

KIMBERLEY WEANER CATTLE IN THE SOUTH WEST OF WESTERN AUSTRALIA - ON FARM DEMONSTRATIONS

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SUMMARY

As part of "on farm demonstrations", weaners from the Kimberley region were run on farms in a number of different locations in the south west of Western Australia. A variety of management systems were used and included both pasture alone or combinations of pasture and grain (feedlot) feeding systems. Cattle were weighed on arrival and at various intervals throughout the finishing period. The project demonstrated to beef producers that Kimberley weaners presented no unusual temperament or management problems, that growth rates found in previous experimental work could be achieved under farm conditions and that the animals produced carcasses suitable for the local market.

Keywords: Kimberley cattle, liveweight, carcasses.

INTRODUCTION

Research by McIntyre *et al.* (1989) showed that Kimberley weaner cattle transported to the south west of Western Australia in early winter had no significant problems in surviving the transport stress or in adapting to the colder environment. The animals, weighing around 150 kg, commenced growing soon after their arrival and gained approximately 100 kg during the following 6 months until early December. Over the following 12 months these cattle grew at comparable rates and following slaughter had comparable carcase and meat quality characteristics to those of similar weight and age born in the south west.

Based on the research results the profitability of these cattle was shown to be at least as high as alternative options. Despite this, beef producers in the south west have been reluctant to adopt this system of production. The reluctance may stem from unfamiliarity with the type of cattle which have been traditionally regarded as having poor temperament, growth potential and meat quality. There is also undoubtedly some suspicion of research results which farmers have difficulty in relating to their farming situation.

The aim of these on-farm demonstrations was to provide producers in the south west with practical experience in raising Kimberley weaner cattle and to measure their performance under farming conditions.

MATERIALS AND METHODS

A total of 202 cattle, 99 from Springvale Station and 103 from the Ord River Station, were included in the investigation. Both stations are located in the East Kimberley. The animals had been born about December 1988 and weaned in June-July 1989 at approximately 6 months of age. They contained a mixture of Brahman and Shorthorn breeding but most contained over 50% Brahman. All were males, most of which had been castrated on the stations. They were weighed on the stations (Springvale 6 July, Ord River 13 July) before being transported and this weight was used as the basis for payment. The transport was undertaken in 2 stages. In the first, the cattle were transported to Broome a distance of about 1000 km and 24 hours travelling time. They were rested in Broome for about 30 hours during which time they were fed hay and had continuous access to water. The animals were dipped and loaded onto their truck where they spent a further 36 hours in the 2500 km journey to Wooroloo Prison Farm in the south west. After being weighed on arrival (21 July) at Wooroloo, they were left for 3 days without any further handling. Over the ensuing 15 days, animals from each station were stratified on liveweight and allocated to 1 of 10 groups, each consisting of a representative sample of the animals. Nine of the groups were sent to properties of participating producers; 5 located near Manjimup (MAN1 to MANS), 2 near Harvey (HVY1 and 2), and 1 each near Dandaragan (DAN) and Denmark (DMK), while a "control" group remained at Wooroloo (WOR). The animals had access to abundant green pasture and hay was provided *ad libitum* while awaiting transport to the various farms.

While advice on all aspects of the management, husbandry and marketing of the cattle was offered by the researchers, all decisions were completely in the hands of the producers. A summary of the number of animals and management details employed on each farm is shown in Table 1. Most producers chose

to finish their animals on pasture while **2** incorporated the use of grain feeding. The use of drenches, vaccinations, growth promotants and supplementary feeding strategies varied widely among the various farmers.

Table 1. Farm location, distribution of weaners and management practices on each farm

Farm location	Date of relocation ^A	Number of weaners		Management details
		Springvale	Ord River	
MAN1	3 August	12	13	GP
MAN2	26 July	5	5	GP, GR
MAN3	26 July	5	5	D
MAN4	26 July	8	7	
MAN5	26 July	5	5	
DAN	4 August	5	5	GR
DMK	26 July	19	31	HA,D,Se,B ₁₂ ,V
HVY1	8 August	14	13	D
HVY2	3 August	9	6	
WOR		15	15	D,V,B ₁₂
^A From Wooroloo to farms. GP - growth promotant; HA - hay on farm after arrival; D - drench; V - vaccination (Clostridial diseases); B ₁₂ - cobalt bullet or vitamin B ₁₂ injection; Se - selenium supplement; GR - lot-fed or supplemented with grain.				

