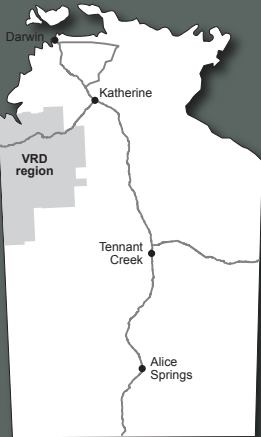




Northern Territory Government



Case Study: Improving weaning rates



- *Victoria River District*
- *Improving productivity and profitability*
- *Reducing emissions from livestock*
- *Potential cash flow from carbon farming*

Can northern beef businesses increase profitability and also generate cash flow from carbon farming?

Much has been said about the “cost-price squeeze” in the northern cattle industry and the need to improve efficiency and profitability. A lot of research in northern Australia thus aims to improve breeder herd performance, reduce mortality rates and increase live weight gain in a cost-effective way.

In addition to improving the efficiency and profitability of cattle enterprises, there are incentives available for primary producers to potentially generate alternative cash flow via “carbon farming”.

The DPIF and Queensland DAFF are investigating how various cattle and land management practices perform in terms of their benefit to beef businesses and whether any of them also have potential for income via carbon farming.

Photo: Dionne Walsh



Australian Government



Queensland Government



“>80% of greenhouse gas emissions in northern beef businesses are generated by cattle”

Calves at Kidman Springs.

Photo: DPIF

Scenario analysis – increase weaning rates

There are two main ways to generate “carbon credits”:

1. By reducing emissions (e.g. methane), or
2. By increasing sequestration (e.g. soil carbon).

These two approaches also have a lot of potential for improving cattle business performance. Here is a worked example based on increasing weaning rate. The scenario is for a 2 400 km² breeder property selling feeder cattle to live export. It demonstrates how the numbers can be crunched and how you might go about testing scenarios relevant to your business.

For this scenario, weaning rates were improved by:

- Reducing stocking rate (adult equivalents) by 5% (property was slightly over-stocked).
- Cull breeders that don't reliably produce calves (using pregnancy testing).
- Best practice weaning (with weaner supplementation).
- Running the heifers in better quality paddocks.
- Keeping some cows of cull age if they are still healthy and pregnancy-tested in calf.





Here's how the numbers stacked up:

	"Business As Usual"	"After Changes"
Total number head carried	25,500	22,970
Total adult equivalents carried	16,600	15,770
Average weaning rate (from cows mated and kept)	58% (20% in second calvers)	69% (50% in second calvers)
Calves weaned	5,829	6,069
Breeder mortality rate	5%	3%
Live weight sold/year	1,787 tonnes	1,797 tonnes
Herd gross margin (after imputed interest)	\$784,000	\$892,000
Gross margin per AE (after imputed interest)	\$47	\$57
Total greenhouse gas emissions per year (tonnes CO ₂ -e)	31,302	28,900
GHG emissions per tonne live weight sold (tonnes CO ₂ -e)	17.5	16.0
Earnings before interest & tax (EBIT) – cattle enterprise	\$765,100	\$795,600
Potential carbon income (gross) from methane abatement	Not applicable	@ \$5/tonne = \$12,000 @ \$10/tonne = \$24,000 @ \$25/tonne = \$60,000

Results

- Smaller breeder herd size, but more calves weaned.
- Lower breeder mortality rates due to better weaning practices and improved nutrition from lower stocking rates.
- More live weight sold per year.
- Improved gross margins.
- Lower greenhouse gas emissions.
- Improved EBIT in the cattle enterprise.
- Potential for carbon income via methane abatement (from the reduction in herd size).
(Note: no methodology is currently approved to realise this income at present).



“This project isn’t about taking country out of production – we want to know whether carbon farming can be integrated into a current cattle business and if there is a strong business case to do so.”

Project Partners

The Climate Clever Beef project is supported by funding from DPIF and the Australian Government until May 2015.

Breeders at Kidman Springs.

Photo: Arthur Cameron

Take home messages

- There can be financial rewards from productivity improvements but do your sums!
- Improvement options are often very sensitive to input costs.
- Focus on more efficient production and associated improvement in livestock income – potential “carbon income” should usually be considered a bonus and not the basis for management change alone.
- Factor in the uncertainty in carbon price and the administration costs of a carbon project.

For more information

Contact the Pastoral Production team at Berrimah Farm on 8999 2011.

Banner photos courtesy of

Dionne Walsh and Department of Primary Industry and Fisheries

