

Venison Farming

KEITH WILLIAMS

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Introduction

I am Keith Williams, and I farm a beef and sheep farm in mid-Wales with my wife and youngest daughter. The farm is 400 acres, carrying 800 ewes and 20 Welsh Black suckler cows. We supply Waitrose with lamb and beef, finishing as much stock as possible from grass.

I began looking into deer farming after my youngest daughter became interested in the idea. With the current political situation and uncertainty about the future, we felt it would be good to reduce our exposure to the sheep market. The UK is currently only 70% self-sufficient in venison. There are currently approximately 400 deer farms with 30,000 actual deer in the UK. The market looks like it is growing, with the consumer wanting a 'healthier' meat. Venison is a very lean meat, but includes all the vitamins and minerals associated with other red meats.



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Aims

I wanted to look at:

- How you would set up the infrastructure needed to keep deer?
- Would deer fit in to our current farming system?
- What are the main problems when keeping deer?
- Is there a market for the end product?

Places and events which we identified to visit included the British Deer Farms and Parks Association Conference. I visited four newly established deer enterprises all located within the Scottish Borders, including Sion Williams, Buccleuch Estate; Jim Logan, Pirntaton Farm; David McTaggart, Hallrule Farm; and Stuart Mitchell, Whitriggs Farm. We also visited Gareth Jones at the Rhug Estate, who are setting up a Sika deer enterprise, and Andrew Morgan at the Welsh Venison Centre. Both businesses sell direct to the public. I was keen to visit an abattoir, therefore, I visited a purpose-built deer facility at Dovecote Park in Pontefract. I also visited Matt and Pippa Smith in Cornwall a couple of times throughout the year to see different stages of the deer farming cycle, and more recently, the abattoir they have set up.

Infrastructure

Fencing

The biggest cost in setting up a deer farm is the fencing, at a cost of £10 per meter. You can modify sheep fencing to work effectively for deer by using deer stakes and adding another layer of sheep netting above the existing fence, using a wire to attach the two. Another option is to use six electric wires on wooden stakes to extend posts. You must ensure that fences are against the ground in order to stop calves from 'hiding' under them, and escaping. Using box profile crash barriers as posts could also be an option.

To extend gates you can put another gate above the first fixed gate using box iron uprights, or extend them with wooden uprights and creosoted wooden planks. Gates should be positioned where possible in corners in order to create a funnel, making it easier for the deer to see. Fields should be ideally fenced to 10-12 acres (4-5 hectares) with access to water in all fields. It is preferable to have water tanks as opposed to natural ditches as deer are known to make a mess in boggy areas. Although, deer are similar to sheep in that if they are being fed on wet food such as roots, their requirement for additional water is almost insignificant.

Handling system

There is a wide range of deer handling systems which work well, with the basic premise splitting the group in half, and half again, until you are down to one or two to deal with at a time. When setting up a system you must think about the following:

- The loading and unloading access for vehicles. It is preferable to lead into winter housing, which can be used for storing different groups when separating the calves from hinds.
- Water and an electric supply are useful within a handling system.
- It is desirable for the system to be higher than the laneway to it, as deer prefer to run uphill.
- Ideally the system should be covered.
- Ensure facilities will enable you to separate calves from hinds, to restrain stags to remove antlers, allowing deer to be tagged and wormed.
- Include a facility to weight the deer.
- Try to avoid square corners if possible, as deer like to run in anti-clockwise circular motions.
- As deer are normally flightier, sand, woodchip or sawdust on the floor of the handling system help to minimize slipping.
- It is suggested that any doors have a small hole or mesh section so you can see the deer, and they can see you.
- Rails and boards are advised in pressure points such as corners, gateways and holding pens. A system with smooth sides will help prevent tags being torn out. The deer will be less likely to hurt themselves and reduce the likelihood of bruising, which is particularly important before sending deer to kill.

