

## Pasture options for increased summer production

In 2009, Rod and Bernadette Vearing volunteered their property 'Mooney's Gap', near Ararat in south-west Victoria, to host a Perennial Pasture Systems (PPS)/EverGraze Supporting Site.

Members of the local PPS group had used phalaris as a pasture base, but wanted to see if there was a place for lucerne in this region. Lucerne had been grown successfully on alluvial soils in the region, but was unproven in the Ordovician foothill country.

They also wanted to learn how to best manage phalaris for persistence, as this had previously been a problem in this area.

### Farm background

According to Rod Vearing, Mooney's Gap had a history of low fertiliser inputs when they purchased it, and the Vearings had not significantly improved the pastures since then due to a run of drought years.

"With an initial carrying capacity of about 7 DSE/ha when we bought it, the property did not have the capacity to carry lambs into summer," Rod said.

"But we hoped pasture improvement could lift the carrying capacity to the district potential of about 12 DSE/ha, and maybe give us the option of finishing lambs later at higher weights.

We run about 2000 self-replacing, 19 micron Merino ewes, 1000 wethers and 1500 weaners for wool production and 1000 first-cross ewes for prime lamb production.

We lamb during June each year, with the crossbred lambs sold in late spring. They go to processors or into store sales depending on their weight, which typically averaged 20 kg carcase weight on the run-down pastures.

### key points

- Establishing lucerne and phalaris in the Ararat region has increased production and provided more enterprise options.
- Consider the trade-off between winter production and persistence when selecting lucerne cultivars.
- Changes to an enterprise may be required to take full advantage of improved perennial pastures.

### farm info.

Case study: Rod and Bernadette Vearing

Location: Ararat, Victoria

Property size: 1200 ha

Mean annual rainfall: 600 mm

Soils: Ordovician foothills rising to steep hill country

Enterprises: Wool and prime lambs



At a field day held at the Mooney's Gap Supporting Site during October 2010, Rod Vearing (red jumper) discusses the excellent establishment and production of both the lucerne pasture (left) and phalaris pasture (right). INSET: The phalaris pasture, shown here in autumn 2011, carried an average of 20 DSE/ha during 2010, 2011 and 2012. Rod used it in conjunction with the lucerne to carry the crossbred lambs to heavier weights. (Photos: Rob Shea)

### Site set-up

With the help of site co-ordinator Rob Shea, agronomist Cam Conboy and PPS committee member Paul Harrington, we sowed a 12 ha Supporting Site paddock to Holdfast GT and Atlas GT phalaris, together with a sub-clover mix, during autumn 2009.

At the same time, we sowed a second 14.5 ha paddock to Genesis 7 lucerne, which has a winter activity rating of 7.

### Fodder production

The 2010 and 2011 seasons were exceptionally wet, and the amount of grazing or fodder produced by the two Supporting Site paddocks was higher than expected.

We rotationally grazed the phalaris paddock, on a simple time-based system of one week on and three weeks off, with the focus on looking after the plants.

We calculated that the phalaris pasture carried more than 19 DSE/ha during 2010 and 2011.

Unfortunately we still did not have the animal numbers to take full advantage of the extra feed the lucerne produced, so we cut the paddock for hay in both 2010 and 2011. It yielded on average 3.1 t/ha each year.

Converting this to grazing equivalents, the lucerne carried 13.4 DSE/ha and 17.3 DSE/ha for 2010 and 2011 respectively.

The initial production increase from the base stocking rate has been dramatic, but we realise we have had two exceptional seasons.

### Profitable finish

In 2011, we had 280 crossbred lambs from the initial drop of 1500 which had not made the grade to be sold in late spring.



We decided to keep them to rotationally graze on the two Supporting Site paddocks, together with 120 first-cross ewes, at a total stocking rate of 15 DSE/ha.

In early 2012 it became obvious that even with below average autumn rainfall, we would have sufficient feed on the Supporting Site paddocks to finish the lambs. We therefore contracted the lambs for July 2012 at 26 kg carcass weight and 640 c/kg, which proved to be about 100 c/kg better than the spot delivery price at the time.

Despite running the ewes with the lambs, the Supporting Site paddocks proved to be almost too productive, with 94 lambs discounted for being too heavy when delivered.

