

COMPARISON OF MEAT PRODUCTION FROM CATTLE AND DEER

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SUMMARY

- Venison production is growing in importance.
- Typical production system is similar to weaner cattle.
- Friesian x Angus bulls produced 40% more meat per hectare than red stags in research trials.
- Set stocked stags grew faster than rotational grazed stags but showed slightly inferior per hectare performance and financial returns.
- High venison price meant twice the revenue per hectare of bull beef in spite of stags' disadvantage in meat production.

INTRODUCTION

Meat production on New Zealand deer farms is becoming an important industry. Many deer farmers are purchasing weaner stags in autumn/winter and selling them for venison at the end of the following summer. The system is analagous to buying in weaner cattle in April/May and sending them to the freezing works 12 months later.

RESEARCH

In a trial at Invermay comparing liveweight gain and meat production per hectare over the spring/summer period, yearling Friesian x Angus bulls produced 40% more meat per hectare than yearling red deer stags. The daily growth rate of cattle was very high (average 1.4 kg/head/day), while that of the stags fell slightly below that expected on the basis of previous measurements (210 g/day compared with 220-250 g/day).

Features of the trial and management techniques used are outlined below.

- Animals were break fed on pasture for 150 days (1 September-23 January) and stocking rate manipulated to supply the highest quality sward possible at a constant level of dry matter/ha (1400-1600 kg).
- Both groups of animals were wintered on feedlot pads with a maintenance ration of meadow hay for cattle and lucerne hay for deer.
- Post winter weights of both weaner bulls and weaner stags were good (300 kg for bulls, 60 kg for weaner stags).
- Stags were managed in both a set stocked and rotational grazing system. There were differences between these in overall stocking rate, growth rate and meat production per hectare (Fig. 1). Results may differ from those achieved commercially and be worthy of further investigation.
- Growth rate of both species over the trial period remained linear and reasonably consistent until the onset of dry weather.
- Bulls displayed some behavioural problems (territory marking and fighting) until social grouping was established at about 45 days.

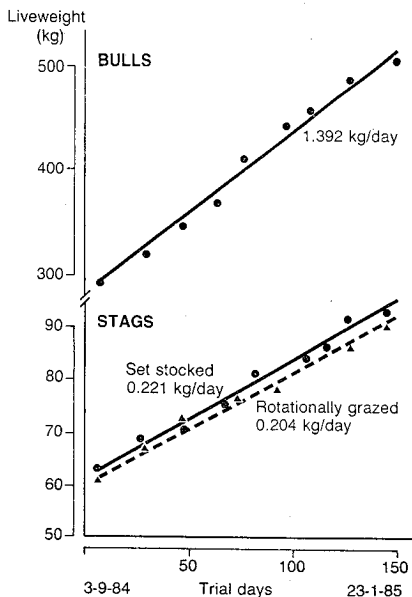


Fig. 1: Liveweight gains of bulls and stags.

- Rotational grazed deer became quiet and very easy to yard and shift compared with set stocked deer.
- The number of stock and small areas used in the trial may have had an 'unnatural' and adverse effect on the performance of deer.

Table 1 shows production levels and financial returns for the three systems. The main features of these are:

- Set stocked stags had superior per animal performance, but rotational grazed animals achieved higher stocking rates, per hectare performance and financial returns.
- High venison schedule prices result in approximately twice the revenue per hectare of bull beef production, in spite of stags' disadvantage in meat production.

Table 1: Liveweight gain, meat production and financial returns from bulls and stags (150 days, 1 Sept. - 23 Jan.)

	Stocking rate (animals/ha)	Growth rate (g/animal/day)	Estimated meat production (kg/ha)	Gross meat return (\$/ha)	Profitability* (\$/ha)
Stags - rotational grazed	30	200	540	3530	2040
- set stocked	26	220	520	3570	2045
Bulls	6.4	1390	720	1860	1235

*Returns less 18% interest on stock value.