Even if it is not the rutting season, when handling stags, don't get in with them without a barrier of some kind between you and them, or ensure that there is a quick escape route. It is very important to let the deer out of the system gradually so they don't run in to any fencing in the lane on the way back to the fields. The laneway or raceway should be a minimum of 4 meters wide, with all entrances starting wider than that to create a funnel in to the raceway.

There are two main types of crush for deer. The first is a drop floor crush with tapered sides where the deer walk into the crush and the floor is released. The deer is then held by the sloped sides of the crush. To let the deer out, one side of the crush is released and the front gate is opened, allowing them to exit.



Fig 1. Drop floor crush.

The second type of crush available is a squeeze crush; they come as a manually and hydraulically operated. They are slightly different. The sides of the manual crush are doors, and are hinged at opposite corners. The doors have padded sides with a larger padded top rail which traps the deer in by their shoulders when closed. There are curtains above the sides so the deer will enter without seeing people. These can then be pulled back to work on the animal.



Fig 2. Manual squeeze crush.

The hydraulic version of a squeeze crush has two padded sides, the same as the manual, but are operated independently by hydraulic rams which will move either side, in or out,

to hold or release the animal. The sides can also raise or lower, depending on if you're working with stags, hinds or calves.



Fig 3. Hydraulic squeeze crush.

A crush can cost between £3,500 up to £20,000. A typical handling system for deer would cost in the region of £15-20,000.

Winter Housing

As they are poorly insulated, deer do benefit from shelter in rough weather. Calves which have been weaned in September before the rut, are normally housed immediately and kept in until they are turned out in April, or even May, depending on ground and weather conditions. Red deer are very versatile in their ability to adapt to most ground situations. Alternatively, once suitably adjusted to a hard diet, they may be turned out for a period again depending on the ground and weather conditions. For winter housing, calves can be on straw or in a slated shed.

A cattle shed could be easily adapted with netting or rails to extend existing gates and barriers for an effective division. The deer can be fed in troughs, and silage (ideally at 10.5 ME), or hay in ring feeders or mangers. Whichever is used, it is important to ensure a lot of eating space as dominant deer may push others off.

Ventilation is less of an importance for deer as pneumonia is almost unheard of. As a rough guide there should be a space allocation of around 2m² per head for calves. Bullying is quite a large issue when housed over winter, but bullying is much less of a problem in calves than it is in breeding hinds. For adult hinds, it is usually necessary to pull out individuals that are being bullied and place them in a pen of other less dominant animals.

Deer will begin to lose their winter coats from mid-December onwards. When housed, they will lose more because of being in close proximity to each other. They can appear very threadbare by the time they are let out, but their coat will soon return once they are outside again.

From December to February deer have a 'pause' in which they aren't very active and barely grow, if any at all; this is assumed to be because in the wild, food supply would be at its lowest. When kept inside, deer become very bored and it is thought to be why they bully each other so much. Therefore, they benefit from enrichment, such as a radio playing, a football, a fishing buoy hung up or simply a bale of straw for them to jump on and spread out themselves.

Cost of breeding stock

A breeding hind bought at 18-24 months to go to the stag for the first time would cost in the region of £450-£500. A hind would live between 14-16 years, therefore potentially producing 12-14 calves. A stag at 2 years old could cost from £1,800 to £3,000 depending on genetics, health status and antlers. A stag has a working life of approximately 10 years.

Deer Farming Calendar

Mid-September

- Begin supplementary feeding up to a month before the rut starts in order to improve hind condition and soften the blow of being weaned for the calves.
- Wean calves if pre-rut weaning is preferred. Worm, sex, tag and weigh calves.
- Identify and keep records of hinds with no udder. Cull hinds that are dry for successive years.
- Sort hinds into rut groups and introduce stags at a 1 to 40 ratio.
- Worm if needed.
- Monitor grazing and introduce silage or concentrates if needed.

Early November

- Remove stags from hinds to prevent late calves and put in a sheltered field with adlib silage.
- After rut, wean calves if preferred.
- Set up winter mobs and adlib feed.
- Winter rising 2-year-old replacements on ad lib feed.

December-February

- Monitor stock and adjust feeding according to weather.

