



Sheep CRC ASBV Case Studies

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ROY AND NAN ROBERTSON WANDERRIBY, WOLLOMOMBI, NSW

Lifetime commercial sheep producers Roy and Nan Robertson are combining their industry experience and eye for good stock with the use of ASBV's to deliver improved wool and superior first-cross lambs.

Using ASBVs has given them confidence in breeding a flock that can handle the environmental conditions at their two properties near Armidale, in the NSW New England region.

"Prior to using ASBVs, rams were selected by looking at sheep and wool quality and targeting Merinos with the highest clean fleece weight and for terminal sires the biggest Dorset and Border Leicester rams with best wool quality," Roy said.

"We now use ASBV information as well and believe it is a 'no-brainer'.

"We are comfortable with using measurements in livestock production and have seen the advances that EBVs have delivered to the cattle industry. We sell wool with prices largely determined on test results and we sell our lambs over the hook, where having quality carcasses with even cover is important."



The Robertsons run two distinct operations at two blocks located 30km apart in distinctly different environments.

At 'Kilcoy', a trap, granite and basalt property located at 1000m elevation on the central eastern side of the Northern Tableland, the family runs a self-replacing Merino flock and produces first cross (F1) Border Leicester replacement ewes for the terminal breeding flock on the second block 'Wanderriby'.

'Kilcoy' is home to 1550 Merino ewes, with 250 joined to Border Leicester rams, as well as a commercial Santa Gertrudis cow herd. Merino wethers are also run in varying numbers, depending on the season, which on average delivers 925mm rainfall, predominantly in summer, to mainly native pastures.

The adult sheep at Kilcoy average 18.5 micron, while the hoggets average 17.3 micron, with an average 80% yield.



"Our scanning results for the mature merino flock joined to Merino Rams at 1% are: Twins 18%, Singles 77% and Dry's of 5% and the Merino ewes joined to Border Leicester rams is Twins 28%, Singles 70% and Dry's of 2%" Roy said.

'Wanderriby' is 60 km east of Armidale and in a very different climate – it is close to the edge of the tableland so the air currents above the Macleay River deliver it a milder climate and a season which begins a month later than 'Kilcoy'.



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The soils here are predominantly basalt, but with some soft trap soils along the Oaky River. Pastures are supered natives with added clover, rye and cocksfoot, which are being replaced with high performance perennial rye, clover, herbs, prairie and fescue species to finish both cattle and lambs. Wanderriby runs 850 first-cross ewes, which cut 27.5 micron wool.

“Our scanning results in 2011 for the F1 ewes mated to poll Dorset rams at 1% are: Triplets 6%, Twins 63%, Singles 29% (with Early Singles 20%, Late Singles 9%) and Dry’s of 2% giving us a 173% to ewes mated. Our marking percentage is usually around 165%,” Roy said. “We retain F1 ewes up to eight years as long as they perform and are sound at joining.”

Rainfall of 1050mm at elevations of 1100-1250m results in plenty of foggy and drizzly days which add an extra challenge to sheep breeding and management.

Breeding Objectives:

When selecting rams the Robertsons diligently refer to ASBV figures, but note that they must also stack up visually.



“Good structure is a very important criteria in selection to obtain as even as possible a line of rams to produce the breeders to maintain consistency in production,” Roy said.

For the Merino flock a strong emphasis is placed on worm egg count (WEC) to increase natural resistance to worms in their challenging climate, fleece weather resistance and feet are also critical.

They are also aiming to breed plainer bodied sheep, with improved fertility, and increased body weight and fleece weight, while also holding the fleece at around 19 microns in adult sheep.

“You have to choose the MERINOSELECT index that you feel matches the priorities for your breeding enterprise, also you can tweak it to suit your objectives by increasing the value of the trait that you feel that you need to.” Roy said.

“For instance, I accept rams with a higher yearling fibre diameter (YFD) than the flock average.”

“The income from surplus sheep is very important so bigger plain ewes are preferred to the smaller ‘necky’ type sheep that are common in this area.”

The breeding priorities for the first-cross flock are similar, with strong emphasis on the dollar per head profit drivers, such as growth rates, WEC and fertility (the number of lambs weaned (NLW)). In particular, the Robertsons are using ASBVs with a view to slightly increasing fat scores and eye muscle depth (EMD).





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Ram selection:

The Robertsons aim to buy rams in the following ASBV ranges but not below flock averages for other traits.

Merino rams:

The use of ASBVs are balanced with visual assessment and phenotypic scores.

Cresbrook Stud rams are used as they are proven to suit the conditions encountered on the Robertsons' operation.

"The Cresbrook Stud has been testing and using ASBV data for many years and so they have a good balance of figures across all traits," Roy said.

Roy likes rams to be in the top 25-30% for yearling worm egg count (YWEC), yearling fleece weight (YGFW), yearling weight (YWT) and the 14% plus staple strength index (14% + SS) and looks to maintain not lower yearling fibre diameter (YFD)

On the visual scores, he looks for the bigger scrotal circumference (SC) and looks for score 1 for feet and a high score for weather resistance (WR).



Border Leicester and Terminal:

Cross-breeding: For their prime lamb operations, the Robertsons buy Border Leicester rams from LINTON \$Superborder\$ for the first-cross, as well as terminal Dorset rams from Yasloc Stud.

For both FI & Terminal joinings, the predominant selection criteria are rams in the top 15-20% for post-weaning worm egg count (PWEC), weaning weight (WWT), maternal weaning weight (MWWT) and post-weaning weight (PWT).

They select rams in the top 30% for post-weaning eye muscle depth (PEMD), number of lambs weaned (NLW), and post weaning scrotal circumference (PSC).

For birth weight, Roy aims to "stay under +0.50 for birth weight (BWT) and I don't have any lambing problems at that figure."

"I like to have multiple lambs with bigger birth weights and feel we get better lamb survival rates."

On the visual assessment, Roy is particular about checking feet for the environment and shoulders to avoid birthing problems.



ROY AND NAN ROBERTSON
WANDERRIBY,
WOLLOMOMBI, NSW



Benefits from using ASBVs – Production and Profit Improvements:

- * Genetic improvements have given their prime lambs a 7-10kg increase in saleable live weight over the last 15 years from similar pastures – from 38kg to 45-48 kg.
- * Terminal lambs are turned off a month earlier than previously, with increased carcass weight and tighter fat specifications in even consistent lines.
- * The Robertsons buy only the highest performing rams from their chosen studs, and aim to use just 1% rams at joining which importantly reduces the cost per lamb.
- * Scanning allows the benefits of increased multiple lambs to be well managed.
- * Lower birth weight index rams are preferred for maiden ewes.
- * Selecting rams with good WEC figures seems to be paying off.

“The big benefit of using ASBV’s is assisting in producing even lines, no matter how big the operation is, it is so important to your actual profit. Whether filling pens, trucks or bales this is where a lot of your costs of production can be improved.” ” Roy said

“The benefits from selecting rams on ASBVs can be hard to quantify in dollar terms but the combination of management and genetic improvements has given us larger sheep with bigger frames – surplus Merinos are more saleable; terminal lambs are significantly larger and more even in growth and fat cover and are turned off earlier; and critically, bottom line is good and improving.”

