Perennials provide perfect match for livestock

Perennial pastures have allowed Peter Hayes, Hamilton Victoria, to match feed production with animal requirements, boosting reproductive rates and reducing supplementary feeding. Peter recently shared his optimistic outlook for perennials with Catriona Nicholls.

"Since coming back to the family property during 1995 we have embarked on a complete pasture renovation program and changed our management practices significantly," Peter said.

"We started with a traditional set-stocking approach on run-down, low-fertility annual pastures that could only support low stocking rates and required significant supplementary feeding every autumn.

We now have a productive perennial-based system that supports our goal of increasing stocking rates, and is resilient and persistent across variable seasons.

Species selection

When looking for suitable perennial species we wanted increased dry matter production and persistence first and foremost.

We visited local research trials, listened to local agronomist recommendations and discussed options with other farmers.

Participating in producer groups, such as the Australian Wool Innovation (AWI) *Best Wool Best Lamb* program, high performance weaner program and the Sheep CRC's *Lifetime Wool* program, has also provided invaluable lessons.

Being involved in groups provides the tools so you can do the number crunching and decide what results you want outside unpredictable weather events.

key points

- The right mix of perennials can balance feed supply across the year, balancing out production peaks and troughs.
- Lucerne boosts lamb production and sets maiden ewes up for maximum conception rates.
- Optimal perennial production requires an understanding of plant growth rates and speciesspecific grazing management.

farm info.

Case study: Peter Hayes Location: Hamilton, Victoria Property size: 426 ha Mean annual rainfall: 630 mm Soils: Basalt volcanic soils to loam a

Soils: Basalt volcanic soils to loam and ironstone-based sands **Enterprises:** Fine-wool Merinos (average 17.5 micron), stud rams



Peter Hayes has found that newer lucerne varieties, planted in the right part of the landscape, provide excellent production opportunities for his prime lamb enterprise.

We've been hammered with bad weather, but a perennial base makes it easier to meet ewe performance targets without buying truckloads of grain – perennial pastures and grazing management work hand in hand to drive profit.

Our winter-active pastures are predominantly phalaris, winter-active tall fescue and subclover, with some older perennial ryegrass paddocks. But we are phasing out the ryegrass as it has been less persistent during dry years and is becoming clover dominant, letting in barley grass during summer.

On our heavier soils, we can't beat the phalaris, tall fescue and sub-clover mix for winter production and persistence.

For summer production we initially focused our efforts on chicory, but after seven years it really hasn't persisted well enough.

We currently have about 30 ha of lucerne in three paddocks - paddock size ranges from 10-20 ha.

EverGraze® has shown us that with newer varieties and selection of the right part of

the landscape we can get good persistence and production with lucerne, even during winter. But we are still searching for another summer-active species where we can't establish lucerne.

On our saline country (about 12% of the farm) we have tall wheatgrass and even though this requires careful grazing management, especially during wet years, there is no other salt-tolerant species that can produce comparable dry matter.

We run up to 20 DSE on the tall wheatgrass pasture, but appropriate management is the key. People have bad experiences when they don't match the management to the species.

Matching animals and pastures

We are trying to grow our feed across the farm – not growing more total annual dry matter, but getting better utilisation as it grows across a longer period.

Although perennial ryegrass produces an enormous bulk of feed, it grows all at once – during winter and spring.

Weed risk note: Future Farm Industries CRC does not promote tall wheatgrass in Victoria as the environmental weed risk assessment resulted in a score of Very High in the State. The completed assessment is available at www.futurefarmonline.com.au/LiteratureRetrieve.aspx?ID=4978

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Higher annual stocking rates and better animal performance comes from production spread out throughout the year — matching pasture growth patterns to animal needs.

It is more efficient and, over time, should drive the costs of production down.

Since 2006-07 drought has impacted on our stocking rates. During 2009-10 our mid-winter rates were about 14.5 DSE (annual was about 17 DSE). By 2010-11 our mid-winter stocking rates were 15 DSE and annual was 17.5. While this is not a huge difference, we could have had more stock this spring and summer, but we had enough mouths on mid-winter — it was very wet and we had lots of surface water.

If we can achieve 15-20% better lambing this will address the spring stocking rate without increasing mid-winter rates.

In the future with the use of summer perennials I think an annual rate of 18-20 DSE is achievable.

