Elite Dairy Beef – A pathway for male dairy calves into the premium beef market

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I. INTRODUCTION

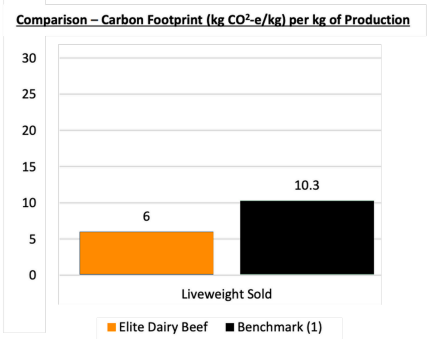
The Elite Dairy Beef program is based on consumer eating experience from dairy beef raised under a unique tightly controlled nutritional program. The program is aimed at changing industry perception of "dairy beef" from the traditional lower quality manufacturing image to a high value premium product that justifies the raising of male dairy calves. A requirement for cattle marketed under this brand requires animals to be antibiotic, hormone and ionophore free. Typically, many dairy beef programs have seen high incidences of disease and defects at slaughter in dairy cattle fed on an accelerated pathway.

II. MATERIALS AND METHODS

The nutritional program was initially developed in Spain and is widely used in Europe and the UK in the premium beef programs. A locally adapted program utilising key ingredients from Spain in conjunction with local sourcing has since been tested and proven in Australia. The milk replacer and rations are of extremely high quality and specifically targeted at superior early life nutrition to rapidly develop the calf immune system and rumen function, thereby maximising health and avoiding the use of antibiotics. Contrary to conventional rearing systems, this system is based on a low milk replacer intake and immediate concentrate consumption from birth. The critical and interlinked aims are to avoid negative energy balance, optimise gut health, and fast-track rumen development.
Calves are purchased at 5 days of age and transported to a rearer. They have ad lib access to concentrate Quickstart, plus specialised milk powder InzarMilk, fed at 2L twice a day for 3-4 weeks. After 2 weeks, calves transition onto a grower ration Papincalf enabling early weaning of the calf. This ration is fed until 14 weeks after which cattle are transitioned onto the final ration Econbeef until slaughter.

III. RESULTS AND DISCUSSION

A preliminary carbon results for the supply chain are displayed below. The Elite Dairy Beef pathway results in 50% lower carbon when compared to traditional beef (Figure 1 and 2).



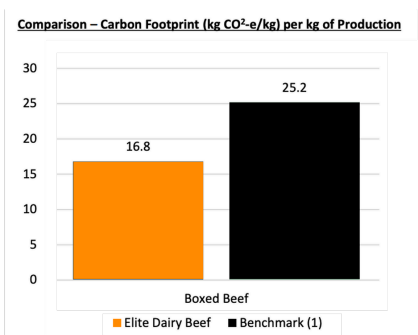


Figure 1 and 2: Elite dairy beef pathways carbon footprint liveweight and boxed beef effect relative to that of traditional beef.

The initial results for processed carcasses are presented in Tables 1 & 2 below for both animal performance and carcass characteristics. These cattle are currently sitting in the top 10% for eating quality of all cattle fed in Australia.

Table 1 and 2: Elite dairy beef animal performance and carcass results from currently processed cattle (n = 1913)

Animal Data	Average	Min	Max
Exit Weight	558.9	348	718
Finisher ADG	1.32	0.51	2
Lifetime ADG	1.19	0.9	1.7
Finisher FCE	5.27	2.5	7.1
Lifetime FCE	4.96	2.8	7.6
Slaughter Age	16	9	20

Carcass Traits	Average	Min	Max
HSCW	286.7	174	372.5
Dressing %	54%	40%	74%
Ossification	135	100	170
Hump	55	5	260
MSA Marbling	370	40	1050
Ribfat	8.5	3	27
Ultimate pH	5.53	5.04	6.5
Eye Muscle Area	64	20	89
MSA Index	62.8	56.04	72.11

Animal health disease and defect results at slaughter are only recorded against 6.1% of the current population, with the highest occurrence in rumen abscesses. This gives a good indication that these calves have been programmed differently during the early phases for early immune and rumen development.

IV. CONCLUSION

Cattle are finishing slightly older than initially expected, however this is reducing with improvements to the system. Cattle are achieving liveweights of 500-550kgs and carcass weights of 280-300kgs. Cattle carry a positive carbon story, with the calf primarily offset by the cow coupled with a highly efficient animal capable of good conversion and fast finishing times. Finally, animal health disease and defect data does not currently indicate that any additional pressures placed on the animal during the accelerated feeding program are adversely affecting the animal internally.