

SKYE & LOCHALSH APPLES

A how to guide all about
apples made by locals for
locals!



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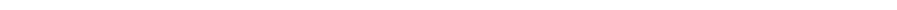
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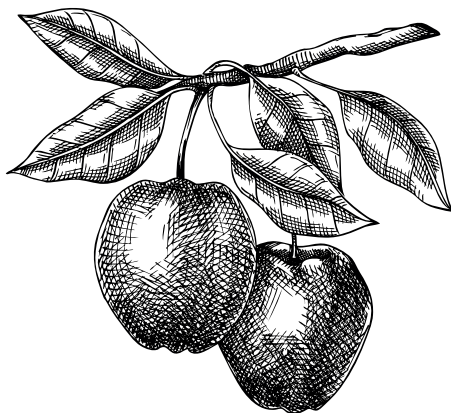


Apples

INTRO

This booklet has been designed to give you all the information you need to grow and enjoy apples here in Skye & Lochalsh.

There's information, recipes and space to write notes.



PESTS & DISEASES

SCAB



- Superficial blemish that is perfectly edible
- Airborne fungus
- Especially bad in areas of high humidity and poor airflow
- Many varieties are susceptible or near-immune
- Stressed trees more susceptible regardless of immunity

Prevention and Treatment for Scab

- Prevention is key – if you don't have it yet then keep it that way!
 - Only use resistant varieties or accept it will come. For eating, juicing or cooking there are no health issues.
 - Removal of all fruit and leaf litter at end of season
 - Ensure tree is healthy and well fed
 - Willow based woodchip has been proven to help prevent it
 - Chemical treatment (practically only for commercial operations and requires considerable effort)
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PESTS & DISEASES

CODLING MOTH



- A small nocturnal moth. Caterpillars feed for a few weeks inside fruit and then drop down to the ground or fissured bark to pupate.
- Look out for the 'sting' mark on apples, a dark sunken pock (right hand picture)
- Pictures are of the same apple – the majority of the damage is hidden. The feeding route oxidises and contains their frass. Can ruin whole apple (left hand picture)
- If fruit picked ripe, it has probably already left – it is quite unusual to find a caterpillar in a ripe apple.

Treatments for Codling

- Chemical treatment, requires considerable effort
 - Poultry – allowing hens in particular to scratch under trees throughout the year
 - Biological controls like nematodes may be available
 - Removal of all infected fruit ASAP. Destroy don't compost! Feed to pigs or poultry should be effective.
 - Regular thinning and checking
 - Highly biodiverse site full of bats, birds, predatory insects, parasitic wasps etc will keep in check.
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PESTS & DISEASES

FUNGAL CANKER

- A fungus that is airborne, waterborne and spread by insects and birds through contact. It is NOT the same as Bacterial canker that affects cherry and prunus species.
 - Recognisable by sunken, dark, withered buds or branches, often with an orangey hue.
 - More likely to infect wounds (including pruning cuts, poor branch unions, rubbing branches, cutting in by wire, wind damage, strimmer damage, loose or too tight guards and stakes, animal damage etc)
 - The biggest problem for apples on the West Coast. Almost all west coast orchards will experience canker.
 - Sometimes affects Pears, also Roses, Rowans and Whitebeams.
 - Exacerbated by high humidity and poor airflow, poor drainage and acidic soils. Very high or low nitrogen levels in soil can be problematic.
 - Once infected it can track down through tree
 - If left unchecked, it is almost always fatal, but can be over a very long time frame
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Prevention of Canker

- Prevention is key. Many varieties are resistant to canker, and some are very susceptible. Do your research!
- Familiarise yourself with what it looks like, and visit infected trees to see it in the flesh.
- Identify and remove cankerous material before pruning other trees. Perhaps wait a few days before working on healthy trees. Ensure high hygiene for tools, gloves, clothing.
- A healthy and well drained and well balanced soil will help prevent it.
- Good airflow around and through the tree helps, but not too much airflow! Those fully exposed to the strongest, saltiest winds will be stressed!
- A stressed tree (through animal browsing, wind exposure or wounded by tree guards, stakes or wire or rubbing branches) is much more susceptible.
- Do not over-prune or over-feed. Over-pruning leads to dozens of potential colonisation sites, it can also cause the tree to pulse into life with lots of whippy branches. Over-feeding will often cause lots of sappy growth that will need pruning too – a never ending cycle! See Pruning for more info.



An infected branch – note the small dark stain at the very bottom. Canker is still present and you will need to cut lower!

