

ORCHARD MANAGEMENT

CALU DEMO FARM REPORT

October 2010



Introduction

On 12th October 2010 CALU held a Farming Connect workshop at Tynyrhelyg, Llanrhystud on the topic of Orchard Management. This factsheet summarises the information presented on the day.

Tynyrhelyg is a smallholding of 10ha situated at 130m above sea level and is approx 4km inland from Cardigan Bay. There are two small orchards each containing a diverse range of apple varieties.

The workshop was led by Chris Creed & David Frost of ADAS. Both have extensive experience in orchard management, through working with commercial producers throughout the UK and from their own domestic production.



The day began with a theory session explaining from first principles how to grow apple trees and establish an orchard.

Chris Creed explained that apple trees need to grow in the sun, which means they need at least six hours of sunlight each day. He recommends that even on dwarfing rootstocks trees should be spaced at least 8-feet (2.5m) apart. It is also essential to provide trees with good drainage. Although apple trees tolerate a variety of soil types, they prefer sandy loam to sandy clay loam with a pH of about 6.5.

Almost all apples are grown as grafted scions on a commercial rootstock. The choice of rootstock controls the vigour of the tree. The easiest way to begin growing apples is to purchase either bare root or container grown trees from a reliable propagator between November and March.

In addition to fruit size, taste, and color, your nursery professional can recommend trees that are cold hardy, disease resistant and suited to your area. Purchasing disease resistant cultivars makes a generous cut in the apple tree maintenance time and cost. Dwarf and semi-dwarf rootstocks typically bear the same size fruit as standard size trees and, overall, are easier to manage.

Common Diseases

A brief overview of the most common diseases to affect apple trees was provided:

Canker affects most tree fruits, particularly apples and pears. It is caused by wind-borne fungal spores invading natural openings or wounds left by fallen leaf stalks and pruning. Sunken lesions appear on branches or main stems, surrounded by cracked or corky bark. If it surrounds the stem the branch will die.



Cronfa Amaethyddol Ewrop ar gyfer Datblygu
Gwledig; Ewrop yn Buddsoddi
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Treatment consists of pruning out and burning all affected branches. Small areas of infection on larger branches can have the affected wood scraped away with a sharp knife, removing all parings.

Wounds should be painted with a fungicidal paint. Canker is more likely on heavy soils where drainage is poor. Avoid crossed branches that rub - damaged bark facilitates entry of the fungus. The routine treatment where the disease is suspected is to spray with a systemic fungicide, but professional advice should be sought before using any chemical products.

Scab is a fungus disease of apple and pear trees, which can affect both the leaves, which form dark, rounded, dusty blotches, and the fruits develop scabby cracks and blisters, usually only skin-deep so that they can still be eaten if peeled. Some varieties, notably Cox's Orange Pippin, are more prone to scab than others. A systemic fungicide spray, applied fortnightly from bud-burst to blossom fall, is an effective preventative measure used in commercial orchards.



Bitter pit

Bitter pit causes spots on the fruits' skins. Underneath this are corky brown areas of flesh. Bitter pit is caused by a shortage of calcium: even though the soil may seem to have adequate calcium some trees are particularly poor at moving the calcium to the fruit. The treatment is foliar sprays containing liquid calcium.

After the short discussion inside, a tour of both orchards was led by Chris and David, the varieties looked at were:

Variety	Comment
Orchard 1	
Claygate Pearmain	On this tree it was seen that the fruit needed thinning as the tree was in danger of fruiting bi-annually.
Laxton Superb	This tree needed pruning, there were 3 Laxtons altogether, we discussed grafting another variety onto them.
Egremont Russet	Chris described the current management of this tree as amateurish pruning
Red Falstaff	Planted this year, Chris pruned it by cutting back the leader - that is the leading shoot or main stem.
Greensleeves	The fruit has signs of the condition known as bitter pit.

Orchard 2

Bramley Seedling

Golden Noble

Laxton Superb

Charles Ross

Howgate Wonder



Howgate Wonder



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Pruning

The topic of pruning was briefly discussed. A future CALU workshop will be covering the topic in more detail.

Pruning apple trees should, on the whole, be done in the winter. This will encourage the tree to grow more during the growing season. The first level of branches should begin between 60cm – 90cm above the surface of the soil. The lateral branches growing out of the central leader should be either weighted down or loosely tied down with string to promote outward growth as opposed to vertical growth.

Pruning apple trees during the summer will inhibit growth, and should be done once the desired size has been reached.

Thinning out the fruit is also important. The fruit grown by the tree is often too heavy for the branches. When this happens, the branches may break off. Apples should be removed until they are spaced about four to six inches apart. This will reduce the burden on the branch, as well as increase the chances for a full crop the following year (producing too heavy a crop has tendency to make trees bear fruit only every other year – biennial bearing).

Cider and Juice making

The initial process of making juice from apples is the same for cider as it is for apple juice.

Firstly the apples are “scratted”, which means minced up. They are then pressed to extract the juice. At this stage of the process, cider and apple juice are the same. If the required end product is apple juice, it would now be pasteurised, whereas cider is allowed to ferment. Fermentation usually takes place in used spirit barrels and continues until fermenting stops. This produces traditional still cider. The wild yeast on the fruit will ferment naturally, nothing has to be added.

Apple juice appears brown from oxidation, ascorbic acid (vitamin C) is added to make it clearer.



Apple press with apples after being ‘scratted’ ready for pressing



Pressing of the apples



Home made, bottled apple juice



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