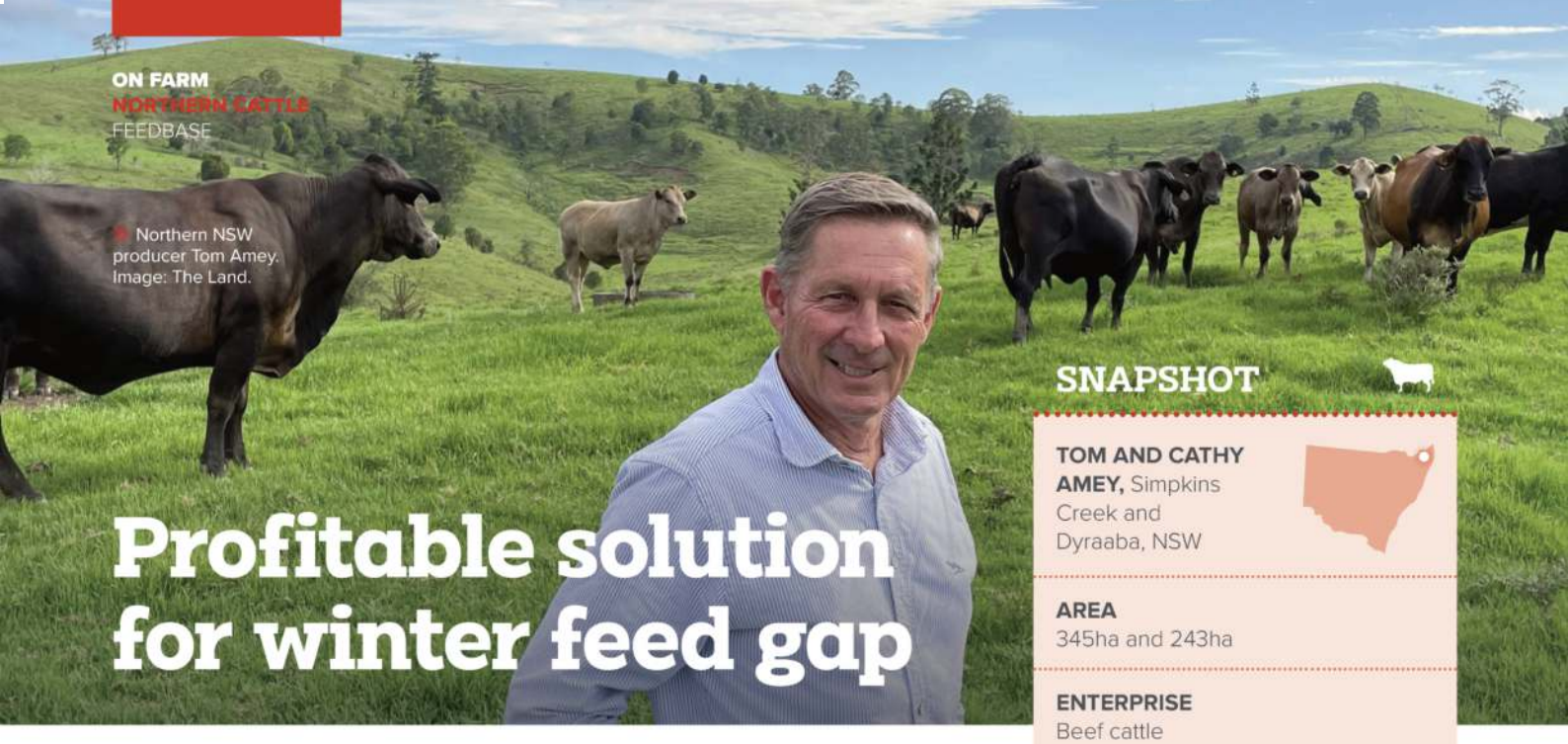


Northern NSW producer Tom Amey. Image: The Land.

Profitable solution for winter feed gap

An MLA Producer Demonstration Site (PDS) project demonstrated the impact of filling the winter feed gap in northern NSW with annual forage such as ryegrass or oats – a strategy which led to an increase in profit of up to $656/ha.

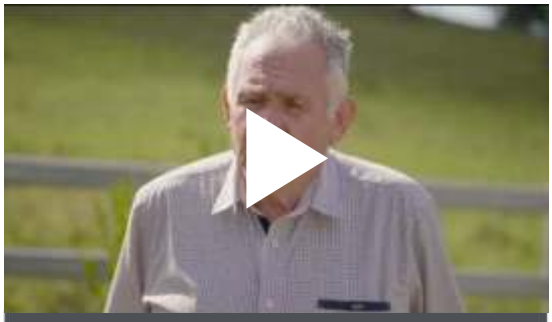
Beef production in the NSW Northern Rivers region, and more widely country east of the tablelands extending from Gympie to Newcastle, is based on tropical grass pasture species.

