

Stocking rates maintained despite difficult seasons

Participation in the Lifetime Wool Project has given farmers from Kingston, South Australia, new management skills and allowed them to maintain stocking rates despite experiencing two dry seasons.

Farm information

Farmers

Doug and Lachie Stewart

Location

Kingston, South Australia

Property size

1200ha

Enterprise

3500 ewes
(Merino and crossbred)

Annual rainfall

525mm

Soil type

Sandy loam to loam with
some non-wetting sand

Soil pH

8.5-9.5 (calcium chloride)

Non-wetting sand: 5.0



Photos: Katrina Copping

Father and son team Doug and Lachie Stewart, Kingston, south-eastern South Australia are from one of the focus farms for the Lifetime Wool Project.

by **Tracy Gillam,**
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Increasing the amount of grain fed to ewes has paid off in higher lambing percentages, improved wool quality and increased fleece weights for Kingston, South Australia, farmers Doug and Lachie Stewart.

The Stewarts increased grain feeding quantities during the autumn feed gap as a result of participation in the Lifetime Wool Project.

Lachie and his father Doug joined the Lifetime Wool Project to obtain quantifiable evidence to support their livestock management practices.

One of the most valuable lessons Lachie learnt from participation in the project was that it was more effective to feed small



Doug and Lachie Stewart's maiden ewes had a 65 per cent lambing rate but they hope to average 85% over the whole flock.

quantities during a long period to maintain sheep condition than to feed large quantities after sheep condition has slipped.

Despite a wet winter and early spring finish during 2004, and an exceptionally dry start to 2005, Lachie and Doug maintained the stocking rate on their farm for which they give partial credit to the new management skills they have learnt through the Lifetime Wool Project.

Merino bloodline

The Stewarts have been buying Merino rams from the local Blackford Merino Stud for 22 years.

Lachie believes the rams are well adapted to local conditions and grow fine wool.

The wool clip from lambs is 16.5 microns, hoggets cut wool between 17.5 μ and 18.2 μ and adult sheep wool is less than 20 μ .

Adult sheep fleece weights average four kilograms, while lambs cut 2.25kg.

The Stewarts aim to maintain their wool micron at current levels and increase overall fleece weight.

Season 2005

The 2005 season had an extremely dry start with farmers around the Kingston area experiencing lambing rates as low as 18 per cent and ewe mortalities of 10-15%.

Lachie fed his sheep during summer to maintain ewe condition and the exercise paid dividends.

Lachie's worst mob was his maiden ewes, which had a 65% lambing rate but he is hoping to average 85% for the whole flock.

Ewe mortality has been less than 2%. Lachie fed his stock from mid-March through until the first green pick at the end of June.

Overall 200 tonnes of grain have been fed but Lachie said it was a worthwhile

At a glance

- It is preferable to maintain sheep condition rather than try to improve sheep condition with large feed quantities after their condition has slipped.
- Increasing the amount of grain fed pays off in higher lambing percentages, wool quality and fleece weights.
- The ability to condition score sheep accurately allows supplementary feed requirements to be assessed accurately.
- The Stewarts use the Lifetime Wool Project mob as an indicator of the condition of the other mobs on the farm.

investment to maintain ewe and lamb health as it is much cheaper than buying replacement ewes.

When the season finally broke, 162 millimetres of rainfall were recorded in just 10 days. Unseasonably warm weather following the rainfall resulted in excellent pasture growth.

Pasture development

Lachie and Doug have always concentrated on pasture development with a range of species on different soil types across the farm.

Each pasture has different peak growth periods so the traditional spring flush is spread over a longer period. Peak growth of annual pastures is from September through to November.

On the sandy country, the lucerne grows all summer if there is sufficient moisture, as do the other perennial species. Lucerne grows well on the sandy soil and is inter-sown with serradella and Puna chicory. Puna chicory was chosen as it has a longer life span than other chicory varieties.

Cocksfoot and fescue have been successful with these perennial pastures now growing even in areas with less favourable conditions.

On the heavier flats, balansa and kyambro Persian clover form the clover base and supply much of the nitrogen required for grass pasture growth.

Tall wheat grass is better suited to low-lying areas on the heavier ground as salinity and waterlogging can be an issue on this soil.

Triple superphosphate is applied annually at a 1kg per dry sheep equivalent of phosphorous. More fertiliser is added if the pastures look like they need it, or if there have been leaching rains on the sandy soil.

Lachie and Doug are familiar with precision pasture growth management through their involvement in Prograze.

The Lifetime Wool Project emphasised the importance of their practice of rotationally grazing paddocks according to pasture



Sheep on a constant plane of nutrition had better staple strength and cut more wool. Lambs with constant nutrition cut an extra 250g/head of wool.



