

Lifting lamb survival with perennials



Farm info.

Grower: Zac Roberts

Location: 'Strathmore', Dandaragan

Soil type: Sand, gravel, loam and clay

Property size: 3000 ha

Ave annual rainfall: 550 mm

Enterprise mix for 2012: 33% crop, 66% sheep and cattle



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Increasing the survival rate of lambs has been a major opportunity and challenge for the sheep industry in recent years. The uptake of ultrasound scanning to identify twin bearing ewes, and the subsequent improvement in nutrition provided to these ewes, has done much to improve lamb survival. However, the average industry marking rate for twin bearing ewes is still well below the potential of 200%.

One of the contributors to increased lamb survival is the presence of shelter, which helps to keep the ewe on the birth site longer. This leads to greater intake of colostrum by lambs and a reduction in the risk of mis-mothering. The other benefit of shelter is a reduction in exposure, particularly during cold, wet and windy weather. So providing plenty of shelter for twin bearing ewes makes sense, but how could a producer feasibly achieve this?

Using perennials to increase lamb survival

Prime lamb producer Zac Roberts, of Dandaragan, has found a way using perennial pastures. He lambs down his twin bearing ewes amongst subtropical perennial pastures that have been rested to maximise their bulk. So effective was this strategy in 2012, the average marking rate from twin

bearing ewes lambing on perennial pastures was 178%, significantly better than the 150% average achieved from twin bearing ewes lambing on annual pastures.

Zac, along with his brother Jeremy and father Wade, have been sowing perennial pastures on the poorer sandy parts of their Dandaragan farms 'Chelsea' and 'Strathmore' since 2006. The area sown has now reached over 350 hectares, with plans for another 100 hectares in 2013. What initially started out as a way to improve the carrying capacity of their poorest country has now taken on a more strategic role given the large benefits perennials provide to twin lamb survival and the subsequent impact this has on the business bottom line.

The Border Leicester x Merino ewes on 'Strathmore' are scanned in late

February and some of the twin bearing ewes are allocated to the three perennial pasture paddocks in early March each year. The three paddocks (Garland, Hoskins and Wolba) differ in size, soil type and pasture composition, and ewe numbers reflect these differences. Wolba, with stronger soils and more panic grass, is stocked at just under six ewes per hectare, while Garland and Hoskin have poorer sands and mostly rhodes grass, so are stocked at 3 to 3.5 ewes per hectare.

The ewes, mated to Poll Dorset rams, start lambing in late April. They are supplementary fed an 80:20 mix of barley and lupins from the time they enter the perennial paddocks. This is trail fed once per week at 2.5kg per head per week prior to lambing, and then twice per week at 5kg per head per week once lambing commences. In contrast, the twin bearing ewes run on annual pastures receive ad lib hay and more grain. Feeding typically drops back to once per week in mid to late May when the focus is on getting the crop in the ground.

The Strathmore property is blessed with plenty of heavier loamy soils that grow exceptionally good annual pastures during winter and spring. With the twin



LEFT: The perennials provide plenty of protection for new born lambs.

INSET: 2012 sown Gatton panic and kikuyu mix.

ABOVE: Zac with one of the modified points he uses for furrow sowing perennial pastures.

is due to two factors: (1) the perennials are C4 grasses with inherently lower digestibility, and (2) the pastures don't have much of an annual pasture component. As a result, these paddocks are only lightly stocked during winter and spring, typically with a low number of cows and calves.

In early summer, these paddocks continue to be used by cattle with a couple of hundred weaner steers rotated through them during December and early January. At this time of year, as the feed quality of the perennials is superior to the alternative of dry annual pastures, this enables extra weight to be added to the steers prior to them being sold to a feedlot in late January. The perennials are then rested in February prior to the next batch of twin bearing ewes arriving in early March.

Compared to when these paddocks were in annual pasture (comprising mostly wild radish and brome grass), these paddocks now provide significant amounts of summer and autumn grazing (compared to little or none historically). They do however produce less winter feed, but this is an acceptable compromise given the abundance of productive annual pastures on the rest of the farm. The

other major change is ground cover, with almost zero risk of wind and water erosion occurring now that the perennials are established and anchoring the soil. Historically, these paddocks could get very bare over summer and autumn.

Return on investment of sowing pastures

Calculating the return on investment from planting perennial pastures is no easy task. However, given the Roberts family are now weaning an extra 0.3 lambs per ewe from these paddocks, at a stocking rate of three ewes to the hectare, this equates to almost one extra lamb per hectare. That would provide an additional \$50 to \$100 of income for minimal additional cost. At six ewes per hectare (as achieved on Wolba paddock), this equates to almost two extra lambs per hectare, providing an additional \$100 to \$200 income per hectare. Factor in the reduction in supplementary feeding (hay and grain), the improved productivity of annual pastures due to autumn deferral, and the additional weight gain of weaner steers over summer, and its obvious these once poor performing paddocks are now more than paying their way. ✓

STOP PRESS: Zac has recently marked the 2013 drop lambs from Wolba paddock and again got 179%!

bearing ewes running on perennial pastures during the autumn, a number of these annual pasture paddocks can be deferred at the break of the season. When they have produced a sufficient amount of biomass, the twin bearing ewes are moved off the perennial pasture paddocks and into these deferred annual pasture paddocks. This transition typically takes place sometime between early June and mid July each year, depending on the season. In poor seasons, the ewes are kept on perennial pastures longer and supplementary feeding maintained. In good seasons, like this one, ewes are put on to flourishing annual pastures sooner, as the feed quality and subsequent lamb growth is significantly higher on annual pastures (if there is plenty of it).

Managing the poorer country

The Roberts' aim to market all their prime lambs directly off their mother, so rapid lamb growth during winter and spring is critical. As a consequence, no ewes are run on the lower digestibility perennial pastures during late winter and spring. The poorer feed quality of the perennial paddocks at this time

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