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Integrating pastoral venison and beef production

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INTRODUCTION

In this paper I plan to follow through a year's management cycle to show how we integrate the grazing of deer, cattle and sheep on our farm. Firstly, a brief description of our farm and stock carried.

My wife and I farm 300 hectares of heavy soils on river flats near Winton in Central Southland. Seventy percent (220 ha) is deer fenced.

The livestock wintered in 1990 consisted of 680 Red deer hinds, 250 (stag and hind) weaners, and 70 adult stags; 50 Friesian cows, 130 finishing bulls, and 30 heifers. The sheep consist primarily of 1,000 breeding ewes. We grow 20 ha of oats, 15 ha Timothy for seed and 13 ha of swedes for winter feed.

SEASONAL MANAGEMENT

(i) Autumn

Deer fawns are weaned in early to mid March and the calves are weaned in early April. Stags are joined with the hinds about 1st April and rams with ewes on 4th April. By mid April the fawns are in mobs of up to 400 on a grazing rotation. The last of the fattening stock is sold in March, where possible.

By early May, cows, hinds and ewes are in large separate mobs grazing (kgDM/ha) restricted areas of grass or Timothy stubble to allow for a good pasture cover to be carried into the winter. This grass is essential for the winter growing of our young stock.

(ii) Winter

The adult hinds are wintered (June to mid-August) on swedes except in wet weather when they are on a Timothy stubble with some silage supplementation. The cows are wintered on silage on a sawdust pad and the ewes on grass or swedes, plus some silage.

The fawns, in mobs of up to 400, are provided with 4.5 ha of good pasture every 3 to 4 days. The bull calves are run in mobs of 40 to 50 moved onto 4.5 ha of

pasture every 6 to 7 days. Not all pasture is eaten by the young stock in the first of these winter rotations. The bulls return to the same areas later in the winter and a mob of bulls follow the fawns a week or two later. Some silage is fed to the bulls in the late winter.

The aim is for the bulls to gain from 100 kg liveweight from weaning to early August and for the stag fawns 10-12 kg from May to August. Emphasis is placed on good feeding and limiting pasture damage with more frequent shifting in poor weather or off-paddock feeding of the bulls in prolonged wet spells.

(iii) Spring

Ewes are lambed down on their own at 15/ha on areas well apart from any deer. Cows are taken off the wintering pad just before they calve. At calving additional calves are mothered on and the cows are then well fed to obtain good calf growth rates and good future conception rates. The hinds after grazing the swedes are fed restricted quantities of pasture to reduce any future calving problems. Most hinds are run in one large mob at 15/ha. This stocking rate can rise to 20/ha in a favourable spring. Old hinds particularly those with well worn teeth and any light hinds are run separately.

Rising yearling deer and cattle are run together

in small mobs of 20 to 30 bulls and 80 to 100 yearling deer (at an ewe equivalent rate of approximately equal). These mobs rotationally graze in early spring, but once sufficient pasture is available they are set stocked. This combination of cattle and deer has the advantage of better pasture control in later spring and less mob stress on the bulls. The yearling heifers are grazed with the velveting stags with an emphasis on retaining good pasture quality for the stags to improve their velvet weight.

(iv) Summer

From mid November the fawning hinds are set stocked at approximately 10/ha in mob sizes to 60 to 130. They are grazed on paddocks with little cover, usually areas where bulls and yearling deer or cows and calves have been often grazed with the hinds until about 10 to 20% of the fawns have been born. Bulls are then removed as the hinds tend to become unsettled at this stage in the fawning. Bulls can be re-introduced 3 to 4 weeks later, when approximately 90% of fawning has been completed. By using this combination of bulls and hinds we have to a large extent eliminated the problem of deteriorating pasture quality in our fawning paddocks.

In the past, because it is possible not to move hinds and fawns till about the end of January when all the younger late born fawns were following their mothers, a lot of rank pasture and low clover content had developed. This is the second year we have introduced cattle at these times and have seen no obvious problems with bulls disturbing young hiding fawns. For the rest of the summer, various combinations of deer and cattle are used as pasture availability changes. Ewes and lambs can also be brought in to the deer area at this time, with ewes being used in pasture control. I have a policy of keeping deer and sheep at least a paddock apart in winter and spring. The cattle at these times are used as a buffer between deer and sheep and this has reduced Bovine Malignant Cataharr deaths in the deer from approximately 3% to below 1%.

Pasture surplus to animal demand is conserved as silage any time between November and February. Annual tonnage varies between 200 and 800 tonnes. By

harvesting these surpluses in good years we have a source of feed to use in a dry autumn or a really wet winter.

ANIMAL SLAUGHTER

Yearling stags are killed from late November when the liveweights are over 95 kg. A proportion of them may be sold for future velvet production. All stags are sold by the end of February.

Bulls are killed in February/March at carcass weights between 270 - 300 kg. Lambs are off the farm by the end of March, with most sold in January and February, at approximately 14 kg carcass weight. In 1990 because of a dry November, a large number of lambs were sold as stores at weaning.

PROBLEMS

Bulls dig large wallows and can cause more damage to fences and gates. If bulls experience feed shortages they become unsettled causing pasture damage and behaviour problems which can cause physical injury to the bulls. There is an extra risk of tuberculosis in deer with buying in calves and running cattle with them. With a high proportion of stock requiring good feed from late spring to early autumn e.g. cows and calves, bulls yearling deer, hinds and fawns and lambs it is difficult to maintain pasture quality. Ewes are the only group of animals that can be used for controlling pasture once quality deteriorates.

SUMMARY

We find that deer and cattle combine well in grazing our summer-wet farm. We have been able to feed our cattle at a high level in the spring with the pasture surplus that develops with deer farming. In the summer we gain better control over our pasture quality in our fawning paddocks with the use of cattle. Animal health is improved with the various stock combinations. Young animals grow fatter because of less stress and reduced worm burdens. By keeping sheep separate from deer in the winter and spring we have also reduced our Bovine Malignant Cataharr deaths.