. It could be argued that pears are a marginal crop anywhere in the UK and this should be borne in mind.

THE SOIL

Ideally soils should be well drained with a texture no heavier than a clay loam. Some 450mm of usable depth helps. If drainage is slow consider installing a pipe system early on with stone to the surface.

Soil analyses are essential and should be conducted on two horizons: from 0-150 mm and 150-300mm. Parameters to assess include pH, phosphorus (P), potassium (K) and magnesium (Mg). If the pH is very low (under 5.5) then apply lime in two halves, ploughing after the first dose. Sub-soiling after liming will help mix in the lime and get it down into the soil.

VARIETIES

Markets for top fruit are conservative with the bulk of the UK demand being for Cox's Orange Pippin and the cooker Bramley. However, if juices or other value added products are envisaged then a range of varieties could be useful.

In damper areas (much of Wales!) go for more scab resistant varieties. Cox's are quite tricky with regard to site selection and offer little disease resistance. Red Falstaff is a useful disease resistant cultivar, as is Egremont Russet. It is sensible to do further evaluation of both the market demand and the local site characteristics before making a choice. Often a local variety can produce acceptable yields.

Cox's orange pippin

Currently, there is a lot of interest in more unusual varieties of apples, popular modern choices include Braeburn and Pink Lady.

For pears the main variety is the Conference pear, with Concord a useful new one.


Conference pear

ROOTSTOCK

Apples are seldom produced on their own roots: they are usually grafted onto a rootstock. These rootstocks confer characteristics to the tree in terms of size, precocity of cropping etc. The variety of the top, or scion, also has an influence on these characteristics, so the more vigorous the scion is the more dwarfing the rootstock needs to be.

Again the quality of the land will be an influence: the better the land the bigger the tree will get.

So, for example, a Bramley which is a vigorous triploid on good land will still produce a big tree on a dwarfing rootstock, such as M IX; whilst a weak variety such as Golden Delicious would produce a very small tree on a bigger rootstock such as MM106. Usually it makes sense to use as dwarfing a rootstock as possible as they produce fruit earlier. Use stronger rootstocks on marginal sites. M26 offers a good compromise.

Single variety orchards are rarely possible with pollinators needed at a ratio of one pollinator to every four crop trees. An arrangement with a local beekeeper is useful in April and May with at least 3 full hives per hectare.

Pears are usually grafted onto Quince C that is semi dwarfing.

Trees are available from specialist propagators such as Matthews enquiries@fpmatthews.co.uk or Adams Apples 01404 823185 and may have to be ordered to get more unusual choices.

PLANTING

This takes place from November to March in dry conditions. In small orchards planting can be done by hand - a two-person team being best. On a larger scale post augers or mini diggers can be used. It is important to plant at the nursery depth not deeper or scion rooting will take place and control of the tree can be lost.

SPACING

This depends on the type of tree to be grown. Modern orchards tend to be centre leader in which the tree is grown as a straight vertical trunk with cropping branches low down usually on dwarf rootstocks. These trees go in at 3m x 3m, standard trees go in 5m x 3m. Usually maiden trees are planted and the desired shape is achieved by pruning. Most trees need a stake at least 1m out of the ground for standards or 2m for centre leaders.

SYSTEM

In Wales, where conditions can be damp, a grass alleyway will keep the orchard drier with a herbicide strip or mulch under the trees. However, a drip irrigation system may also be helpful to preserve yield and quality in dry spells. Orchard mixes of grass are available which are dwarf, but do need some mowing.


Grass alley between rows

PEST, DISEASE AND WEED CONTROL

This is a complicated area and outwith the scope of this leaflet, professional advice should always be sought if you have a problem. Scab. powdery mildew and canker are the worst diseases whilst aphids, mites and caterpillars will attack fruit and leaves. An Integrated Pest Management system is needed to encourage beneficials whilst controlling disfiguring problems. Producing value added items provides an outlet to use up inferior produce.