

Summer-active trials look set to change farming forever

An *EverGraze*™ trial in Hamilton, western Victoria has revealed results with the potential to change the way the region is farmed forever. A switch from winter-active perennials such as ryegrass to deep-rooted, summer-active perennials such as lucerne and chicory has dramatically improved productivity and profitability and made significant inroads into the challenge of containing salinity. Laureta Wallace caught up with David Robertson to find out how sowing summer-active perennials on his property are paying off.

"I'm the chairman of the *EverGraze*™ Regional Group that oversees the Hamilton trials, started about four years ago," David said.

"The Hamilton trial is about looking at how we can take better advantage of summer rainfall in terms of pasture production, matching the pasture system to the animal system and how to reduce water recharge.

The prediction was that 40 per cent of the region would have salt problems by 2020. However we've had quite a few dry seasons and the water tables have gone down.

I was heavily involved in the *Lifetime Wool* project and saw *EverGraze*™ as a natural progression. *Lifetime Wool* looked at an animal's pasture needs and identified the green feed gap during summer and autumn as a critical period in ewe production. I have been a reasonably high stocker and was interested in *EverGraze*™'s combined focus on production, profitability and environmental sustainability – all important to me.

EverGraze™ looks at how pasture systems can be managed to complement animal systems.

The Hamilton trial looks at using summer-active perennials – the only pastures that respond to summer rain.

key points

- Summer-active perennials prove profitable, even during drought conditions
- Profitability can be boosted by more than 50 per cent
- Year-round pasture production provides greater marketing flexibility for prime lamb producers.

farm info.

Case study: David Robertson

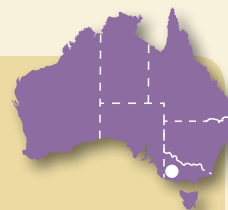
Location: Coleraine, Victoria

Property size: 1200 ha

Mean annual rainfall: 600 mm

Soils: Duplex and clay loams

Enterprises: Wool, prime lambs and cropping



Hamilton *EverGraze*™ Trial Site Leader, Ralph Behrendt (left) and Regional *EverGraze*™ Chairman, David Robertson (right) inspect a lucerne pasture on the trial site.

At the start, the aim of the trial was to increase profitability by 50% and reduce water recharge by the same amount. On the trial sites profitability has been increased by more than 50% with stocking rates increased significantly. However, the 50% reduction of water recharge has been revised somewhat. It is now really all about soil health.

Last season was probably our toughest season ever here. However, the two pasture system plots that maintained their profitability with little need for supplementary feeding were the lucerne/fescue and kikuyu/chicory systems. The comparison plot, which is indicative of traditional pasture systems in this region with 100% ryegrass, cost \$20 more

per head for supplementary feeding than the two pasture systems. Plus the paddock had to be destocked.

Adoption of the pasture systems

I started sowing lucerne about two years ago and it has certainly been beneficial for growing out weaners. The green feed is wonderful for getting them up to weight and for fattening prime lambs.

It has been staggering to see the production from lucerne not only during summer but also during winter. Our belief that lucerne would have little grazing value during winter was incorrect. The trial has shown it is equal to



or better than banquet rye and fescue in its production. A small amount of green feed is very valuable over summer when everything else is dry.

I estimate that during last season, with weaners, I saved about \$6 per head on supplementary feed costs and made an extra \$10/head with store lambs.

In this region the traditional pasture system of sub-clover and rye grass starts to dry off during mid-November. As such, farmers have adapted their animal systems so as to ensure they have their animals finished before this date.

This has meant lambing has been brought back to the start or middle of winter – which is certainly not ideal. When people go to market with their lambs just before Christmas there tends to be a market glut. In the past, farmers have got stuck and have had to feed their lambs during summer when they have had no green pasture.

With deep-rooted summer-active perennials, I'm able to set my prime lamb lambing later (August) and still finish them off on green feed.



Photos: Currie Communications

Summer-active perennials such as lucerne are providing protection against seasonal variability for producers such as David Robertson (left).

They do wonderfully well and grow out into, what we say with Merinos, pretty good animals.

It's about being flexible with your pasture system to fit in with your animal system rather than the other way around.

Using summer-active perennials can also provide protection against increased seasonal variability because of the flexibility it provides. In this region we seem to be getting less rain and the timing of that rainfall is also becoming more uncertain. As such we need pastures that can take advantage of rainfall at any time. Ryegrass simply does not respond to summer rain.

I started sowing summer-active pasture systems three years ago and I am certainly still learning.

I have trialled various mixes of tall fescue/lucerne, phalaris/lucerne, chicory/lucerne. The lucerne/chicory and pure lucerne seem to be the best.

By the end of next year I plan to have 20% of the property sown to summer-active perennials." 🌱

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By Dr Ralph Behrendt, EverGraze™

science behind the story

- Stocking rates and productivity from the Hamilton trial site are 50-100 per cent higher than some of the region's benchmarked farms, while soil moisture levels have decreased under the higher water use of summer-active perennial pastures.

Areas sown to improved varieties of lucerne and chicory have been substantially drier at the start of winter than the region's traditional perennial ryegrass winter-active pastures.

Started in 2004 the trial has shown farmers can grow more pasture, run more stock and produce more wool and meat per hectare while reducing soil moisture at depth.

The production systems being trialled offer alternatives for other high rainfall areas (annual average rainfall 600-800 mm) that traditionally rely on winter-active pastures such as sub-clover and perennial ryegrass.

The Hamilton trial site covers 70 hectares, divided into one-hectare plots. It matches deep-rooted, summer-active, improved perennial pastures to varying soil types on valleys, slopes and crests on the site. It uses top sheep and cattle bloodlines and measures livestock performance (lamb production, wool production and beef liveweight gain) from the different pasture systems. The pasture systems with increased summer activity are compared against a 'best practice' perennial ryegrass system. The 'best practice' perennial ryegrass system was designed and modelled to be 50% more profitable than 'current practice'.

The current practice benchmarks were drawn from the top 20% of farms in the *Hamilton Monitor Farms* project, which has recorded the performance of 50 farms in the region over 30 years. These farms traditionally graze sheep and cattle on perennial ryegrass/sub-clover pastures that are dormant in summer. Both the best practice perennial ryegrass systems

and the summer-active pasture systems are increasing productivity, but each one responds differently to the seasonal conditions at hand.

The key is having a diversity of perennial pastures, some that are summer active and some winter active – that are matched to soil type and landscape and respond to rain when it falls – and then adding high-quality stock and managing them so they can convert as much pasture as possible to lambs, liveweight gain or wool production.

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