## Using the results

I have been so impressed by the production of the Supporting Site paddocks, that even back in 2010, I was already preparing paddocks for future phalaris and lucerne pastures.

I now appreciate the value of long term paddock preparation, and use crop and brassica sowings to control weeds and improve soil fertility before sowing pasture.

Since the Supporting Site was established in 2009, I have sown an adjacent paddock to phalaris in 2011, and another to lucerne in 2013. Further perennial pasture establishments are planned for coming years.

These new pastures have given us the opportunity to change our lamb enterprise from selling at the end of spring, regardless of weight, to finishing to a higher weight and better prices.

Over time we will learn to manage these pastures to ensure we use the right stocking rates and grazing regimes to hit target weights and maximise returns.

Despite some ryegrass weed issues in the phalaris, I wish the whole farm had pastures like the EverGraze Supporting Site paddocks."

For more information visit [www.evergraze.com.au](http://www.evergraze.com.au)

Rob Shea, Perennial Pasture Systems and Jane Court, DEPI Victoria

## science behind the story

- The lucerne sown at Mooney's Gap was very productive in the years of the trial, but its long-term value and best management system in this environment is yet to be established.

To try to predict how well lucerne will produce in the long term, including in drier seasons, Rod's paddocks were modelled in the grazing decision support tool GrassGro, using the Ararat weather data from the past 40 years (1970-2011). Figure 1 shows the estimated long-term average growth rates of lucerne and phalaris as modelled by GrassGro.

### Seasonal impact

This figure shows the long-term (40 year) average and not the year-to-year variation of the phalaris and lucerne pastures. In some years with late spring and summer rains, the lucerne added to the total pasture supply. In other years, total pasture production was reduced due to the lower winter production.

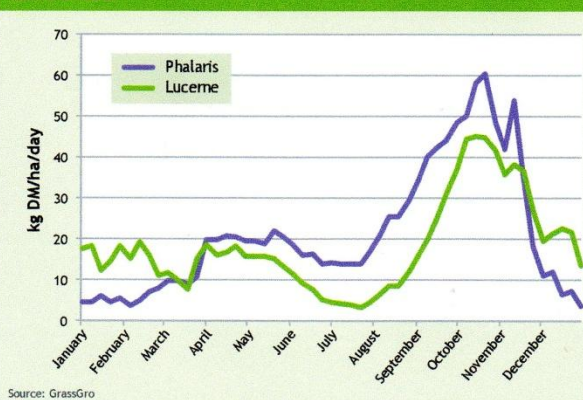
The modelling also indicated that if lucerne was included in the pasture system, the better feed quality in the late spring and summer months made it necessary to carry lambs to heavier weights to maximise the returns (see also the Wagga Wagga EverGraze Proof Site article on page 6-7).

### Consider costs

A perennial pasture can provide options for increased profitability of the farm with the right enterprise choice. The higher establishment and re-sowing costs of lucerne must also be considered.

Establishment costs for the phalaris paddock at Mooney's Gap amounted to \$447/ha, which included three spray

Figure 1 Long-term (1970-2011) average monthly growth rates for phalaris and lucerne at Ararat



Source: GrassGro

applications and applications of lime at 2.5 t/ha, gypsum at 0.5 t/ha and MAP at 100 kg/ha during sowing. Ongoing annual maintenance costs for weed control and fertiliser were \$72/ha.

The lucerne was sown at a cost of \$493/ha, which included a post-sowing weed control spray costing \$64/ha.

In addition to the same pre-sowing sprays and sowing fertiliser program as the phalaris paddock, the lucerne receives phosphorus and potash to replace nutrients removed in hay. Total ongoing annual maintenance costs for the lucerne paddock were \$123/ha.

With an estimated payback period of 4-7 years, lucerne varieties that require re-sowing every 7-10 years need to add a lot of value to production to be a worthwhile investment.

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**Weed risk note:** A weed management guide for phalaris and weed risk assessments for phalaris and other plants being researched by the CRC are available at: [www.futurefarmonline.com.au/about/weedrisk.htm](http://www.futurefarmonline.com.au/about/weedrisk.htm)