AGE OF STEER TURNOFF

A look at Northern Gulf beef production systems

Gulf Savannah NRM

Increased profitability and drought resilience for grazing businesses

As part of the Drought and Climate Adaptation Program, the Queensland Department of Agriculture and Fisheries is investigating a range of management strategies and technologies aimed at helping primary producers better manage drought and climate impacts.

One of the resulting works is the Northern Gulf Beef Production Systems Report which analyses the economic implications of management decisions that can be applied to beef businesses in the preparation for, response to or recovery from drought.

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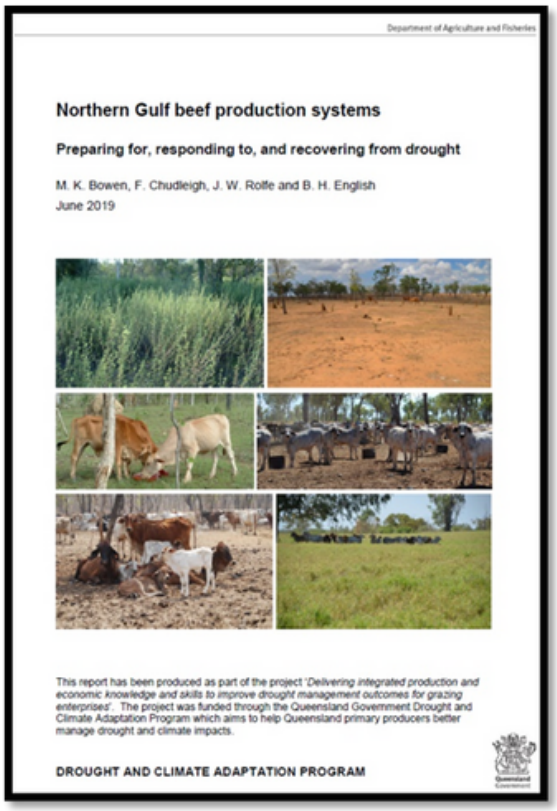

Department of Agriculture and Fisheries

Northern Gulf beef production systems

Preparing for, responding to, and recovering from drought

M. K. Bowen, F. Chudleigh, J. W. Rolfe and B. H. English
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This report has been produced as part of the project '*Delivering integrated production and economic knowledge and skills to improve drought management outcomes for grazing enterprises*'. The project was funded through the Queensland Government Drought and Climate Adaptation Program which aims to help Queensland primary producers better manage drought and climate impacts.

DROUGHT AND CLIMATE ADAPTATION PROGRAM

The representative property

As a basis for comparison, a regional representative property was developed using case studies with local producers, industry surveys, research data, and opinion of experienced industry and DAF personnel.

- 30,000 hectares
- 1,500 AE
- Selling live export steers
- 83% of steers (the lead) were sold at 29 months
- 17% were held over a season (the tail) and sold at 41 months
- The representative property is located near Georgetown with low productivity land types such as Sandy Forest, Range Soil and Sand Ridge

The impact of different steer turnoff ages in northern beef production systems

One of the management options analysed was to compare the profitability of different turnoff ages. The key inputs and results are shown below:

			Representative herd		
Time to turnoff from start of calving period	**6 months 190kg Weaners**	**18 months 308kg Yearling**	**29 months 418kg Steer**	**41 months 529kg Steer**	**53 months 643kg Bullocks**
Total AE	1,500	1,500	1,500	1,500	1,500
Total cattle carried	1,539	1,671	1,740	1,721	1,661
Weaner heifers retained	288	263	233	208	181
Breeders mated	997	912	806	721	625
Breeders mated & kept	930	851	752	672	583
Difference in females kept	**179**	**100**	**0**	**-79**	**-168**
Calves weaned	576	527	465	416	361
Cows & heifers sold	250	229	202	181	157
Steers & bullocks sold	288	257	220	193	163
Total cattle sold	538	486	422	374	320
Average female price	$671	$671	$671	$671	$671
Average male price	$410	$587	$841	$1,098	$1,240
Net cattle sales	$286,505	$304,911	$321,353	$333,395	$307,957
Capital value of herd	$960,150	$984,756	$994,962	$1,063,990	$1,107,056
Herd gross margin after interest **using long term pricing*	$145,365	$161,397	$181,963	$196,063	$179,540
AE gross margin after interest	$97	$108	$121	$131	$120
Difference to base herd	**-$36,483**	**-$20,451**	**$0**	**$14,215**	**-$2,308**
Herd gross margin after interest **using peak market pricing*	$325,294	$392,089	$361,524	$358,494	$353,285
AE gross margin after interest	$217	$261	$241	$239	$236
Difference to base herd	**-$36,230**	**$30,565**	**$0**	**-$3,030**	**-$8,239**

Prices used:

c/kg (liveweight)	**Restocker steer/heifers 200-330kg**	**Light steer 330-400kg**	**Medium Steer 400-500kg**	**Grassfed Bullock 500-750kg**	**Medium Cow 400-520kg**
	D2	**D2**	**D2**	**C-D4**	**D3**
Long term price average	190 steers / 190 heifers	220	240	220	172
Peak pricing (2021-2022)	447 steers / 396 heifers	391	371	359	285

