Early joining improves turnover, financial margins & emission intensity in western Queensland

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Introduction
Can carbon farming present opportunities for beef producers in northern Australia?

Much of the available information suggests the main way to reduce emissions is to reduce cattle numbers—but won’t this cost money through reduced productivity?

This poster presents results from one case study in the Longreach district which found:
Breeding herds can become more efficient
The same number of calves can be weaned from fewer breeders
Fewer breeders = reduced input costs
Fewer breeders + the same number of weaners = better margins!
Fewer breeders + the same number of weaners = less emissions!

Results and Discussion
Earlier mating and improved weaning rates:
Increased beef turnover by 33%
Improved herd Gross Margin (GM) twofold
Reduced Greenhouse Gas (GHG) emissions per tonne of beef by 24%
Did not reduce total GHG emissions.

Table 1: Key characteristics and results for the property and regional average herd structures.

<table>
<thead>
<tr>
<th>Herd</th>
<th>No. mated</th>
<th>Breeder wt (kg)</th>
<th>Age at first joining</th>
<th>Weaning %</th>
<th>Beef turn-off (t lwt)</th>
<th>GHG emissions (t CO₂-e)</th>
<th>Emissions intensity (t CO₂-e/t lwt)</th>
<th>GM after interest ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case study property</td>
<td>1007</td>
<td>435</td>
<td>1 year</td>
<td>79</td>
<td>314.2</td>
<td>3,598</td>
<td>11.5</td>
<td>339,765</td>
</tr>
<tr>
<td>Regional average</td>
<td>984</td>
<td>481</td>
<td>2 years</td>
<td>62</td>
<td>236.3</td>
<td>3,593</td>
<td>15.2</td>
<td>157,153</td>
</tr>
</tbody>
</table>

Did you know:
Australian beef production is estimated to produce 11% of Australia’s Greenhouse Gas (GHG) emissions
Carbon Farming projects are based on reducing total farm emissions e.g.
Reducing cattle numbers
Improving breeder efficiency
Lowering age of turnover.

Methods
We compared the case study property with the regional average.

The case study property:
Is 23,000 ha of predominantly Mitchell grass downs
Has an annual average rainfall of 380 mm
Has reduced joining age to 16-22 months and improved weaning to 79% through selection and improved grazing management.

The regional average:
Is based on Mitchell grass country with 400 mm rainfall
Joins heifers at 24-36 months with 62% weaning.

We used:
Total cattle numbers of 1748 Adult Equivalents (AE) for each case
Current regional prices for costs and sales
Breedcow plus for the economic analysis
the Greenhouse Accounting Framework for beef to estimate emissions.

More information
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