Lachie and Doug Stewart's Merino flock has a 22 year history with the Blackford Merino Stud. The Stewarts breeding objective is to maintain their micron while increasing fleece weight.

growth and not letting pasture feed levels fall less than 700kg per hectare.

The early end to spring 2004 and the extremely dry start to 2005 season resulted in pasture shortages. Lachie is persisting with large mob sizes of 800–1000 sheep with regular movement between paddocks.

Pasture quality and quantity measurements are taken every 4–6 weeks. This will be a useful management tool in the future as it will provide a guide to the energy, protein, digestibility and quantity of feed available across the different seasons.

Lachie said he felt confident that he could now assess the seasonal pasture composition, calculate the shortfall between the pasture and sheep requirements and overcome this gap with supplementary feeding.

Supplementary feeding

In the past, the Stewarts had carried out supplementary feeding based on a guess of what was required.

Supplementary feeding is now adjusted to the last gram of grain per sheep per day.

Before joining the Lifetime Wool Project flock, lupins were fed twice weekly during the autumn feed gap.

With more regular pasture assessments and condition scoring of sheep, Lachie has increased the amount of grain being fed.

Where Lachie's upper limit of grain fed would have been 100g/head/day, this year it has been at 900g/head/day.

While the higher rate of feeding is expensive at about \$10/head, Lachie said it was justified when replacement ewe prices were also high.

Given that the feed not only grows wool but also a lamb, this is money well spent.

Lachie said sheep receiving constant nutrition during the autumn feed gap had better staple strength and cut more wool.

Lambs with constant nutrition cut an additional 250g/head of wool. Lachie found it was better to feed a small quantity over a long period rather than try to improve sheep condition with large quantities of feed after their condition had slipped.

The Lifetime Wool Project team recommends condition scoring at key times such as pre-joining, day 90 of pregnancy, lambing marking and weaning.

Condition scoring

The ability to condition score sheep allows supplementary feed requirements to be assessed with precision.

Like other farmers involved in the Lifetime Wool Project, Lachie believes that condition scoring is a more accurate assessment of a sheep's health than weight.

Although the Stewarts are not yet differentiating their sheep based on condition scoring, it is an aim. At present, the Lifetime Wool Project mob is used as a monitoring tool. If the Lifetime Wool Project mob has decreased in condition score, Lachie uses that as an indicator that the other mobs will have lost condition and will need additional feed. Sheep are condition scored on average four



This balansa, fescue and kyambro pasture has proven successful on many soil types. The balansa and kyambro Persian clover provide much of the nitrogen for the grass component of the pasture.

times each year which Lachie said was enough to provide a useful indication of flock condition. An understanding of condition score and seasonality allows Lachie to manipulate the condition of the ewes so they are in a condition that optimises their chance of conception. Although it is difficult to keep a ewe in good condition if she is feeding a lamb in a paddock with a reasonable stocking rate, it is possible to improve condition score before joining.

Stocking rate

The stocking rate on Doug and Lachie's farm has been increasing during the past few years partly as a result of the Lifetime Wool Project but also due to an improvement in pasture productivity. The current stocking rate is 9DSE and will not be lifted to more than 10DSE until pastures and seasons improve.

Parasite burden

The parasite burden has decreased during the past three years with monthly faecal egg counts used to monitor the worm burden.

Only one summer drench was required during 2005 because better sheep condition had not allowed parasites to take hold. The worm burden is monitored carefully to avoid unnecessary drenching. This is important as resistance to Ivomec was already prevalent in the flock.

Paired paddock evaluation to show best bet option

A Lifetime Wool Project focus farm paired paddock evaluation at Doug and Lachie Stewart's property, Kingston, South Australia, is being carried out during 2005 to compare a best bet option with normal practice.

Ewes were mated during late January 2005 as a single flock and managed under normal conditions until Grazfeed predicted the condition score of the ewes would fall below 2.7. This occurred during early April at which time the ewes were divided into a normal practice mob and a Lifetime Wool Project mob.

The Lifetime Wool Project mob maintained condition at condition score 2.7 between day 100 of pregnancy and lambing.

The Lifetime Wool Project ewes were further divided at pregnancy scanning into a single and twin mob and managed accordingly. At lambing the single-bearing Lifetime Wool Project ewes were

re-combined with the normal practice ewes and managed together during lactation, while twin-bearing ewes were managed according to their requirements.

Given the seasonal conditions there was a large gap between feed available and ewe requirements.

Using Lifetime Wool Project principles, it was demonstrated that it is possible to manage ewes to attain predicted condition score in a winter lambing situation in the SA environment.

The ewes were mated during January and started lambing at the end of June. There was a clear difference between the condition of the two groups of ewes going into lambing.

Summer and autumn conditions were very dry and up to 900 grams/head/day of grain (lupin and barley) supplement was required to maintain ewe condition through the latter stages of pregnancy.

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