

Planting the seed for successful pasture

In response to two bushfires and a drought since 2007, Victorian producers Brad and Jen Smith have changed their approach to pasture management, planting nearly half (400ha) of their land to perennial pasture.

Drawing on the support of their agronomist, Neil Moss, and skills gained from producer-led Gippsland Agricultural Group and an MLA Producer Demonstration Site (PDS), they've gained confidence to renovate pastures and reap the results.

Paddock preparation

Soils

Brad starts pasture renovations with cultivation to break up and level soil in paddocks (many which had never been worked), and at least two annual crops to provide solid weed control.

Steep slopes present risks for machinery use and soil retention, so Brad doesn't overwork paddocks, making just one pass with a chisel plough and one with speed discs, immediately followed by seeding and rolling.

Successful pasture establishment requires good soil health and fertility. Brad aims to raise the pH(CaCl₂) of his naturally acidic soils to at least 5.0 before sowing, by working 2–3t/ha of lime into the soil during preparation for summer crops.

In unimproved paddocks, where Olsen phosphorus levels can be as low as 4–5mg/kg, the pre-pasture cropping rotation may be extended to two to three years and 100kg/ha of DAP is applied at each crop sowing to build soil fertility.

Weed control

The initial crop is usually a spring-sown brassica, followed by an annual ryegrass crop in autumn.

"I don't include clover with the ryegrass, so as to allow more options for broadleaf weed control," Brad said.

Over the growing season, the ryegrass is grazed regularly and fed with urea and gibberellic acid to promote strong growth to support calving cows and lambing ewes. An early cut of silage is followed up with 100kg/ha of urea to encourage regrowth, and, in most years, there is a second cut of hay.

Ground cover is also an important consideration on these slopes.

"We're always careful to leave around 200mm of stubble post-cutting, to protect the soil from washing in summer storms."

In recent years, Brad has used a chemical fallow – after the second cut, the ryegrass is sprayed out and left fallow for summer to preserve moisture.

"In the paddocks that have been sprayed out, followed over summer and kept clean, there's so much more moisture. We can get phalaris, lucerne and clover to germinate, without rain, in March.

"The earlier we get that pasture in, the better the pasture ends up being."

Paddocks are sprayed with a knockdown herbicide a few days prior to sowing pasture seed, to minimise weed competition. Introducing direct drilling has enabled greater weed control at sowing.

Sowing

Currently, the Smiths' seed mix is 12kg/ha, made up of 5kg/ha phalaris, 3kg/ha grazing-tolerant lucerne and 4kg/ha clover (arrowleaf, sub-clover, crimson clover), which is sown with 100kg/ha DAP.

"The biggest thing in terms of getting good establishment is correct sowing technique," Brad said.

They use a double-disc drill on a parallelogram set-up, with a press wheel behind it, to follow the contours and achieve the correct depth (10–12mm).

After sowing

Brad aims to get an early broadleaf spray once clover is at three trifoliolate leaf stage.

"It may seem like a lot of spraying, but getting it right early sets the pasture up for a strong future, with less intervention required later."

First-year management involves an early application of nitrogen (100kg/ha of urea) and careful grazing management.

In that first year, a perennial pasture will have two to three grazings, beginning when pasture is around 300mm in height and firmly anchored.

"As a general rule, these pastures are grazed with cattle in preference to sheep, and each grazing event lasts no more than two days, short and sharp just to take the top off the pasture and let light into the base of the plants."

Once late spring hits, Brad will lock these paddocks up to let the phalaris and clover go to seed.

"This makes a big difference to pastures' growth and composition in the second and subsequent years, significantly outperforming pastures that were grazed throughout the spring/summer." ■



Brad Smith with his children Amy and Tyson in a brassica crop which was established to enable good weed control leading into pasture sowing.



An annual crop of ryegrass cleans paddocks up prior to sowing permanent pasture – yields help offset pasture establishment costs.