The cattle were weighed at intervals from their arrival on the properties until marketing. Following slaughter, carcase weight and fat thickness data were collected where permitted by the selling method.

RESULTS AND DISCUSSION

Liveweight losses of between 10 and 16 kg (6-9%) were recorded during the assembly and transport phases (Table **2**). Most of this liveweight loss was undoubtedly due to reduction in gut fill. However it took some time to recover and in the case of DMK, the cattle had not recovered their station weight some 6 weeks after arriving in the south. These effects must be considered in the purchase of cattle on the basis of liveweight as they can have a significant effect on the cost of the animals.

Table 2. Liveweight of animals on stations, on arrival in the south west and at first weighing on farms

Farm location	Liveweight on station (kg)	Liveweight at Wooroloo (kg)	No. days ^A	Liveweight on farm (kg)	Liveweight gain ^B (kg/hd)
MAN1	172	160	53	183	23
MAN2	174	159	54	206	47
MAN3	176	165	54	183	18
MAN4	176	160	54	200	40
MAN5	175	161	53	179	18
DAN	175	164	60	181	17
DMK	183	169	39	177	8
HVY1	180	165	55	186	21
HVY2	174	160	55	188	28
WOR	165	153	66	200	47
^A Days between liveweight on arrival at Wooroloo and on farm. ^B Gain between liveweight on arrival at Wooroloo and on farm.					

Following arrival of cattle in the south west there was a large variation in the rate of growth during the first 2 months (Table 2) with 4 of the groups averaging over 0.5 kg/day and 2 under 0.3 kg/day. From observations these differences in growth could be accounted for by variations in stocking rate and pasture availability. There was no indication that they were due to climatic adaptation as there was a large range in performance among farms in the Manjimup area.

The growth pattern of the steers from arrival to just prior to slaughter on the different farms is shown in Figures 1 and 2. The data for WOR were included in both figures for ease of comparison. In all but 1 case the growth of weaners on farms was as good as or better than at WOR under the "standard" management system developed in the research program.

Figure 1 shows the growth patterns of groups in close proximity to each other in the Manjimup region. There was a wide range of performance among the farms. Weaners at MAN2 which were grain fed from early December gained an average of 1.1 kg/day. They were sold in early April weighing 425 kg. At MAN4 and MAN1 the cattle reached suitable weight for slaughter of around 400 kg by late August. At this time animals at MAN3 and MAN5 were about 50 kg lighter and were not sold until September and November respectively. Differences in the growth rates of the other 4 groups run on pasture only reflected differences in the management factors including stocking rate, access to good quality pasture and supplementary feed.

There was a similar range in performance of the cattle at the other locations (Figure 2). The cattle at DAN grew at about 0.8 kg/day while on supplementary grain from early February and were sold at around 400 kg liveweight in May. The cattle at DMK grew slower during the second winter-spring than most other groups, probably due to the waterlogged soil conditions and low pasture growth, and were the last to reach the normal target slaughter liveweight of around 400 kg. By contrast the cattle at HVY1 grew at a relatively fast rate throughout and were retained until they had reached almost 500 kg before sale.

Selling methods ranged from saleyard auction, CALM, liveweight auction and over the hooks direct to abattoirs. Not all of these methods allowed the collection of carcase data. Those data available are shown in Table 3. The measurements were consistently within the range in carcase weight of 200-230 kg and in fat thickness of 4-12 mm acceptable to the local market.