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Treatment of Canker

- Ruthlessly prune out at all times of year. On thinner branches cut at least three buds below wound and check for the tell-tail tracking of the canker by a dark round or oval just below the bark, it may be small! If present, cut lower and check again.
 - When on main trunk or hefty branches, look to prune or cut (chisel!) out and seal wound.
 - If the canker is widespread and throughout the central branches, you may have to accept it, and know that the tree will have a shorter life. They can continue to be fruitful and rally somewhat, but be mindful of being a host tree that will aide infection of your other trees and your neighbours.
 - Alternative for a large infection is to be ruthless and remove or coppice whole tree (you could re-graft).
 - Ensure tools are cleaned thoroughly between trees, and be mindful of gloves and clothing.
 - Burn all prunings.
 - Make a note of which varieties are susceptible and share the information!
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More Fungal Canker images
A typical infection of a bud. Note the growth beyond (left of wound) is still healthy and can mean the canker can grow undetected and hidden throughout the summer. Prune out at least three buds back towards the main trunk. Always assume it is tracking back to the trunk!

A typical sunken wound on a main branch. It can be subtle and hard to tell it is canker. Observation is key. Do consider examining your trees under torch light at night – it is remarkably effective at showing canker that is harder to see in the day!



Canker in a branch union. Good pruning should have seen that acute angle and bark rucking taken out before, it is now harbouring canker and likely all of the branches may have to go, perhaps including the one close behind.

POLLINATION AND FRUIT YIELDS

Is your variety self-fertile or self-sterile? Even self-fertile varieties would benefit from having additional pollen sources.

Diploids and Triploids?

The vast majority of apples and pears produce pollen but need another tree for pollination – these are diploid. Trees that don't produce much pollen yet need another for pollination are known as triploid. This is important to know if you only have two trees! Bramley is a famous triploid – it isn't great for pollinating others but needs others. If you just plant a Bramley and one other, you may not get much if any fruit on the other tree.

Species like Crabapples are often long-flowering species that can pollinate almost all others. As well as being a useful tree in itself, it's the pollination value that is important.

Ideally the pollinating trees should be less than 20m away.

Pollinators

The vast majority of apples are pollinated by the diptera – flies. Hoverflies are especially good at this. Honey bees get lots of attention and they are important pollinators, but unless there is a bee-hive close by it will likely be fly dominated or some of the many native hymenoptera (bees and wasps). An orchard should not need bee-hives to flourish, if you do not have sufficient wild pollinators then that should be a priority to address. Bumblebees are an obvious and very visible pollinator. They need habitat to nest in and sources of nectar throughout the spring.

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Managing for pollinators

Having a broad range of native trees, shrubs and tall herbs is vital for pollinating an orchard. This should be throughout the site and not just peripheral. Use of chemicals should be minimised, especially pesticides as the knock-on effects are huge. Surprisingly, trees can often be the best sources for pollen to help sustain early pollinators that fruit needs. Grey, Eared and Goat Willow are all excellent, with shrubs such as Bird Cherry, Hawthorn and Blackthorn adding to this.

Pollinators need homes, and while folk are aware of man-made structures for them, undisturbed natural habitats are the main source for the majority. A healthy soil is vital for overwintering larvae and pupae. Short cut or overgrazed grassland offers almost nothing for early pollinators.

Flowering Times

Trees are often lumped into different pollination groups so that flowering times align. This is a numbered or a lettered system depending on the country and supplier and is broadly consistent.

Some varieties have long flowering periods and some very short.

Weather at the time of flowering is vital – wet, windy and cold weather can see it failing on a large scale.

Biennial Fruiting and thinning

Some varieties are naturally biennial in their fruiting, with gluts in some years followed by lean years. Variety choice is important for this if you would rather have a more consistent annual crop. You can thin out biennial trees heavily, but to avoid buds being set, it would need to be done very early, before the fruit is bigger than a marble!

Thinning is a vital part of any fruit operation. Young trees in the first few years should have their fruit removed for best long-term health reasons. As trees get bigger, they can often lay on much too much fruit, which could lead to tree or branch failure through excessive weight. Thinning and pruning is vital here. Once they are older, fruit thinning is done to avoid overloading or exhausting the tree, also to allow individual fruit to flourish and get to full size.

PRUNING

The topic of pruning often brings out a nervous reaction in folk – it can be an overwhelming thought and 2D illustrations of single branches in books are a world away from 3D trees! For the west coast, focus first on health of the tree. Whole books are written on the topic but start with the basics!