March-April

- Increase concentrates for in-wintered calves and separate any that are bullied.
- Monitor fields and turn out calves in late April to May.
- Reduce hind supplementary feeding as grass growth begins.
- Check fences in preparation for calves.

May-August

- Monitor worms and drench accordingly.
- Set stock hinds around 8-10 per hectare (3 per acre) by early May ready for calving, ensuring there are areas for hinds to hide calves. Hinds may be rotationally grazed from mid-July onwards to ensure adequate grass quality for optimum lactation.
- Calves will be up and suckling very quickly but will hide for the first 3-5 days. They can run very quickly from a young age.
- Calves growth rates of 500 grams per day are possible if hinds are on good, quality grass.
- Never move hinds during fawning. They will hide young fawns in rushes and grass, but will come back to them.
- If you have an orphan fawn, unless it is directly at the birth, there isn't a lot you can do as deer form very strong bonds and they won't suckle off an adoptive mother or anything else.
- Top or harvest fields post-calving to improve summer grazing quality.

Mid-August

- De-antler breeding stags as soon as the velvet is shed, taking in a few at a time. Cut them off before they realise their antlers have become hard and can be used as a weapon. Worm and copper drench if needed.
- De-antler yearling stags in batches as the velvet is shed. Weigh and sort for slaughter. (Target liveweight of 110kg for stags and target liveweight of 88kg for hinds)
- Set up quality fields ready for the rut.

Health Issues

It was suggested to use a copper bolus or cattle feed supplemented with copper if an animal wasn't doing as well as others in the group or wasn't looking content. A copper treatment would normally solve the majority of the issues. Deer can also suffer from liver fluke and worms but it can easily be treated by using normal sheep drench. Additionally, lung worm is an issue that could need. Deer are capable of contracting TB but it isn't compulsory to test them at the moment.

Deer can suffer from Malignant Catarrhal Fever (MCF). The usual signs of MCF include

- high fever
- enlarged lymph nodes
- discharge from eyes and nose
- lesions in the mouth and muzzle
- inflammation and cloudiness of the eyes
- diarrhoea.

If infected there isn't much you can do apart from separate the affected deer from the herd.

Deer can suffer from Cryptosporidium. This can build upon the ground during calving and if possible, late calvers need to be calved on separate ground. Deer do not suffer from foot rot, fly strike or mastitis. It is also very rare for deer to have problems when calving. Deer can also contract Johne's, and it is suggested to cull the infected deer. Keeping a closed deer herd helps prevent the spread of diseases in to your farm. Depending on your local vet, there may also be limits on the amount of veterinary knowledge available.

Market for Venison

Venison is a premium product and is a niche market. Currently, the options for marketing are quite limited with Waitrose being the dominant buyer of venison, paying in the region of £5/kg of carcass weight. The other main option for selling your venison is direct sales/farmers markets. Prices achievable are obviously much higher but there is the added cost of processing the meat, as well as delivery or attendance at farmers markets.

Summary

In conclusion, when looking into farming venison there are a couple of major incentives including low labour requirements, minimum handling and very few birthing problems (in fact they are best left alone during calving). Deer farming would fit well around the busier times of beef and sheep farming. With the animal being only a few generations from the wild, very few health issues occur as any problems would have died out due to natural selection.

The current market has been growing 10% annually even though it had a very low starting point. Consumer trends move towards leaner meat, and venison meets this requirement.

There are also down sides to deer farming. The largest of these is the initial set up costs for fencing and a suitable handling system. Hinds costing £450-£500 and a stag at £2,000 plus the costs are not inconsiderable. The current market (although has been rising at 10% annually) does seem to have plateaued at the moment with a waiting list to supply the major customer. If a new customer was to come in to the market it would have a huge effect.

Also, with national deer numbers leveling there will be more female calves coming into the meat supply chain. If there were any health problems, not all vets have extensive knowledge of deer therefore this could be an issue. As one deer farmer told me, returns are similar to a good year on sheep, therefore, considerable thought should have been given before investing on borrowed money.

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