Table 3. Time of slaughter and mean ($\pm$ s.d.)carcase characteristics of Kimberley weaners raised on farms

Farm location	Month slaughtered	Number slaughtered	Final liveweight (kg)	Carcase weight (kg)	Fat thickness (mm)
MAN1	Oct 1990	22	na	222(13.4)	6.5(2.2)
MAN4	Nov 1990	14	408(27.2)	212(18.5)	7.6(1.9)
DMK	Feb 1991	47	428(47.0)	226(25.9)	10.1(3.1)
HVY1	Sept 1990	17	na	216(20.5)	10.8(3.0)
WOR	Nov 1990	27	429(48.2)	225(31.1)	8.8(3.4)

The project demonstrated to beef producers that there were no particular handling or management problems associated with Kimberley weaners. All participating producers requested a further draft of weaners or made their own arrangements for the purchase of weaners in the second year of the project. The use of farms involved in the work as a focus for extension in the local regions succeeded in generating interest and awareness of the system. The project also helped to stimulate interest among pastoralists in supplying weaners as it provides them with an alternative production and marketing system.

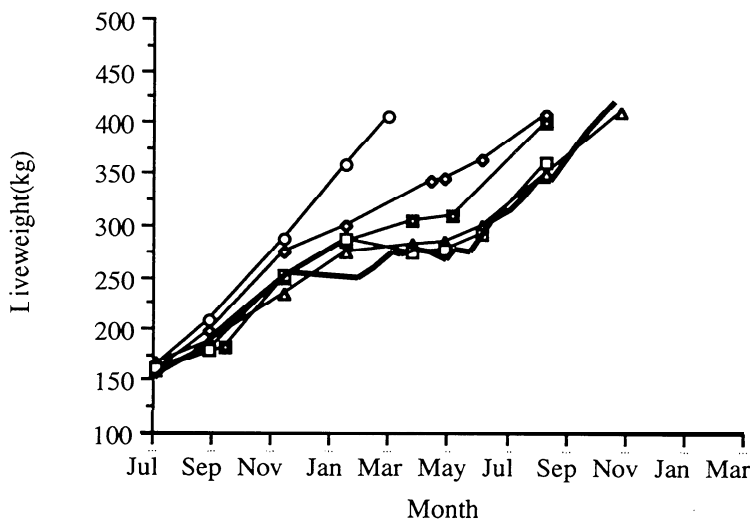


Figure 1. Liveweights of weaner steers on farms at Manjimup (MAN1, closed squares; MAN2, open circles; MAN3, open triangles; MAN4, open diamonds; MANS, open squares) and Wooroloo (WOR, thick line) between arrival in the south west and turnoff

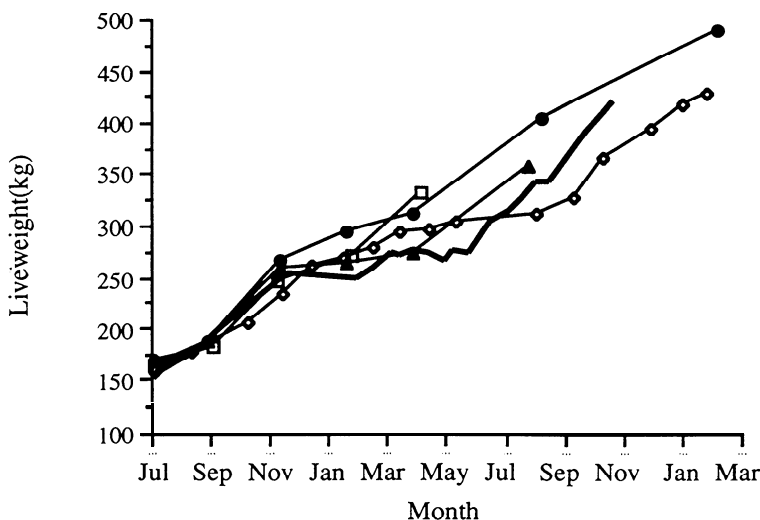


Figure 2. Liveweights of weaner steers on farms at Harvey (HVY1, closed triangles; HVY2, closed circles), Dandaragan (DAN, open squares), Denmark (DMK, open diamonds) and Wooroloo (WOR, thick line) between arrival in the south west and turnoff

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REFERENCES

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