The principles of regulated pruning

Given the marginality of growing fruit on the west coast, we must accept that traditional doctrine may have to be put aside, and perhaps we shouldn't be reaching for the secateurs, loppers or pruning saws as often as we do. Every cut should be justified. Pruning for health reasons should be the number one focus, with overall shape and fruitfulness secondary to this.

The absolute priority is for focussing on the three D's that applies to all good plant management. Removal of Dead, Diseased and Dying material. Though it must be caveated that in a more mature situation with an ancient orchard, it may be that the biodiversity and the habitat created by an old tree with lots of wounds is of more value than attempting to restore a tree to being fruitful.

(see Restorative Pruning).

All growth below the graft union or from the ground should be removed. This is not the same variety and will not produce the fruit you want!

Crossing branches should be removed to avoid rubbing and to promote good airflow.

Very long branches should be cut back if fruitful and kept strong. It can be hard in winter to imagine the effect of a heavy crop of apples on branches in late summer! It can cause branches to snap or trees to split or fail entirely! Keep the structure a little shorter and stronger.

Prune on a dry day and ideally when dry for a few days.

Is the variety a tip bearer or a spur bearer? Do your research – don't prune away your fruiting buds!

If tackling a large branch, reduce the weight of bigger branches first by cutting back in stages, to avoid tearing. Undercutting on bigger cuts will help minimise this too.

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Consider the surface area of the cut. A 90 degree cut across the branch will leave a smaller wound. Some advice suggests angled cuts to shed water, but do consider total surface area of open wounds.

Cut back tight to a bud, do not leave a stub behind that will rot.

Don't fight the rootstock!

See Rootstock page for more information, but it is important to know the rootstock is not the same as the grafted fruiting variety. Knowing the rootstock variety and its properties and variety is key to understanding how a tree is going to react to pruning, as is the time of year.

For example, an M25 rootstock (standard, vigorous) tree will always want to push on above 4m. There is little use in trying to keep it small and contained by pruning. The majority of apples you see for sale will be on MM106 which produced a tree that will want to be 3-4m. If you want a cordon, espalier or pot grown tree then consider something smaller like an M26 or M9, more vigorous varieties will be too hard to contain.

Some varieties are more vigorous than others too, regardless of the rootstock. A Bramley for example will always try and push on regardless of the rootstock, with lots of thick upright branches.

A bigger tree will be more fruitful, but it will take longer and you will have to consider use of a ladder or long-handled tools.

Do consider your fitness and ability in 15-20 years to work a much larger tree! This is why MM106 is often the go-to rootstock for a manageable size.

Tools

Tools should be kept sharp and clean. They should be sharpened little and often. It can be much harder to restore blunt tools and cuts will be imprecise and feature an element of crushing and tearing. A sharp tool creates a much cleaner cut that will

heal quicker. Always clean the tools between trees to ensure you do not spread fungal problems like canker.

Use the right tool for the job, and do not overextend them – if a job is too big for secateurs then use loppers, and beyond that a good saw. Use a long-pole saw or loppers for higher branches, and a ladder only when necessary. There are specific orchard ladders that taper, allowing for a more stable positioning.

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Types of Pruning

There are four main types of pruning – formative, regular summer, regular winter and restorative.

Formative Pruning

This is the pruning carried out in the early years to help shape the tree and provide a strong and permanent structure. The style and shape of the tree is up to you, but pick a style and try and be consistent – many go for a Bush form – with an open centre and a goblet like ring of strong branches. This promotes lots of light and air. Another popular form is the Standard approach, focussing on one main leading trunk which is the natural form of the tree (but is taller on the whole)

Other forms include step-overs, espaliers, fans, cordons, pyramids, spindlebush and more. Appropriate rootstock is vital here if these are your objectives.

Do you want livestock underneath or to be able to easily mow the grass? Do you want to stack production with fruit bushes underneath? This can be planned for in these first few years.

Regular Summer Pruning

Principally done in July and August to reduce congestion, promote good light and airflow. Water-shoots, which are strong upright branches should be targeted at this time. Branches cut in summer tend not to cause a strong response the next year. Cutting back of water-shoots can be to stubs of 3-4 buds. In some varieties these will turn to fruiting buds, maximising fruit. Espaliers and cordons are best shaped in summer for these reasons. Research each variety to see if spur or tip bearing, this makes a big difference.

Regular Winter Pruning

Carried out in the dormant season (usually November to March). Most structural work is carried out now. Justify every cut and do not cut for the sake of it. The buds you cut back to will typically respond very strongly in the next growing season so ensure that bud is pointing in the right direction. In most cases this is to an outward facing bud, to keep the branches fairly flat and the tree open but this depends on the shape and style. See regulated pruning above for the key principles. Research each variety to see if spur or tip bearing, this makes a big difference.

