

## **Orchard Grazing Extrats from Nibblers online discussion group July 2006**

Dear all.

An enquiry from someone who is establishing a traditionally managed orchard with sheep grazing...

We are attempting to establish a "traditional" orchard with standard trees in Hertfordshire and want to graze it with sheep. Despite elaborate wire protection around the trees our current small flock of Shetlands seem determined to nibble at the branches and the trunks. There's plenty of grass but they seem to think this is a last resort!

Have you any suggestions for alternative varieties that may be a) too small and b) actually prefer grass to trees.

Any suggestions will be passed on - many thanks.

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Probably not Swaledales; yesterday I went back to visit a heathland grazing project I started 2 and a half years ago and all the birch had clean stems up to 3'6".

Henry Campbell-Ricketts

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Apple trees are much tastier to mammals than conifers - certainly rabbits love apple bark - so, even with Shropshire sheep, there could be problems when grazing in an orchard. I would have thought the only real solution is probably better tree protection.

Chris Britt  
ADAS

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Yes I agree with Chris ,stronger tree guards

Simon Berry (Devon WT)

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I sent some of the correspondence regarding sheep in orchards to my father who is trying to establish traditional orchards in Suffolk and is actively involved in the East of England Apples and Orchards Project ([www.applesandorchards.org.uk](http://www.applesandorchards.org.uk)). He has sent this information for circulation. My mother keeps sheep, some of which graze in the orchards.

Helen Read  
Burnham Beeches

These are my thoughts and experiences, with some input from some other EEAOP members:

1 All sheep eat apples, damsons and plums, and some cultivars are tastier than others - some seem to actively dislike pears until the grass is in short supply. Hazel/cob leaves are especially liked, although even small coppice stems of hazel is not regularly bark stripped. Walnuts are left to the last. Cherry leaves are really liked... but old cherry trees seem to be rarely bark stripped. We have several myrobalan varieties, *Prunus cerasifera*, cherry plums, with trunks only 20cm in diameter on their own roots that are never touched.

2 Apples and plum trees up to a foot in diameter are bark stripped, especially in winter, but any bit of peeling bark will be given great attention at any time. (Sheep are curious and will chew the plastic pipe straps used to hold tree protectors to posts).

3 Even in old orchards where the trees are unprotected sheep were considered the only "relatively safe" grazing animal, and even there some trees were occasionally lost by bark stripping. Sheep were not grazed in winter - the risk was too great - nor when spraying took place (orchards were not the healthiest places in the late 19th/early 20th century!). In Rummors Orchard, nr Wisbech in Cambridgeshire (with some of the biggest trees in the area, all apples, mostly Bramleys), where grazing has been reinstated in summer in the last few years, some trees have been targeted, and even with this age of tree you cannot simply push the sheep in and walk away.

4 Some breeds can reach higher than others. Icelandics can put their feet on the top of a 1.1m post and reach another 20cm. I would expect most primitives to be equally active and reach these sort of heights. They need to be treated like roe deer which also eat orchard trees especially the young bark in winter. Our Ryelands rarely lift their front legs off the ground, but can do, using wire netting to reach higher. Most downland breeds are less of a risk than primitives. Remember that primitives were probably never given the run of orchards - they came from different parts of the country. The taller meat breeds like Leicester and Suffolk can reach to 1.2m without effort.

5 All breeds rub on rough posts used to support tree protectors, and some posts will inevitably be snapped off - once that happens you can forget that tree! Rams are a greater risk as they like rubbing even more than ewes (and occasionally take a dislike to a tree and "ram" it til it gives up - then they eat it!

6 If a sheep can't see (or smell) the tree it is less likely to be targeted. Thus 1.2m Tubex treeguards supported by a peeled-and-pointed (or machine-round-pointed, MRP) 2" x 5'6" (50mm x 1.70m) is my preference for downland sheep and 1.5m Tubex for bigger beasts. I have also used 1.5m open mesh tubes (made by Acorn) which are cheaper than Tubex, but the sheep can see the leaves and do worry the trees more. Also some leaves and shoots pass thru' the 1cm mesh and get eaten. Acorn also make clear plastic infilled mesh tubes which I think would be better. (I used the mesh tubes to allow light into the tube as I think that the opaque/translucent Tubex produce slower growth).

