Maranoa – Factsheet 3: Supplementing steers

The Queensland Department of Primary Industries (DPI), together with ConnectAg and Rural Solutions Queensland, evaluated the economic implications of implementing a range of management strategies on a beef property in the Maranoa to build resilience. Many producers supplement steers in the May to December period, when pasture quality has declined, to meet market specifications earlier.

Key finding
The results of supplementation strategies are dependent on the additional weight gain achieved during the dry season and if this advantage is maintained through to sale.

Feeding supplements to steers when pasture quality has declined

The representative property and herd outlined in *Maranoa – Factsheet 1* was used to compare the profitability of supplementing steers based on a property grazing 940 adult equivalents. A typical supplement fed to weaner steers in the district is a dry lick (costed at $1,150/t) containing 10% urea, 10% salt and protein meal. An intake of 200g/day is assumed and fed to each steer for 210 days, at a cost of $48.30 per steer. Supplementation is assumed to increase weight gain by 150g/day, which results in an extra 31.5kg of weight gain per steer.

Steers are estimated to be 31.5kg heavier when the supplement feeding ceases in December when they are 15 months of age, but this liveweight gain advantage may be diminished by sale time at 20 months. The growth path of cattle in the base strategy, outlined in the project report, includes compensatory growth that may occur when the cattle move from a low plane of nutrition (over winter and spring) to a high plane of nutrition (in summer). As a result, supplemented steers may not gain as much weight as the base strategy steers over summer.

To examine the possible impact of compensatory growth on the supplement strategies, two strategies have been analysed with an increased sale weight of 31.5kg or 21kg (two thirds of the 31.5kg gain).

The table below shows that if the sale weight of supplemented steers is 31.5kg greater than if they were not supplemented, then herd gross margin increased from $380,650 to $385,624.

However, if the sale weight of supplemented steers was only an additional 21kg than if they were not supplemented, then herd gross margin was marginally lower by $354.

Production and sales	No supplement	Supplement & sale weight +31.5kg	Supplement & sale weight +21.0kg
Adult equivalents	940	940	940
Breeders mated	483	479	480
Calves weaned	386	383	383
Steers sold	189	188	188
Steer sale weight (kg)	458.0	489.5	479.0
Steer price ($/head)	$1,347	$1,440	$1,409
Net cattle sales	$425,083	$438,820	$433,574
Variable costs	$44,433	$53,196	$53,278
Herd gross margin	**$380,650**	**$385,624**	**$380,296**
Herd gross margin after imputed interest	$338,779	$344,129	$338,738

Australian Government | Future Drought Fund | Drought and Climate Adaptation Program | Queensland Government

What is the effect on profitability of feeding supplements to steers?

An investment analysis was undertaken to evaluate the effect on cash flow and profitability over 30 years when changing from not supplementing steers to supplementing steers, during the May to December period. A capital purchase of feed troughs, at a total cost of $3,000, has been included in the analysis. Furthermore, additional annual overhead costs have been included to cover the extra fuel ($250) and labour ($1,250), whether paid labour or unpaid family labour, required to pick up and feed out the supplement.

Supplementing steers, and increasing their sale weight by 31.5kg, resulted in profitability increasing by $5,004 per year (measured as Annualised NPV as outlined in *Maranoa – Factsheet 1*). However, if after supplementing the steers, the increase in sale weight was only 21kg, then profitability decreased by $672 per year (measured as Annualised NPV).

What producers need to consider before supplementing steers

The result of this supplementation strategy is dependent on the additional weight gain achieved during the dry season and if this advantage is maintained through to sale. The comparative advantage of supplementing in the dry season may be eroded to some extent by compensatory gain in the unsupplemented steers over the following growing season. Factors affecting the degree of compensatory gain include pasture quality and quantity, and the condition and age of animals. Consequently, producers need to factor in the potential impact of compensatory gain in their supplementation decisions.

Please note, these results are specific to the assumptions used for the analysis . Further detail on these, and other strategies that influence profit, are available in the full report (QR code link below).

Find your local DPI Officer on the FutureBeef website.
← here

All factsheets and full reports are found on the FutureBeef website.
← here.

The Farm Business Resilience Program is jointly funded through the Australian Government's Future Drought Fund and the Queensland Government's Drought and Climate Adaptation Program.

Australian Government | Future Drought Fund | Drought and Climate Adaptation Program | Queensland Government