

Implications of Organic Farming on Hefting in Southern England

This case study demonstrates the implications of organic farming on hefting in Dartmoor. This farm on the southern side of Dartmoor has been in organic production since 1997.

The home farm includes 100ha (247acres) of in-bye land with the 347ha (857 acres) Buckfastleigh Moor, which is owned by the farmer but also grazed by other commoners. They also farm further land at Huntingdon Warren under a tenancy agreement, comprising 150ha (370 acres) of rough grazing and 16ha (40 acres) of enclosed semi-improved permanent pasture along with grazing on some 100ha (250acres) of Dartmoor Forest. The farmstead lies at 250m above sea level whilst the hill grazing rises to 515m. Much of the land is steep and rocky and, as with most of Dartmoor, characterised by exposed granite. The soil tends to be acidic and on the in-bye ground regular attention must be given to maintaining pH levels. Rainfall averages 80 inches a year.



Huntingdon Warren

A total of 490 breeding ewes are kept, along with 200 cattle including 6 multiple suckler cows and their offspring and 140 replacement dairy heifers. Until 2004 an organic Ayresshire dairy herd was kept but the increasing cost of organic feed and poor milk value at the time led to the herd being sold. Replacement heifers are now contract reared for the herd's new owner. Lambs and calves are all reared on the farm and finished to produce organic

beef and lamb sold as packed meat. There are also free range laying hens and miniature Shetland ponies on the farm, which are mainly managed by the children.

The land is all registered as organic with the Soil Association. This includes areas of common grazing despite these being grazed by non-organic stock. This mainly occurs on Buckfastleigh Common where the farmer is the landowner and can at least ensure that no herbicide is used. The moorland grazing at Huntingdon Warren and on the Forest is not actually shared grazing, although it runs unfenced alongside other grazing areas, any other livestock that may graze there do so unofficially.

The 100ha on Dartmoor Forest is particularly unlikely to attract wandering stock because it is very wet and dominated by Purple Moor Grass (*Molinia*). On this area a Purple Moor Grass supplement is paid to secure summer grazing by cattle. As a result, in 2007 a group of 27 young cattle were turned out onto the Dartmoor Forest grazing, alongside 80 ewes. They had to be visited and fed daily to encourage them to remain on their lea. They were given organic concentrate and an organic molassed mineral lick, which was very expensive, to encourage them to remain on this otherwise unattractive area. To date, there has been little impact on the Purple Moor Grass. Prior to turning out the cattle the Forest grazing would have been visited once or twice a week in summer. In winter there remain only a small group of very hardy sheep and they are visited only once every three or four weeks.

From the farmstead to the moor gate is around a mile. That is also the edge of Buckfastleigh Moor. From there to the top of the Dartmoor Forest lea is another three miles, measured in a straight line on the map, and a rise of 185m in height.

Although all the land falls within the Dartmoor ESA (Environmentally Sensitive Area), it was not possible to make an ESA agreement work for this farm because the requirements were incompatible with an organic system. For example, the ESA required weed problems in long term leys to be dealt with by herbicide rather than re-seeding; a measure not applicable to organic management. There are ESA agreements in place for Buckfastleigh Common and Dartmoor Forest, which are joint agreements with other commoners. An application for HLS (Higher Level Stewardship) on the farm was submitted but was turned down.

On Huntingdon Warren, a place of high ecological, historic and landscape value, there is a private shepherding agreement in place with Dartmoor National Park. This aims to avoid overgrazing or undergrazing the land and there are annual meetings to discuss stocking levels and the condition of the sward. Although not encouraged, limited supplementary feeding is accepted in times of severe weather. It is felt that this agreement is generally practical and reasonable and is working well.

On Buckfastleigh Moor, with ESA funding, bracken control has been carried out over the past three years using a barred roller behind a quad bike. Carried

out twice a year, this crushes the bracken when it is young and succulent, causing it to bleed. The farmer believes the work is proving very effective and although there is still a covering of bracken it is much lighter and interspersed with grass. There are also plans to reduce the quantity of European gorse, especially near the moor gate. Although some is useful for shelter and shade it is increasing and lambs often get lost in it during gathering. The farmer believes that the smaller, Western gorse actually causes more problems. Because it is low and interspersed with the grass, heather and whortleberry they graze the sheep prick their lips on it, which aids the transmission of the orf virus. The ESA payment rate for bracken control is thought to be very low at £14 an hour. This has to cover a man's time, fuel and wear and tear on a quad bike, which on such rough ground is likely to be considerable. However, the area based rate for gorse control is felt to be more generous.

Sheep are managed in three main flocks: A flock of 110 mules at the home farm, and two flocks of Scotch Black Face: 180 on Buckfastleigh Moor and 200 at Huntingdon Warren.

Buckfastleigh Moor grazing is shared with just one neighbour in winter, who turns out around 120 ewes. In summer there would be two further flocks of around 200 and 100 each. Between June and September there are also cattle from 3 different herds totalling around 40 head. However, the cattle numbers are sometimes virtually doubled due to strays wandering in. The farmer visits this moor every other day in summer and once or twice a week in winter to see stock and shepherd any strays.

The mule ewes are tupped with terminal sire, Suffolk or Texel rams, in October and following the Dartmoor Clear Days, in November, are turned out onto Buckfastleigh Moor until mid January. They are then brought to in-bye land for better keep and supplementary feeding with silage, kale or organic oats (which must be bought in and are expensive) preparatory to lambing from mid March. Barreners go out to the moor and all the ewes will go out to the moor after weaning in early August. The lambs remain on in-bye land, doubles and singles together, and are finished and sold between July and December. This system is designed to make the most of the grazing available. A lambing percentage of around 150% at weaning is usually expected, but last year this flock did exceptionally well with 170%. Losses were few, two or three due to clostridial diseases and pneumonia, one drowned in a water trough and foxes had about half a dozen. Around once every 5 or 6 years the policy is to run a Blue Faced Leicester ram with the older Scotch Black Face ewes to produce replacements for this flock. The older mule ewes will then be drafted out.