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Restorative Pruning

After many years of not being pruned, apple trees are often full of dead wood, crossing branches and have little light or airflow. Some maintain their fruitfulness but often they tend to get much smaller fruit that is often plagued by pests, diseases and cracking. It is a long game of at least 5 years to successfully restore a mature tree, and you have to approach it knowing it may fail. Is it worth attempting? Does the tree provide valuable habitat and have high biodiversity? It may be best left but this also harbours large numbers of pests and diseases for young trees. If you choose to remove a tree entirely, it is best practice not to plant into the same space. If the trunk is healthy you could consider cutting back and grafting on a new variety?

If you wish to attempt to restore it, the principle rule is that you shouldn't remove more than 25% of the weight of the branches each year. Too much can cause shock and allow fungal diseases in, and it will also promote lots of vigorous new growth, which will need managing the next year and count towards your 25%!

You must start with the principles of regulated pruning (see Regulated Pruning) to remove dead, diseased, dying, crossing, rubbing, rootstock suckers and then can focus on shape, size and angle of branches after that. For the long game, focussing on fruiting in a restorative prune may not be the best strategy, get the tree back to health and a nice open and airy structure first.

There are of course huge numbers of books and resources on pruning, but it is best learned from an expert when standing with a tree.

Let us know if you would like to see pruning courses in this area!

ROOTSTOCKS, GRAFTING AND VARIETIES OF APPLE

Rootstocks

Before selecting a tree species, or before managing one that is planted, it is vital to understand rootstocks and their importance. We have been commercially producing rootstocks for centuries – but why?

Rootstocks have been selectively bred for resistance to all range of pests and diseases, but importantly for hardiness, soil type and ultimate size. The rootstock is the part of the tree in the ground and that is grafted on to with a known variety of fruit.

All rootstocks are clones, they tend to be grown on a large scale and are cut as an annual crop from an existing tree stump, with just enough root to survive. They are then planted out for summer bud grafting (the majority) or whip-and-tongue late winter grafting (minority of commercial trees).

Having a rootstock of a known ultimate size, with heavy and early fruiting is especially useful in modern commercial settings, where machinery is used and economies of scale are vital.

There are hundreds of rootstocks used around the world, the majority in the UK are from either from the Malling or Merton research centres. The collaborations produced the M and MM series that dominate over 99% of UK apple trees.

Standard rootstocks

Ideal for trees that will eventually be grazed underneath. They are longer lived but slower to fruit and more of a challenge to fruit. They shouldn't require a stake if planted as a one year old tree. Many old orchards with sprawling trees are on vigorous standard rootstocks, such as M25.

Semi-dwarf or semi vigorous Rootstocks

The in-between trees that form the majority of community orchard and garden plantings. They usually grow to 3-4m and are relatively easy to manage and hardy trees. Characterised by famous rootstocks such as MM106, MM116 and M26

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Dwarf Rootstocks

These are often used for pot grown, fan, espalier or cordon trees. They are generally shorter-lived but much quicker and heavier fruiting for their size. They require support for their entire lives, using stakes or wires. They are also hungry trees that do not like competition. High maintenance but high reward! Most commercial operators use an M9 or M27 set-up and they are often only used for 15-20 years at most before being removed or re-grafted.

Grafting

There are many ways to graft trees, but the majority are either bud grafted or whip-and-tongue grafted. The principles are the same – you fuse some genetic material of the exact variety (a clone) onto a rootstock.

Bud Grafting

The majority of grafting for the home and commercial market is now bud grafting. Rootstocks are grown in the ground, and in July or August, a single bud is taken from a known variety of apple and it is surgically inserted into the rootstock just a few inches above the ground. It is then wrapped or covered and given a chance to heal and fuse. In late winter, if the bud has taken, the remainder of the rootstock above it is cut away and that bud is allowed to grow on, with all other buds being removed if they start to open. After one growing season the tree is ready to plant out, though some nurseries grow them on for another year or two to get bigger or to begin shaping. This requires 2 years of work per tree, but is quicker and is all done in-situ.

Whip-and-tongue Grafting

The classic grafting that most folk are aware of is the whip-and-tongue graft. Here a scion of one-year old thin branch wood is fused to a rootstock with very sharp and very clean knives in late winter. Generally the scion is just 2-3 buds and is not the very tip of the branch. It is usually done with an angled, smooth cut and aligned so that the cambium of the bark aligns for both parts. A notch is cut into the scion and rootstock and these can be locked together (the tongue) and it is then usually wrapped with a material to allow it to heal as quickly as possible. If successful then the tree is ready to plant the next winter, so only takes one year, but does require the grafting to be done quickly and in a limited time window. The grafting is done inside (it is also called bench grafting) and requires more labour and scion wood. Do let us know today if you would like to see grafting courses in the region.