There's a deficit in pasture growth and/or quality in this region during late autumn, winter and early spring.

This feed gap results in multiple productivity issues in beef breeding herds which include a decrease in:

- the year-round stocking rate
- the condition score at calving and a delayed and decreased re-joining rate
- conception rates
- milk production and calf growth rate
- pasture quality and ground cover.

The PDS project facilitator and beef producer Tom Amey, along with his son Callum, had one of the core sites on part of their Dyraaba property, near Casino.



Casino – Virtual Farm Tour: **Scan this QR code towatch a video with Tom Amey and the other core producers involved in the PDS discussing productivity drivers related to the whole farm system.**

"I've been direct drilling ryegrass into my setaria pastures for several years," Tom said.

"I knew I was gaining some benefits, but I didn't analyse the system to quantify the benefits.

"I was pleasantly surprised when the three-year results were analysed – the results from the other three core sites were also very pleasing."

Boost carrying capacity

The outstanding impact was the increase in the annual carrying capacity.

The 40ha site of tropical grass had 16ha direct drilled with ryegrass and oats and carried an average of 38 breeding cows throughout the three years. This was double the carrying capacity of other parts of the property without winter forage.

"This allowed me to concentrate some of the breeding cows on a smaller area and use the freed-up land to grow out my heifers," Tom said.

An increase condition score of more than one at calving compared to the non-winter forage group flowed on to give benefits such as:

- earlier return to service
- higher conception rate
- allowed the cows to produce more milk and increase the weaning rate of their calves.

The quality of feed produced from the setaria pasture also increased due to mulching in late summer in preparation for drilling the ryegrass – and later accessing the residual nitrogen at the end of spring.

SNAPSHOT

TOM AND CATHY AMEY, Simpkins Creek and Dyraaba, NSW

AREA
345ha and 243ha

ENTERPRISE
Beef cattle

LIVESTOCK
730 head

PASTURES
Setaria, creeping blue grass, paspalum, kikuyu and Rhodes grass; some glycine and siratro, winter forage at Dryaaba

SOIL
Black medium clay and silty clay soils on creek flats, clay loan basaltic soil and sandy loam soil on ridges

RAINFALL
650–1,500mm

Sustainability benefits

In some paddocks the soil organic matter has increased to 11% (12cm sampling depth) over 20 years due to the increased pasture biomass and increased plant material on the soil surface.

The surface organic matter gives many benefits such as:

- soil moisture retention
- decrease erosion
- decreased weed invasion
- reduced trampling.

"I've used the carbon calculator developed by the University of Melbourne and the project results have encouraged me to further increase the productivity of my properties," Tom said.

His Dyraaba property is 179t of Net Farm Emissions ahead while the Simpkins Creek property is 338t Net Farm Emissions behind.

"I only need to reduce the total emissions by 159t to be carbon neutral. I have a plan

> **"It's great to get productivity benefits and sustainability benefits such as increased soil organic matter."**

for this over the next two years and I have been paying a lot of attention to the biodiversity on both properties," Tom said.

"I can increase my profitability and increase the quality of habitat for all the creatures."

Drought lifesaver

Tom found during the drought year of 2019, the 40ha trial area carried 37 breeding cows with no supplementation.

"They did lose about 80kg live weight from calving to weaning however, they were still very strong and fertile. The conception dates and rates moved forward to give an earlier calving the following year.

"Other groups of breeding cows without access to winter forage consumed up to $300 worth of pellets/head (12MJ ME and 14% crude protein).

"It's great to get productivity benefits and sustainability benefits such as increased soil organic matter. However, my beef enterprise is a business and in the drought year of 2019, the difference in profit from the winter forage group and the others was $42/ha.

"Carrying the cows through the drought year allowed me to capitalise on the better weather conditions and cattle prices in the following years, so in 2020 and 2021, the benefit was $547/ha and $656/ha respectively." ■

LESSONS LEARNT

- Bridging the feed gap with annual forage increased our annual carrying capacity.
- Improved surface organic matter has many benefits, including soil moisture retention, decreased erosion and weed invasion, and reduced trampling.
- The quality of feed produced from the setaria pasture increased due to mulching in late summer in preparation for drilling the ryegrass.

TO DO

Scan this QR code to learn more about the PDS.

- Access tools and calculators – including for carbon accounting and feedbase management – at **mla.com.au/tools-calculators**
- Subscribe to the PDS Updates newsletter and access other PDS resources at **mla.com.au/pds**
- Attend a MeatUp (southern) or BeefUp (northern) forum near you: **mla.com.au/meatup** or **mla.com.au/beefup**

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