Lucerne – the flexible powerhouse

Lucerne is the key to the productivity within our lamb enterprise. It provides critical summer feed for weaners from November and also extends the season at both ends to support ewe and wether production.

This year lucerne has been an absolute powerhouse due to summer rain. We lambed down ewes, grazed weaners and during late autumn we grazed wethers off-shears.

We also cut lucerne hay – one paddock was cut on November 16 and grazed by

December 30. I estimated 3-5 tonnes of dry matter so that puts growth rates at 65 to 100 kilograms/day, which is excellent for that time of the year. This performance was repeated during January on 100 mm of rain.

Being able to respond to rainfall at any time of the year, lucerne gives you flexibility to do all these things where other pastures don't.

No one has seen a season like this on our current pasture species — lucerne, phalaris, tall fescue and tall wheatgrass. If we go another four weeks (to the end of April) we will not have fed our sheep for 12 months.

Our Merino lambs were weaned during November and are growing in the range of 50-200 g/day with no supplements.

Last year's Merino lambs cut 3.1 kg greasy wool (averaging 16 micron) at nine months of age and averaged about 73 mm for staple length. Even though they have been bred for a longer staple with no nutritional set-backs, strength was consistent along the staple at 45-50 newtons.

Maximising reproduction

The whole thing starts at weaning. We wean at 12-14 weeks so ewes can regain condition before that dry period during autumn. We aim to have ewes at condition score 3 (minimum 2.7) by joining to maximise conception rates. If you get that wrong you are playing catch-up.

We manage for the end of spring so we can wean early. We aim to have everything going right to manage for joining. Anything

By Anita Morant, DPI Victoria

• EverGraze research at the Hamilton Proof Site demonstrates that the concept of putting the right plant in the right place with the right management improves profitability but Peter has demonstrated this principle also works at a farm scale.

Understanding the animal system and its demands and the potential pasture production curve, which is driven by rainfall and soil type, is critical to putting all the pieces together. It is one thing to increase pasture production, and another to use it effectively.

Autumn and winter create the largest gap in pasture production, which in turn drives overall stocking rate. Most producers try to squeeze the maximum number of DSEs through this period to make use of the spring peak.

The key is to identify the gap and find suitable species that will persist in the environment to fill this gap. Peter's systems are geared to take advantage of the spring peak, so winterspring pasture production is essential.

Where ryegrass wasn't persisting Peter has chosen the 'right' species for the environment – phalaris, winter-active fescue and a sub-clover mix.

The Hamilton research has proven that summer-active pastures help spread feed supply across the whole year by providing a shoulder of high-quality feed during summer-autumn.

This has been valuable in the *EverGraze* system to reduce supplementary feed costs and in 2006-07 lucerne achieved a \$300/ha saving while animals on the ryegrass system were locked in containment and fed.

This saving will not be realised every year but as Peter reveals, the summer-active species, particularly in a spring lambing enterprise, provide more flexibility and reduce the risk across a number of years. under condition score 2.7 is where the low performance creeps in.

During winter we maintain ewe condition leading up to lambing, scan for multiples and singles, and give grazing priority to twinning ewes. We aim to maintain the condition of our single-lambing ewes, but don't let them get too fat so we can avoid lambing difficulties, while ensuring our twinning ewes get enough energy for themselves and their lambs.

I've found you don't have the lambing difficulties and don't have as many undernourished twins and cast ewes.

While the lambs have had the priority over the lucerne during summer, we have followed them with maiden ewes this year to boost their condition score.

We are really starting to make some improvement with better management. We are achieving higher lambing percentages, giving us a reproductive excess and allowing a prime lamb component to our self-replacing Merino system. From lambing percentages of between 50-75% we are now achieving 70-95% although some mobs are close to 100%.

A combination of better genetics and better management is seeing continual improvement." \checkmark

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EverGraze More lives to ck from perennicids

Getting the basics right includes soil fertility, selecting the appropriate species for the landscape and purpose — matching feed supply to animal demand.

It is important not to underestimate the value of summer feed in adding flexibility and a shoulder at each end of the main pasture production period.

The latest results from the Hamilton Proof Site can be found at www.evergraze.com.au EverGraze is a FFI CRC, MLA and AWI research and delivery partnership.

• Anita Morant is the Extension Coordinator at the Hamilton EverGraze Proof Site.

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- Weed risk note: An environmental weed risk management guide is currently being prepared for phalaris. It will be available on the FFI CRC website: www.futurefarmonline.com.au.

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