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Can I take a cutting of a variety and grow it on its own roots?

Yes, you can grow a known variety on its own roots, but it is worth remembering that the fruiting variety has only been raised for its fruiting qualities, its rooting, growing and size are all unknown, so it may be a long game or a weak tree. The absence of a graft point is an advantage, as this is a source of weakness for the tree but it would take a lot of experimentation and trial and error.

Can I graft on to a pip grown tree or a wild crab apple?

Yes, they should all work, but again there is a lot of randomness of the end size and characteristics of the tree.

Can I not just grow from a pip?

Yes, all apple pips will grow and produce a tree. However, due to the randomness of their gene pool the chances of an apple coming true from its pip are incredibly small. You are likely to get a hybrid, and often they are very small and crab-apple like. The tree size will also be random, so it could be a very large tree and it could take 8-10 years to flower and fruit.

Many of our favourite varieties are wild grown from pips, but it takes an awful lot of pips to get one that is really exciting.

If you have the space and the time, it is worth doing and you may well create something special. The vast majority are very middle of the road and average!

How many apple varieties are there?

In the UK, over 2,500 varieties of apple have been recorded, with over 7,000 formally documented worldwide. Many more are of course not formally recorded. Hundreds have gone extinct, but there are national collections in corners of the UK, the largest being at Brogdale in Kent.

Cider, cooking and eating apples

Many of our apples have been specially raised for their properties in relation to cider making, juice making, cooking and eating. Flavour and texture were often prioritised as fruit didn't need to travel far or be stored. The characteristics we looked at before are not necessarily what we look at today, as we have the benefit of technology and chemical use. Most cider or cooking apples are not good eaters, so do think through what you will need them for.

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Heritage varieties vs modern varieties

Modern varieties are often bred to be stored and transported, and they are a consistent and reliable product that meet the strict grading of the supermarkets and wholesalers. Growing them is often dependent on high chemical and high input systems that are highly mechanised. Storage is in vast climate controlled hi-tech warehouses. Many of the heritage varieties have not been able to perform consistently in the modern world and so remain as museum pieces. It is important we keep these genes going though, especially if the apples are delicious! Many of the garden centre varieties of apples were cultivated in the early to mid 20th century for the commercial market but now are only maintained for this home market.

When selecting apples for your site, perhaps consider a mix of heritage and modern varieties? Do you want a large amount for juicing or processing at the same time, or do you want a drip-feed regular supply from August through winter of eaters and cookers? The first apples can be July with the last ones still on the trees in November. The majority are September and October.

Can I grow the varieties we see in the supermarkets?

It may be hard to find the scion material and in many cases the varieties are trade marked and you have to purchase a license for their use. Over 60% of our apples are grown overseas in very different climates and would not be well suited to growing in the UK – take the Pink Lady for example.

Are there any varieties that have been specifically bred for growing on the west coast of Scotland?

There are a few from Ayrshire and Galloway but we are not aware of any heritage varieties from the Highlands and Islands and there are few records, beyond the large estates, of apple growing. These larger estates often used the commercial varieties of the day, often from England.

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What characteristics should a west coast apple have?

High resistance to fungal canker is the priority. It is good to look to areas with high rainfall, high winds and often thin and acidic soils. Irish and Welsh apples may therefore be better suited than many Scottish heritage varieties, as the soil and climate of Fife and Angus is a world away from the west coast. Scandinavian apples, especially from coastal and fjordal Norway should definitely be considered. Varieties from other maritime climates should also be considered, the Pacific North-West or Tasmania for example. Neil Clapperton and Phil Knott are working on a list of species that seem particularly suitable to growing on the west, please let them know if you know of thriving varieties.

In truth, it seems the vast majority of apples out there will grow on the west coast if they have adequate shelter and a healthy soil. Whether they are long-lived and truly flourish is another question. If you have a heritage variety you particularly like, it may be worth taking a punt on it.

SOURCING, PLANTING AND MAINTAINING YOUR FRUIT TREES

Sourcing

Professional fruit tree nurseries will have an excellent overview of the varieties, rootstocks, pollination ability and timing, age and initial pruning. If selecting from a garden centre, be sure to ask lots of questions and do your own research on the rootstock and the variety, and be sure it fits in well with what you actually want from an apple and when. Will it need a pollinator? (See Pollination!).