7 Planting and pruning when using this sort of protection will be completely different

from all the recommended fruit tree methods. On planting directly into a tall tube the trees will be pruned of all side shoots. When they reach beyond the tube they can be topped about 30cm above and will then produce a branching head, and until then all side shoots are removed. This will slow down the girth growth, and the first fruit production will take at least a year longer to be reached. We do not stake the tree within the tube. (We do not subsequently prune to make the traditional open centred fruit tree, largely to reduce the burden on us of regular pruning which has to be kept going to reduce the increased vigorous growth caused by the pruning, but also because we aren't producing fruit as a commercial crop and are more interested in making graft and bud wood available from our many cultivars).

8 Planting directly into grass will slow growth down. We clear the ground around the new tree in a 1m radius (with glyphosate). We do not normally mulch as the sheep dislodge, or eat, any mulch material, altho' expensive felt discs can work quite well, and we water in the first year only (and only when necessary). A recent experiment has been to plant the tree into the tube as a bench-grafted rootstock only about 20cm high in February. Initial results look interesting.

9 Rootstock is important. In general, you can't buy trees from the local garden centre and expect to get a standard tree orchard that can be grazed. Apples should be on MM111 (good on poor soils, like ours), M2 or M25, plums on St Julien A (the "smallest" plum rootstock for large trees), Brompton (better) or Mariana, pears on "wild pear", never Quince A, cherries on F12/1. (If you are hoping for a grant from defra under HLS be warned that they like to decide what rootstock, and may be more restrictive, currently they only "recognize" M25, Brompton and F12/1). Trees need to be ordered well in advance, probably 18 months ahead, from specialist nurseries like Keeper's or Deacon's (or you can graft your own!). Garden apples are usually on MM106 (or smaller rootstocks, like M9, M26 or M27) and these are unsuitable for tall standards grown in grass, although MM106 may be suitable for large half-standards on rich soils without grass cover).

10 Not all cultivars will make vigorous enough large trees to be unprotected in a grazed orchards, however long it takes. Even on vigorous rootstocks some varieties will always need to be surrounded by post and rail (Cox's Orange Pippin is a good example). We could advise on the biggest varieties.

11 When trees are bigger they will still need protection. Post and rail in a small square or triangle, with sheep netting is expensive and time consuming to make but its the only system that can be relied on. In the Herts WT Tewin Orchard in Herts the 70 year old low branched Bramley and Monarch apples have a 2.5m square enclosure round each one. A single stemmed standard will need a 1.5m triangle 1.5m high. (Those nice metal tree protectors used in parkland can cost a great deal of money, and anyway some are too high to pick over!).

12 Each summer, probably best in late July, the orchard will need to be topped to control the nettles and thistles. The greatest diversity and ground flora interest is usually in early spring. Orchards were also intentionally planted with some flowers, snowdrops, daffodils and several violet species are common. Here in Suffolk farm orchards also have *Ornithogalum umbellatum* (Star of Bethlehem) and *O. nutans* (Drooping Star of Bethlehem, called round here Ghost Flower).

I think that there are some widespread misconceptions about traditional sheep grazed orchards. They were not UK wide. Cambridge/fen edge apple orchards do not ever seem to have been grazed, many of their oldest orchards have massive half-standards, branching just above the ground and with their wide and long branches pulled down and arched over, some almost to the ground. There the term "standard" is used to mean any tree large enough to use a ladder to pick - not trees on single upright branching over 1.2m above the ground, to which it refers elsewhere in England. Also damson orchards were never or rarely grazed - the trees are usually on their own roots, i.e. not grafted, are low and rarely make large trunks and so easily stripped.

Orchards were not, as far as I am aware, traditionally planted with young wips or maidens, and then immediately grazed as young trees (although we may do this - we are doing this - to recreate this traditional landscape form now).

There were several routes to the "English grass orchard", as some writers called it.

One was to plant the trees very closely on large rootstocks (the seedling rootstocks used for orchards until the mid 20th C, and then when the tree canopies touched intermediate trees were removed to leave more widely spaced trees. In the "institutional" orchard at Girton College (for the kitchens to feed the staff and students) this was about 20 years after the original planting. The Seabrook reference (see below) describes the quincunx system and its many variations. Land between the trees was initially often given an annual plough with a special shallow plough share.