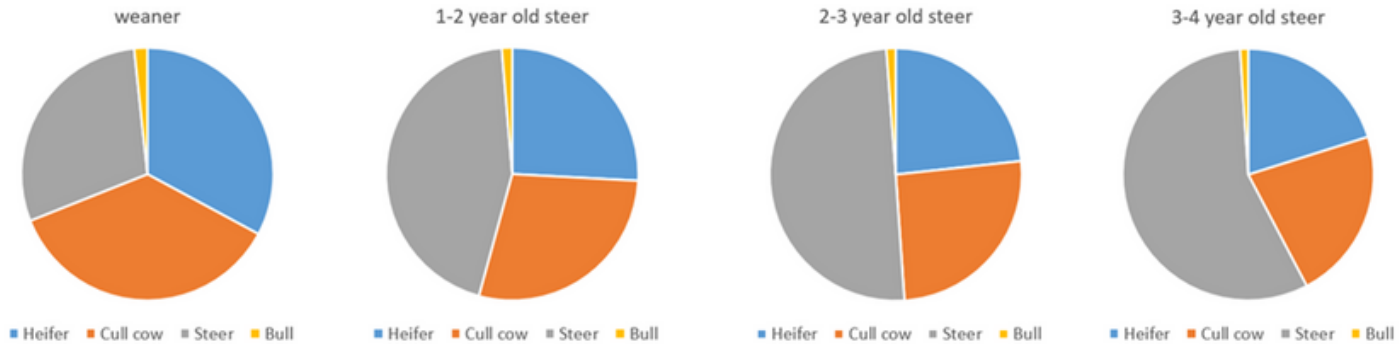
Key factors in determining optimum age of turnoff

The optimum age of male turnoff on beef properties in northern Australia is driven by the relative profitability of breeders and steers. This, in turn, is a function of breeder productivity, steer performance, available markets, and the relative price of weaners and older steers. When weaning rates are below 65%, modelling consistently shows that keeping steers to an older age is more profitable than selling weaners. Weaning rate should be measured by the total calves produced from both weaning rounds, divided by the total breeders put out to the bulls.

Things to remember

- Changing the herd structure does not change your grazing pressure as AE is kept the same
- Older age turnoff of steers and lower cow numbers is a key drought/dry year management strategy, gives more flexibility to reduce numbers quickly
- Turn off as weaners has repeatedly been shown to be the worst performing gross margin option

Proportion of stock classes as age of turnoff change



The Weaner Trap

Converting from a weaner turnoff to older age turnoff model generally results in reduced cashflow. Not all businesses can afford this income sacrifice and become stuck in what is referred to as the weaner trap. This is often an issue for new businesses, those who made temporary changes and those coming out of drought/depleted herds.

If going from an older turnoff to younger turnoff it is only increased cashflow for the short term, it is not increased income in the longer term.

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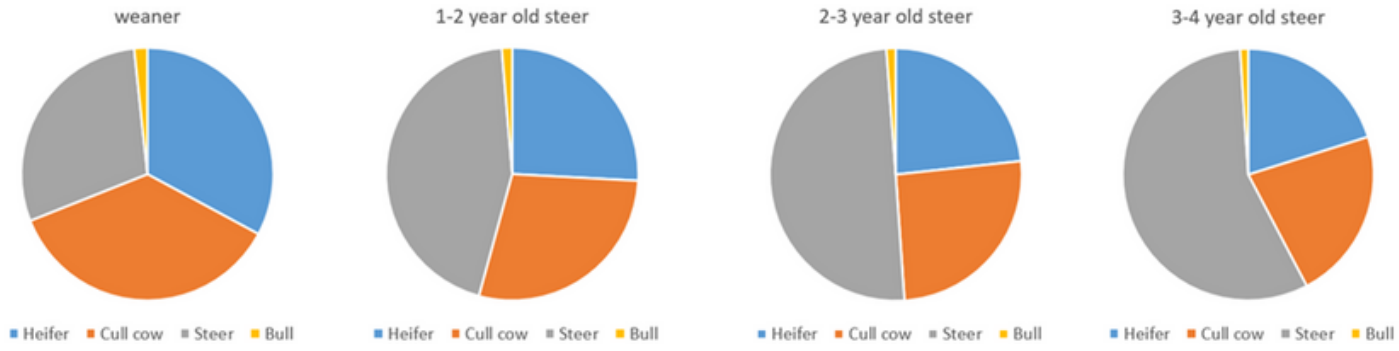

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Key observations from years of analysing beef businesses

The following are some observations that can be made based on the analysis of beef businesses in North Queensland:

1. The profit centre is the steers. The one sure way of really messing up the profit is to get the male turnoff age badly wrong.
2. The worse the breeder performance, the more likely that older male turnoff will be most profitable (depending also on steer performance). Really good breeder performance (80% plus true weaning) might make weaner steer turnoff more acceptable.
3. The better the steer performance (i.e., the better the country), the more is lost by selling the steers as weaners and therefore the more that must be received for them to make weaner sales worthwhile (there is some offset here since the breeders will also be doing better).
4. If good fattening country is available, get the steers on to it as young as possible.
5. The market generally undervalues weaner steers relative to what they should be worth to their breeder as a growing or fattening proposition.
6. Some producers are caught in the "weaner trap", meaning that they are selling a younger steer and know that an older male turnoff would be more profitable but cannot afford the cash flow sacrifice needed to make the change.
7. There is a choice between selling say 50 percent of heifers while keeping the cows to an advanced age, versus selling say 20 percent of heifers and selling the cows younger. The most profitable choice depends on relative branding and mortality rates plus sale prices but will be driven mainly by the relative price of heifers and cows.
8. Supplementation brings with it the possibility of unintended overstocking. Breeder numbers may have to be reduced by 30 percent or more to compensate for the effects of supplementation on herd structure, animal size and animal appetite.
9. In considering stocking rates or carrying capacity, the number of breeders can be very misleading. A particular number of breeders can mean wildly different numbers of total adult equivalents depending on branding rates, age of male turnoff and supplement use. The preferred method of expressing herd size is to use adult equivalents.
10. Over the long term, asset growth may be more important than the physical production from the business; avoid abusing the asset in pursuit of short-term production

The DAF agricultural economists are available to assist you analyse different options for the management of your property.

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Flyer created by:
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