The vast majority of fruit trees are grown in England, often on Dutch rootstocks. This shouldn't be a problem in the long term but it will still be a shock to a tree when exposed to the reality of our region! Do consider integrating Scottish varieties and supporting small Scottish businesses. Speak to one of the experts here today who will be able to help point you in the direction of local nurseries.

Bare-root or pot grown? When to plant?

Pot grown trees can be planted at any time, but it can be quite a stressful transition in the summer. All trees would be happier planted in the winter. Root growth begins many weeks before the buds and leaves break so good to get trees in the ground by the end of March for best results. The fine roots, once exposed for planting will get damaged or killed on a particularly frosty, sunny, dry or windy day so ensure they are only exposed for a tiny amount of time. Do not lay out bare-rooted trees while planting! A mild and damp day would be ideal.

Trees from a nursery or garden centre are often pot-grown and are usually more expensive. Bare-root trees have been lifted in winter and had the soil shaken off and have their roots wrapped in a material to minimise moisture loss. Trees are easy to transport in this format and greatly increases the range of trees available and lowers the cost. Living here in the Highlands it can be a stress with additional delays and extreme weather for plants by post or courier.

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The roots themselves must be protected from frost, so keep them covered and either plant them as soon as possible, or heel them in in a temporary location. Storage in a dark and damp shed may be fine – they should not be kept in water for more than 24 hours, damp (but not soaking) moss or hessian is fine though.

Planting

Site Selection and the importance of free-draining ground and shelter

Pick your site before ordering your trees and check the soil carefully. How sheltered is it? Fruit trees cannot contend with full exposure to salt-laden winds. Fruit trees benefit from a free-draining brown earth, do look at the vegetation in the ground before planting. Is it mossy or heathery? How wet is it? Fruit trees cannot cope in very acidic soils and will not be happy with a very wet site. Soil that is wet in winter but dry in summer may be fine. Fertility can be added and maintained but peaty or sopping wet ground is much harder to maintain. If your site does not have shelter, it would be prudent to get a shelterbelt established first. Trees take a long time to get away here in this region, so this has to be a priority. Fruit trees will barely grow or even die if fully exposed to the elements for years on end and they are unlikely to be fruitful. Not only for the blossom, but for moisture loss and shock from the leaves.

Digging the Hole

It is good practice to dig the hole and insert the stake first. Gardening doctrine would be to dig a large hole and incorporate a large amount of compost or well-rotted manure. Modern thinking is to dial back on the fertility at planting. It is best to dig a square hole with sharp corners, as our often compacted soil can cause tree roots to spiral around the edge of a round hole.

Corners ensure the roots push through.

Planting the tree

Ensure the tree is planted at the appropriate depth. There will be a clear collar with a different colour on the stem, usually an inch or so above the first roots. This is the line where the soil should sit after it settles. Carefully fill in the hole and ensure there are no air gaps around the roots. Lightly press down and water in very well.

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Labelling and mapping

Do not assume that the label provided will last for long in our climate. Be sure to make a note of the varieties and make a clear map that you keep safe. It may be worth photographing it and emailing it to yourself! Permanent labels or signs may be worthwhile. Scratch on aluminium or painted signs may work, ensure they are checked often.

Staking

Small and semi-dwarf rootstock trees have limited roots and are grown with support in mind. If growing on an M9 and M26 rootstock for example the tree will always need a stake for its entire life. Best to plant it with a long-life stake that will be strong enough to support it for at least 20 years as taking out and driving in a new stake next to an established tree can cause significant root damage. Pot grown trees that are more than a year old will have very limited roots in relation to the shoot and likely need a stake. The larger rootstocks like MM106, MM116 and M25 have excellent roots and exposing to wind early on is a good way of ensuring they use their roots to stabilise. They shouldn't need a stake beyond perhaps an initial one for a few years. They can quickly come dependent on the stake so lowering the tie progressively may be one way of weaning them off.

For a larger rootstock in our windy climate, it may be best to plant without a stake and just plant a younger tree and allow it develop at its own pace.

Wind will always be an issue here, so accepting a smaller tree that is to be permanently staked may be the best if particularly exposed, but do see Shelter below.

Damage from rubbing and bashing in strong wind can cause significant wounds that allow canker and other problems to establish, so if committing to a stake do it properly and check it regularly.

