Sheep Genetics

Breakfast Forum



Genetics in Practice

Lambex
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Performance of the Australian sheep industry

Hamish Chandler, Manager, Sheep Genetics, Armidale NSW

Sheep Genetics is the national genetic evaluation service for the Australian sheep industry through its MERINOSELECT and LAMBPLAN Australian Sheep Breeding Values (ASBVs). ASBVs rank animals on their genetic merit for breeders to use as a selection tool to compare between years, flocks and breeds. Nearly 1000 Australian and international flocks submit performance and pedigree information annually to Sheep Genetics for ASBV calculation.

Sheep Genetics delivers value to the commercial sheep industry through an increased rate of genetic gain in the seedstock industry that is passed on when clients purchase rams. Genetic progress has been tracked since the launch of Sheep Genetics for major production traits including growth rates, carcase characteristics, fleece traits and reproductive performance.

Analysis of Sheep Genetics data from the past 10 years shows that genetic selection has delivered benefit across the industry, but that benefit to flocks is different between the top and bottom 20%.

The Merino Production index in MERINOSELECT has a difference of \$1.2/year between the top 20% and bottom 20% of flocks in terms of the rate of genetic gain being made.

The maternal\$ index in the LAMBPLAN maternal analysis sees a \$1.90/year difference between the top 20% and bottom 20% flocks on rate of genetic gain.

The LAMB2020 index in the LAMBPLAN terminal analysis has a \$0.61/year difference between the top 20% and bottom 20% flocks on their rate of genetic gain.

Genetic progress will differ depending on the breeding objectives of individual breeders. To maximise benefit, commercial breeders should ensure that they are selecting for traits that will have the biggest impact on their bottom line.

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How does genetic improvement in sheep compare with other species?

Dr Robert Banks, Director AGBU, UNE Armidale NSW

Progressive sheep breeders and producers will know that the Australian sheep industry is making good genetic progress, helped by widespread use of LAMBPLAN and MERINOSELECT. But how does that progress compare with what's happening in other species?

To answer this question, we can make a simple, practical comparison:

- Get the current genetic trends in sheep and cattle (beef and dairy), expressed in \$ per breeding female
- Convert that to \$ per DSE per year, and compare amongst species, including comparing with current gross margins in each species

When we do this, genetic progress in sheep – meat, dual-purpose and wool – is running at about \$0.50-1.00 per DSE per year, which compares very favourably with the trends in beef and dairy cattle. Expressed as a % of typical operating profit per DSE, it's running at around 5-10% improvement per year.

This means that genetic progress in sheep is helping maintain the competitiveness of sheep production as a land use – genetic progress is improving returns faster than the cost-price squeeze is eroding them.

Good as this story is, there is room for improvement. Ram breeders should be looking to increase their rate of progress, primarily by making more use of high Indexing young rams, coupled with use of genomic testing and potentially advanced reproductive tools such as Embryo Transfer.

Ram buyers should encourage their ram breeder to make as much progress as possible – the improvement in the rams you buy year on year goes straight onto your bottom line.

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Proof of Profit:

Greg Johnsson, Sheep Owners Academy, Kingscote South Australia

Low profitability and low productivity growth have been consistent features of the Australian sheep industry for the last 20 years.

The latest ABARES Farm Survey Report estimates the average profitability of Australian sheep enterprises over the period at 1.1% and total factor productivity growth at 0.1%!

In the period 2011/12 – 2013/14, 62% of sheep farm businesses surveyed produced a negative business profit and average profitability levels fell to 0.73%.

This contrasts starkly with the high performing 25% of sheep farms that have averaged 5.9% profitability over the same period and the gap between the top farmers and the rest is increasing.

And here's the interesting thing – high performing sheep farms are found in all regions of Australia and in all farm sizes!

So how do they do it? What do the top 25% do that sets them apart for the rest and allows them to continue to run extra-ordinary businesses?

Greg will take you through his Profit Progression Program for TOP Producers and show you how a struggling specialist wool producer on Kangaroo Island transformed his business in to a money making machine with a 10 year average profitability of 7.6%.

The take home message is that all of the strategies and systems described will work equally well in wool flocks, prime lamb flocks and dual purpose sheep flocks – just the emphasis changes.

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