SNAPSHOT

BRAD AND JEN SMITH, in partnership with Brad's parents **DAVID AND HEATHER SMITH**, Tambo Crossing, Clifton Creek and Sarsfield (share farmed), Victoria



AREA
890ha (across two owned farms)

ENTERPRISE
Cattle and sheep

LIVESTOCK
410 Angus cows with calves, 600 maternal composite ewes

PASTURES
Half of farm is improved pastures (cocksfoot and phalaris-based) a quarter is annuals (brassica crops, annual ryegrass), remainder is unimproved

SOIL
Sandy loam, steep slopes

RAINFALL
800mm

LESSONS LEARNT

- ✔ Correct seeding depth and good soil–seed contact is critical, and to achieve this you need good sowing equipment.
- ✔ Strong weed control before and after sowing reduces competition, vastly improving the success of pasture establishment.



- ✔ MLA feedbase hubs: mla.com.au/persistent-pastures and mla.com.au/healthy-soils
- ✔ MLA PDS mla.com.au/pds
- ✔ Brad Smith smithgraziers@gmail.com
- ✔ Andrew Morelli amorelli@mla.com.au

Working together to boost breeding businesses

Northern Breeding Business (NB2) is a network of beef business groups across northern Australia who are working together to better understand and improve their businesses.

To understand their annual herd, pasture and financial situation, the groups are identifying business opportunities and taking research into the paddock by trialling different management strategies.

NB2 Coordinator, Steve Banney, said the NB2 group facilitators have been working with seven producer groups on their foundational training, which provides a standard framework for producers to collect and analyse important herd, feedbase and business data. This data is owned by the individual producers and is treated as confidential.

“This exercise provides fundamental information to get producers using the same terminology and meaningful metrics, so they are comparing apples with apples,” he said.

“Group members have visited each other’s properties to learn about their production and management systems.

“Combining the data templates, analysis and their understanding of each other’s businesses, the groups will work out what to do in terms of additional skills and knowledge they need to improve their breeding business.”

Producers, together with specialist livestock, business and feedbase advisors, analyse the data and use simple metrics to help diagnose their business.

“The advisors will flag areas where performance is good and not so good and identify areas where more questions need to be asked,” Steve said.

“Data reports are just the first step – it’s the story behind the numbers over many years that provides a good picture of the business.”

What’s coming up

An NB2 symposium at the end of this year will share key learnings, including producers’ journeys and what they have achieved to date. The symposium will include related research and development such as the Calf Alive and uSuckle research projects which are focused on giving producers tools to reduce calf losses and improve breeder productivity.

How NB2 works

NB2 provides northern beef business owners and managers with a unique opportunity to set directions for their business, based on evidence from their data, whilst working alongside other producers to exchange ideas and learn through a network of expertise and support. NB2 is a producer-directed program, delivering relevant customised learning and skills development opportunities. If you’re interested in knowing more about NB2 or joining a producer group, visit mla.com.au/nb2



“The symposium is open to anyone involved or interested in joining NB2 and we’re expecting a good mix of producers, coordinators, facilitators and advisors,” Steve said.

Want to be involved?

The NB2 program is keen to hear from producers who may be interested in being in a NB2 group.

“Any producer who currently operates a beef breeding business in northern Australia with at least 800 adult equivalents is encouraged to make contact,” Steve said. ■

SEASONAL ACTION PLAN

- 1 **Revise your feed budget by assessing grazing pressure on preferred species.** Aim for more than 800kg/ha dry matter and 60% ground cover on productive land types in higher rainfall regions.
- 1 **See how your ground cover is tracking** compared to the broader region you operate in at Long Paddock: qld.gov.au/forage
- 1 **Check out the forecast** for the predicted wet season at bom.gov.au/climate/rainfall-onset/
- 1 **Plan which paddocks to spell** this wet season at futurebeef.com.au/resources/wet-season-spelling-2
- 1 **Get up to speed on climate drivers** and how they influence beef business decisions at nacp.org.au/outreach
- 1 **Attend a Grazing Fundamentals EDGE or Grazing Land Management EDGE workshop** at mla.com.au/edge-network



- ✔ Steve Banney steve.banney@bigpond.com
- ✔ Tony Parker tparker@mla.com.au

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