Protection from browsing and damage

Apple trees in particular are very tasty for browsing animals. From tiny voles to Red Deer, apple trees will definitely be targeted. Livestock especially go for the bark too. Guards themselves can cause damage to trees in the high wind so ensure if using a guard you are checking it regularly, weeding in it and removing it when it is no longer needed.

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Voles, Rabbits and Hares

If growing in anything other than short grass, then voles can be your major enemy for the first 2-3 years. Using the longer vegetation as cover, they love to girdle the bark at a few inches above the ground. Even if they don't completely ringbark it they will significantly weaken it. Vole guards are little plastic tubes that keep them off. If you have a large population of rabbits or hares then they too can.

Roe and Red Deer

Deer love fruit trees. It can be very hard to establish fruit trees in the presence of a high number deer, and full protection will be needed. In the case of Red Deer, it is worth protecting the tree up to 6ft. Not only do they browse the branches, they snap them, girdle the bark and love to rub their antlers on them too.

Planting fruit trees without full protection in a high deer zone is not recommended. Consider an area of deer fencing for best results.

Livestock

Full protection will be needed until the trees are mature. Bark and branches are not safe, and rubbing animals can cause trees to fail. Consider 'cactus' guards if planning to integrate livestock from an early age with your trees. If you wish to have livestock under fruit trees, then best to use a standard rootstock for your tree like an M25. It will need to be pruned to a standard so that the lower branches don't start until 3-4ft at least. You will likely need a ladder to harvest or wait for fruit to drop.

Poultry

Even poultry can peel bark and cause damage. Consider protecting for the first few years if integrating, especially with geese!

Mulching

Mulching can be with natural or man-made materials.

There are three main benefits for mulching:

- 1) Moisture retention. Providing the mulch was laid over damp ground, it can help alleviate any water stresses in dry spells.
- 2) Weed suppression. Especially in the early years, or with dwarfing rootstocks throughout their lives, weeding makes a big difference. A good mulch should stop most weeds or certainly make weeding easier. Strimmers cause lots of damage to young trees, mulching will mean it is not necessary and clear to see the trunk.

Apples

3) Fertilising and soil building. If a natural material, the slow decomposition will feed the soil. Some mulches are richer than others, and here on the west coast we are lucky to have a plentiful supply of seaweed, wool and bracken to name a few. Even straw, hay or hardwood woodchip are effective. Man made materials can be very effective, including plastic or biodegradable membrane, cardboard or carpet but please be mindful of microplastics and fibres into the soil.

Aftercare

The first few years require a little more care, especially in relation to weeding and observation. Some water stress is good for root development but watering may be needed in prolonged dry spells. Observation, little and often, is the key to success. Fruit trees are not something that should be planted and ignored!

Feeding

If growth is slow or the leaves are yellowish or otherwise discoloured then it may need some feeding. You would want to see the tree putting on steady growth each year with broad, deep green leaves. Gardening doctrine will often encourage feeding throughout, often with rich well-rotted manure, bonemeal, fishmeal and artificial fertilisers. It is a trade off though – an overfed tree can have excesses of lush growth but this isn't always desirable, and it will invariably be pruned off. A slower grown tree, in keeping with its surroundings may be healthier in the long run. Modern apple varieties and rootstocks often fruit heavily regardless and require thinning, so additional feeding may not be needed for this either.

Seaweed as a mulch and reduced into a compost tea seems to have almost all of the trace elements that trees need. Make use of this free resource!

Apples

VARIETIES



Bottom Left – Scrumptious (Drumfearn)

Top Left – Clockwise from top: Saturn, James Grieve, Hereford Russet,
Greensleeve (Broadford)

Top Right – Hood's Supreme (Drumfearn)

Bottom Right – Clockwise from far left: Scrumptious, Bramley,
Arthur Turner,
Katy, Keswick Codlin, Irish Peach and Discovery (Drumfearn)

Apples

NOTES & JOURNALING

Apples

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Apples

RECIPES

Apple and mint jelly

Use any apples, small and sharp ones are best, you can even use ornamental quince for this.

Mint sprigs (or experiment with pine, rosemary, chillies even!)

sliced lemon (1 per kg of fruit is fine)

water

Sugar (granulated)

Weigh your apples, if you have 1 kilo of apples you need 1 litre of water.

Roughly chop your apples, no need to peel or core.

Add your chopped apples and a good sprig of mint to a heavy based pan along with the water and lemon slices

simmer on high for about half an hour and allow to cool.

Pour the mixture into a muslin cloth (I use it tied to the legs of an upside down stool) with a bowl ready underneath. Allow the liquid to drain naturally into the bowl. Leave it overnight and don't be tempted to push it through or your jelly will not be clear.