The Scotch Black Face ewes are gathered in November for the Clear Days, when all stock must be removed from the moor, and are held on the in-bye land at Huntingdon Warren for tupping. This year the Buckfastleigh Moor flock ran with texel rams, so none of their ewe lambs will be retained. The flock on Huntingdon Warren ran with 3 Scotch Black Face rams and one Swaledale. Annual decisions are made about breeding replacement ewe lambs. The best

ewes are selected to be put to pure bred Scotch Black Face rams. Poorer quality ewes might be put to a texel to breed a terminal lamb.

These ewes are all turned out to moor again between Christmas and New Year. They are taken all together, as one flock, to the highest part of Huntingdon Warren and there they separate themselves into their two flocks. The Buckfastleigh Moor flock drift down the hill to their lea and the Huntingdon Warren flock remain there on the high ground which is their home.



Some of the Huntingdon Warren flock

The Scotch Black Face ewes are brought in again in February or March for scanning. Singles and barreners are turned out to the moor again. Doubles are usually kept on in-bye land, or in some years they will be turned out again for another 2 to 3 weeks, depending on the quantity of silage available and the weather.

Scotch Black Face ewes carrying doubles are brought back to the farm and ewes from both Scotch Black Face flocks are kept together. They are usually fed on around 1.25ha (3 acres) of kale, with a grass run back, as they eat it readily. Silage and concentrates often take longer to be accepted because these feeds are too different from the moorland pasture they are accustomed to. Organic concentrate cost £310 per tonne last year and was provided to the 110 mules at 20kg per ewe and the 100 Scotch Black Face doubles at 15kg each. This represents a total cost of £1147 for concentrates for the sheep. Silage is made on the farm using contractors, mainly from grass or grass and

clover leys, and usually with a cover crop included. Around 6 to 8ha (15 to 20 acres) of oats and peas is sown with a new grass ley as a cover crop and for the nitrogen fixing quality of the legume, and then cut and ensiled in late summer with second cut grass.

Scotch Black Face ewes carrying singles remain out on the moor until lambing time. If there is enough keep on in-bye land, the Moor flock may be brought in for two or three weeks. The flock from Huntingdon Warren remains out on the moor and lambs there. These ewes receive no supplementary feed of any kind and must make use of what shelter may be naturally available. It is accepted that a low lambing percentage is to be expected from these ewes and foxes are a particular problem out there.

Lambing begins in mid April. Mules always lamb indoors and the Scotch Black Face doubles usually lamb outdoors, although if the weather or the foxes are particularly bad they may be brought in for a short time. Lambs born at home will be tailed, castrated and numbered in their first day of life. The single lambs out on the moor will be gathered to be castrated, tailed, marked and treated for ticks a little later. Some vaccinations are used and, providing these are administered as part of a flock health plan and the need can be demonstrated, the Soil Association accepts this. Tick borne diseases are a particular problem in this area and all replacement ewe lambs are given a louping ill vaccine. A Blue Tongue vaccine will probably be used in the future.

Shearing is carried out in July and this is usually done on the home Farm. Occasionally shearing has been done at the rented farm with a generator but since there are no buildings there it is totally weather dependant and very difficult.

The Scotch Black Face doubles still on the farm will be weaned in August and the singles are gathered off the moor to be weaned in September. The exceptions are replacement ewe lambs that are turned out to moor again with the ewes. These ewe lambs are never weaned and the ewe teaches the lamb her lea. They remain in family groups, sometimes with two or three generations always living together.

The two Scotch Black Face flocks are kept separate as they represent different gene pools and, if necessary, rams from one could be used with the other. The Moor flock was originally bought from Scotland in 1980. The ewe lambs stayed reasonably well on the lea but the older ewes wandered everywhere and needed constant shepherding. The flock for the rented farm were bought from a neighbour and had already been leared there, for over 100 years.

They market their lamb all year round. The mules finish between July and December and the Scotch Black Face between December and July. Of the Scotch Black Face, those crossed with a Texel ram would finish first and the pure bred last. Usually the doubles finish before the singles because they have been kept in, although some strong Texel cross singles would be on a par.

All lambs are slaughtered and butchered at a local abattoir, and the farmer sells the meat. The farmer has a number of regular customers who buy prepared lambs and meat is also sold at farmers markets and through a box scheme. Customers include some organic retail outlets and a van operator, delivering to hotels and restaurants, who typically takes four lambs a week. Nothing is ever sold to a supermarket.

Killing, butchering and packing costs £32 a lamb so the return must be £60 each to make it viable. Typically, an 18kg lamb would be sold for £5.50/kg. This marketing position is vital to make the production system worthwhile. A web site is currently being designed, and this should facilitate an expansion of the mail order box scheme.

Organic farming adds to production costs in a number of ways. Grass and clover leys must be kept young and vigorous and so are renewed more often than on a conventional farm where artificial fertiliser could be used to boost production. Russell notices that the old permanent pasture fields are very slow, many including a lot of moss, and little can be done to improve this. Even the younger leys are less productive than might be the case using artificial inputs and silage yields are about half that of a conventional farm. Silaging is therefore expensive because the contractor charges by the acre. More record keeping is necessary since compliance with organic standards must be demonstrated, which requires a greater time input. The farmer considers that his farm can support half the stocking level that might be possible under a conventional system.



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