

## INTRODUCTION

With the increasing interest in diversification and involvement in new livestock enterprises, deer farming offers a good alternative to beef and sheep as a meat producing enterprise. Farmed deer when fed on forage-based diets can provide an economically viable alternative to both sheep and cattle production systems. The first deer farms in the UK were established in Scotland in the early 1970s. Initially deer farming was carried out on the hills and uplands at low stocking rates but in the 1980s there was a large increase in farmed deer and expansion occurred in the lowland situation. Higher stocking rates and growth rates were achieved in the lowlands.

## FARMED SPECIES

The main species of farmed deer is the Red deer (*Cervus elaphus*) although the Fallow deer (*Dama dama*) is also farmed. The Red deer hinds weigh around 100 kg and are about 30 kg heavier than the Fallow. Under farm conditions well-grown hinds will breed at 18 months of age. The latest Defra census in 2000 indicated that there are 363 deer farms in Great Britain farming 33,848 deer. The majority (73%) are farmed in England with approximately 19% in Scotland and 8% in Wales. There are about 11,000 breeding hinds and they produce 500 tonnes of venison annually.

## MANAGEMENT OF THE BREEDING HERD

### Mating

The rut starts in mid-September after stags have shed their velvet and the antlers have hardened. Stags can become very aggressive during the rutting season and will roar and fight for dominance. People should keep away from stags during the rutting period. Stags are usually mated in single sire groups with 30 hinds per stag. Hinds are seasonal breeders, and usually begin oestrus cycling in mid-September.

### Calving

The gestation period is 8 months (231 days). Hinds must be grazed tightly in the spring to avoid calving difficulties. Calves are born from late-May until early-July and are usually singles weighing about 9 kg. The calving rate depends on autumn feed availability and herd management but should exceed 90% with losses of 5% to the yearling stage. Hinds will usually calf each year and will continue breeding until at least 12 years of age.

### Grazing

Summer is the vital season for hinds when the demands of lactation more than double their energy requirements. Good calf growth rates can be achieved on 8-10 cm swards, but supplementation may be needed in August and early-September if grass is in short supply. Calves are weaned in mid-September at 12 to 14 weeks of age. To achieve good conception rates, hinds need to build up body condition following weaning and during the rut. This is usually achieved on high quality grass swards but some trough feeding may be needed if grass supply is inadequate. Breeding hinds are usually housed in late-December.

### Winter feeding



Fig 2. Housed hinds

Adult deer have a mid-winter inappetence period, when there is a natural weight loss. Therefore, it is important that hinds are in good condition at the start of the winter. Hinds housed in December can be wintered on various basal rations including straw, hay, fodder beet and baled silage. Research at ADAS Rosemaund, Herefordshire has shown that mature hinds housed in good condition can be wintered on 11 MJ ME/day without affecting subsequent performance of hinds or their calves. This can be provided with big bale silage with no extra supplement or *ad libitum* barley straw plus 270 g

soya bean meal. However, young hinds, during their first or second pregnancy, require at least 15 MJ ME/day during the winter period.



Fig 1. Mature stag

## MANAGEMENT OF CALVES

### Suckling period



Fig 3. Newborn calf

On well-managed lowland farms, calves born in June should gain about 350g to 400g per day during the summer period when suckling their dam. They are weaned at 12 to 14 weeks of age and should weigh 40kg to 45kg.

### Winter-feeding

Calves are usually housed at weaning and fed good quality forage with a small supplement. From December to February calves go through a period of low winter growth and the aim is to feed economically during this period.

### Summer grazing

Calves are turned out to grass in April and for optimum growth rates swards should be grazed at 7 to 9 cm sward heights. Following a store winter, high compensatory growth occurs at grass and growth rates of 250g/day are achieved. Trial results, at ADAS Rosemaund, have shown that pure white clover swards can increase growth rates by 55%. Calves are usually slaughtered at 16/17 months of age. Stags should weigh 100 kg live weight (55 kg carcass weight) and hinds 90 kg (50 kg carcass weight).



Fig 4. Hinds and calves

## VENISON MARKETING

Deer farmers can either sell live animals to a wholesaler for transporting off the farm and then slaughtered in a suitably adapted abattoir or shot on-farm. When shot on-farm an ante-mortem inspection by a veterinary surgeon must be carried out and a certificate issued within 72 hours of shooting. Farmed deer is treated as a red meat and subject to EU regulations. Venison is mainly sold through marketing groups. The supermarkets are the main outlets although an increasing amount (40%) is sold through farm gates and farmers' markets.

Consumers are now more aware of the importance of healthy eating and venison is promoted as a healthy red meat which is low in fat and cholesterol but high in protein. Haunches and saddles are considered the prime cuts, with sausages and pies being amongst the most common venison products purchased.

Venison sells 'wholesale' for about £3.00/kg but retail sales will return twice this amount. However, additional costs are involved in preparing, packing, freezing and storing venison when sold in the retail market.

## REQUIREMENTS OF A DEER FARM

Secure fencing is the first essential and a major cost in deer farming. Boundary fences need to be 1.9 m high with horizontal and vertical high tensile fencing. For extra security, electric offset wire may be needed. Deer are easily panicked and secure handling facilities are essential. A crush is vital to restrain deer. Weaned calves perform better if housed during the winter and at high stocking rates it may be worthwhile to house adult stock as well. Many existing farm buildings can be adapted to house deer.



Fig 5. Deer fencing

## SUMMARY

- Deer, preferably red deer, can be managed successfully in a farming situation.
- Venison is fat-free lean meat, well suited to current customer demand.
- There is a strong demand for farmed venison from the catering trade and farmers' markets.
- Deer farming is a viable option for beef and sheep farmers seeking alternative livestock enterprises based on grassland systems.
- Venison production can be profitable but there is a high initial set-up cost for fencing and handling.

## FOR FURTHER INFORMATION

More information on farmed deer can be obtained from The British Deer Farmers' Association – [www.deer.org.uk](http://www.deer.org.uk).