Weight the liquid, you will need about 3/4 of this weight in sugar. There is plenty of pectin in apples so granulated sugar is fine. Bring the liquid and sugar to the boil, stirring continuously and keep it boiling for about 10 minutes. 105c is the temp to get to if you have a thermometer, if not, do the wrinkle test (spoon a blob onto a cold plate, and see if it wrinkles when you push it with your finger). Scoop off any scum and pour into warmed, sterilised jars (never pour into cold jars as they will crack). Use a skewer or cocktail stick to tease out any bubbles and seal immediately. Voila, beautiful, jewel like jelly perfect for gifts or treating yourself!

Apples

RECIPES

Mulled Cider or Mulled Apple Juice.

Per litre of Cider or Apple juice:

1 Star anise,

2 cloves

1 bay leaf

1 cinnamon stick

small chunk ginger

3/4 slices dried lemon/orange.

1 tablespoon demerara sugar or honey to taste.

Heat up the ingredients in a slow cooker on low, or a pan on low, keep just below a simmer for a good 40 minutes or so allowing the spices to infuse. Stir in sugar or honey to taste.

Serve with a ladle into a big mug making sure not to drop any of the chunks into your mug.

Try mixing a little cranberry juice in for a festive coloured, warming drink. If you don't like a particular spice, leave it out.

Apples

RECIPES

Dried Apple Rings

Wash and core your apples.

Slice them into rings approximately the thickness of a £1 coin.

Toss gently in lemon juice.

Dehydrate completely, they will be slightly rubbery in texture. You can do this by threading them onto a thin pole (like bamboo) and hanging above a radiator, or if you have a dehydrator set it to 45 degrees C, or place flat on a tray in an oven on its lowest setting with the door slightly ajar.

The length of time will depend on the humidity of your house, but it's likely to be around 12 hours. Once totally dry they are ready to eat and will keep in an airtight container for a few weeks, although they are unlikely to last that long! (Top tip for new parents, if you keep these in the freezer they make great teething rings to gnaw and suck on!)

Apples

RECIPES

Winter warmer: apple and leek soup.

4 large apples (peeled and cored)

1 celery stick

2 medium potatoes

1 medium sized leek

1 cup apple juice or water

1 stock cube (optional)

1 bay leaf

mulled wine spices

large slice of orange or lemon

This will feed between 2-3 people generously, especially if you have chunky bread with it.

It's perfectly fine to use fruit and veg that is slightly wrinkly.

Chop the apples and veg up. The smaller you chop it the quicker it will cook. Put in a pan or slow cooker with a cup of apple juice or water and the rest of the ingredients. If you don't have the spices a great alternative is a spiced tea bag such as Ginger tea (this also contains cinnamon and cloves). However, it will still be delicious without any spices at all.

When all the ingredients are soft, it's ready to go. Don't forget to remove the slice of orange, bay leaf, cloves/tea bag.

You can blitz it for a smooth soup, leave it chunky, or mash it a bit for a halfway house type soup. If you prefer a thinner soup simply add more juice/water.

Garnish with a swirl of cream/cheese/fresh thyme - whatever you like!

Apples

RECIPES

Apple Sauce

3-4 large bramley apples - peeled and cored (you can use any but this works particularly well with bramleys)

Zest of 1 lemon

1/2 cup of water

1/4 cup demerara sugar

1 finger of butter.

Chop your apples into small chunks and put in a pan with the lemon zest and water. If you like a tart sauce you can add the juice of the lemon too.

Simmer gently for about 20 minutes or until the apples have gone nice and smooshy.

Stir in the sugar until it has all dissolved. (You don't have to use demerara, I like it because it has a caramel taste, caster sugar would dissolve quicker and give you a lighter coloured sauce).

Stir the butter in fully.

Taste as you go. If you want to use the sauce in a sweet pastry treat you may want more sugar, or you may prefer less if it's for accompanying meat. This is such an easy and versatile recipe!

You can eat this straight away, or spoon into warmed, sterilised, jars and sealed immediately. It will keep like this in the fridge for a few weeks. It also freezes very well but if using freezer bags be sure to allow it to cool completely before filling the bags.

Apples

Apples

Apples

OUR TEAM

PHIL KNOTT
philknott@hotmail.com

EMMA BENNETT-WEST

NEIL CLAPPERTON

COLIN PARSONS

GENERAL EMAIL ENQUIRIES
CAN BE SENT TO

waste@broadfordandstrath.org.uk

SKYE & LOCHALSH APPLES

THIS WAS FUNDED BY

