



Sheep CRC ASBV Case Studies

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Author:	Sheep CRC
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**MATT & BEC MACARTHUR ONSLOW
CANNANBRI, WALCHA,
NEW ENGLAND REGION, NSW**

- * **Ram selection using ASBVs has increased fleece weight, whilst maintaining micron and quality**
- * **Studs not providing ASBVs are not considered**
- * **Rams must be able to withstand high rainfall and cold weather and maintain health, productivity and wool quality**



Selecting rams with a combination of high performance figures in the traits most suited to their operation is delivering real productivity improvements to the flock of Matt and Bec MacArthur Onslow.

The MacArthur Onslow's two properties, 'Cannanbri' and 'Eulo', are part of a diversified family business centred 25 kilometres south of Walcha on the southern end of the Northern Tablelands.

Since adopting the use of ASBVs when selecting rams, the flock has recorded improved fleece weights, weaning weights and weaning percentages, which together have significantly improved the business's bottom line.

"The main breeding objectives are to increase clean fleece weight while maintaining micron, yield and wool quality," Matt said.

"I believe that we have benefited strongly from genetic research and that the stud industry needs to continue to focus on performance.

"Now I do not look at a Merino stud that does not supply and use ASBVs in their breeding program."

In the past rams were selected by looking at the sheep and wool quality, as well as the fleece cuts, but the use of ASBVs for wool traits has now given him added confidence in the animal's genetics.

Matt selects rams with a combination of high performance figures. Rams must have ASBVs in the top 10-30% for yearling weight (YWT), yearling fleece weight (YCFW) and average fibre diameter (FD), as well as a physical type that suits the operation and environment.

Through auction, he purchases Alfoxton Poll and Yalgoo poll rams for the Cannanbri flock, and Yalgoo rams for the Eulo flock.

Matt expects that these studs will continue to make strong genetic gains and pass those gains on to his flock. And he expects they will continue to breed a consistently even type, as evenness of type is an important attribute to the buyers of his wool and surplus sheep.

"I prefer to purchase from the same studs as their sheep are proven to have a strong constitution with even constant wool that handles our challenging weather conditions," he said.

"In 2010 there was 1400mm (56") of rain on Eulo, but we saw virtually no fleece rot or colour, or feet problems, and very little fly on our unmulesed sheep."

The properties cover 3200 hectares, with annual rainfall of 850-900 mm, of which about 60% falls in summer, while winter delivers approximately 80 frosts.



MATT & BEC MACARTHUR ONSLOW CANNANBRI, WALCHA, NEW ENGLAND REGION, NSW

“Weather resistance and constitution - especially feet - are critical for this challenging environment,” Matt said.

“We are looking to make gains in wool cut per head and in weaning weights, rather than chase lower micron sheep that may not suit our environment.

“Worm resistance is desirable but not actively sought as we have found that a well fed healthy animal has strong natural resistance.”

The Macarthur Onslows’ properties are at elevations of 1100-1200m, and have soils of about 50% basalt and 50% trap.

Pastures have had single superphosphate treatment applied regularly over many years. The pastures have been carefully cleared to retain shade and shelter, and have been planted to Demeter Fescue and white clover.

Newly replanted paddocks and some with better species are rotationally grazed at times. Both properties are conservatively set stocked, with a Merino breeding flock and some wethers held over in good years.

Matt prefers to build a feed wedge for winter and does



not winter feed so stocking rates are 7.4-10 DSE/ha (3-4/ac).

“Sheep are shorn every nine months to optimise wool growth and length. They deliver an average 4.9kg of superfine spinning style wool (on an annual basis) with 75% yield, with our grown sheep averaging 17.1 micron and hoggets a low 16 micron.

“Our ewes have good frames and strong constitutions. In good seasons, ewes are held over from six up to eight years without losing wool quality, though there is some decrease in the cut of the older sheep.

“If the season deteriorates the extra wethers held over and older ewes can be culled without damaging the breeding ‘core’ stock.”

Rams are joined at a rate of 1.5%, while marking rates average 94%. Lambs have not been mulesed for about eight years. Sheep variable costs are low at about \$14 per head.

Management plans are not “set in concrete”, with Matt and his manager at Eulo, Michael Wall, considering opportunities as they are presented in different seasons.

In the past the business traded cattle but in recent years these have been replaced with an increased number of breeding ewes as the sheep returns have proven to be 3.3 times higher than cattle on a DSE basis. Agistment cattle are now only taken opportunistically.





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Benefits from using ASBVs – Production and Profit Improvements

- * Wool cuts in the past 2- 3 years have averaged 4.9 kg/hd compared to 4.3 kg/hd four years ago, with similar yields and stocking rates. On November 2011 wool prices, the 0.6kg/head increase in 17.5 micron wool gave a net increase in returns of about \$7/hd.
- * Increased lambing percentages have been hard to quantify due to the recent seasonal variability, but higher weaning numbers have been recorded. Marking in the wet year of 2011, including maidens, was over 100%.
- * Wool is maintaining and increasing in quality especially in extremely wet years like 2010/11.
- * Weaning weights and maiden ewes are heavier and bigger, with fewer culls.
- * With their large frame, strong constitution and consistent type, surplus sheep sell well.
- * Matt has found the higher performing rams to be more virile, allowing him to use a lower ram percentage and still obtain good conception rates. This has allowed them to budget for fewer rams but of a higher ASBV ranked quality for an equal cost per lamb.
- * The sheep enterprise financial returns – net dollars per head has increased partly because of the recent increases in wool and livestock prices, but also because the ASBV-driven wool cut and body weight increases have also added significantly to returns.





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“Using the figures”

Matt and Bec use ASBVs to help them select Merino rams that will pass on the right genetics in the flock.

A ram’s appearance is affected by the level of feeding, its age, whether it is single or twin, if it was born in a good or bad season and if it’s dam was a maiden or adult. ASBVs remove these effects so that sheep producers can directly compare the genetic value of rams with greater confidence.

ASBVs are reported as variations from the average of the animals in MERINOSELECT in 1990. This means that the average in 1990 is set to zero and all ASBV figures are deviations from zero.

For some traits the average ASBV for animals in MERINOSELECT will have increased since 1990 (Clean Fleece Weight), while others will have declined (Fibre Diameter) or stayed about the same (Fat).

The MERINOSELECT Percentile Band Report is an important tool for selection of Matt and Bec’s rams. It provides a basis for comparing the performance of all rams born in a particular year and identifies the ones that meet their selection criteria.

TRAIT	YWT	YCFW	YFD
What Matt and Bec are looking for	Rams in the top 10% - 30%	Rams in the top 10% - 30%	Rams about average
ASBV value required	Rams with an ASBV between 7.4 and 5.0 kg	Rams with an ASBV between 19.3 and 12.2%	Rams with an ASBV around -1.3