A second common method was to plant with wide lanes between more closely planted trees and crop the lanes with soft fruit (strawberries or blackcurrants for example) or even cereals or vegetables, until the trees were big enough to reduce the "intercrop". Then the orchard was grassed down (termed "letting down to grass") and even later some of the trees removed from the rows. (Intercropped orchards can still be seen in Eastern Europe, especially Hungary, Slovakia and the Czech Republic, or where it has been reconstructed at Skansen in Stockholm).

In every case the grassing down, and subsequent sheep grazing came later, after the intermediates were removed (and there needed to be some careful planning to leave the pollinator trees as well as the main crop trees especially for self sterile plums and cherries), or the intercropping ceased.

Clearly not all orchards went through this process, and perhaps the small farm house orchards that were almost universal near every single farm throughout England (look at any 19C tithe map, to see them) were planted in a single process.

Many orchards sites were, or are, of great longevity although the individual trees themselves did not live to a great age. Individual trees were replaced regularly (not always with the same species, to avoid disease, and often not in exactly the same place, resulting in shaky lines after a century or so) and these new small trees needed protection from the gazing animals. Modern plastic tubes were not available and several methods are described or illustrated in the literature - the post and rail

square or triangle, without modern sheep netting, but with closer rails, close-woven hazel or willow hurdles, and in the 19C pailing, made of split wooden stakes, often chestnut, held by two wire lines. These last, chestnut pailing was also widely used to protect older trees from bark stripping by being wrapped directly round the tree's trunk with no other support. We have not tried this yet.

Pigs in orchards are another matter with which we have no experience, but we know of orchards where pigs are fed on the windfalls. They too strip bark and are probably better than sheep at this. If pigs are left too long in an orchard the ground is turned up and results in such uneven ground levels that sometimes no vehicle can be used to cut or top the grass.

The greatest risk to old orchards are horses. A horse can strip the bark from the largest apple tree in a single day, and across England many magnificent old orchards are being destroyed completely by becoming pony paddocks. To see this just drive down the M20 in Kent.

Many old books on gardening carry instructions for planting country house orchards, but few describe the traditional grazed commercial orchard, or the farmhouse orchard. The most complete are: Hoare, A. H., *The English Grass Orchard*, Ernest Benn, London 1928, Seabrook, W. P., *Modern Fruit Growing*, Ernest Benn, London, 1st ed 1918, to 8th ed 1947 (which also describes the first bush apple orchards on the early dwarfing Paradise rootstocks).

Paul Read  
Home Farm,  
Thrandeston, Suffolk.

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Fascinating stuff from Paul Read -- can you thank him please Helen.

For what it's worth, cattle might be an option in some orchards of larger trees.

We haven't grazed orchards, but there are lots of crabs on the Forest, and these must surely be similar. Also Amelanchier, sloe & the like.

Cattle don't eat apple bark much if at all, even when hungry in winter (ours prefer our neighbours' gardens...). They do eat apple leaves in summer, and probably smaller twigs in spring. Some of our British Whites can reach to about 2 metres, and some will pull down thinner trunks to get at leaves, so you'd need trunks of 15 cm plus at head height to be safe -- I guess taller than most orchards. They will also scratch on posts and trunks, and especially where a low branch gets that awkward bit between the shoulders.

They'll readily eat fruit, and I don't think would do themselves much good if they had access to windfalls.

Dexters can of course not reach nearly so high, and I'm sure would have similar tastes to ours. A use for Dexters!

Horses eat bark much more readily, especially on horizontal and diagonal branches

and exposed roots -- and of course the leaves and fruits. Even quite a small pony can reach to nearly 2 metres -- only our largest cattle can reach above the (c 13 hh) New Forest ponies' browse line. Some horses will only eat bark when hungry, but others do it just for fun or from boredom.

Richard Collingridge

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Paul

Fascinating stuff. One comment - why use expensive felt disks for mulch when you could be using the worst of your sheep fleeces (felted ones which are worthless otherwise)

Cathy Wainwright (BCNP WT)

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