



Sheep CRC ASBV Case Studies

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TRENGOVE PARTNERS BROUGHTON PARK SPALDING, SA

- * Experience with Breedplan in Shorthorn cattle gave confidence in the use of breeding values for sheep
- * ASBVs used for selection of Merino and White Suffolk rams
- * The Dual Purpose 7% index is a good initial screen for Merino rams

A Merino breeding flock built on superior genetics selected with the help of Australian Sheep Breeding Values (ASBVs) is transforming a business traditionally associated with cattle production.

“Broughton Park” near Spalding in the Mid North of South Australia, has been in the Trengove family for nearly 100 years and is well known as the home of the Broughton Park Shorthorn Stud.

However, with the recent sale of the Shorthorn herd and the next generation of the Trengoves taking up the reins, “Broughton Park” is moving into a new era focusing on sheep and cropping enterprises.

“Broughton Park” is currently operated by Glen and Lindley, together with their sons, Tom and Sam, and Sam’s wife Rachel.



Tom, who concentrates on the sheep whilst Sam looks after the cropping operation, says that sheep have always been run on “Broughton Park” but numbers are currently being expanded.

“We currently run about 1700 ewes joined to a mixture of Merino and White Suffolk rams,” Tom said. “Our aim is to increase this to 2000, of which 1500 will be joined to Merinos.”

Every year both Merino and White Suffolk rams are purchased at on-property sales in the Mid North, Eyre Peninsula and South East areas of South Australia. Where possible, the Trengoves focus on rams with ASBVs to aid in their selection.

“In the past, Broughton Park Shorthorns was a foundation member of the Shorthorn Group Breedplan,” Tom explains.

“We learnt from experience with the Shorthorns that by selecting animals with the use of breeding values, much faster genetic gain could be achieved and those studs that were not involved quickly got left behind.

“Our experience with the Shorthorn Group Breedplan gives us confidence to use ASBVs in our ram selection. We know that by using ASBVs the traits that we select for in the rams will show up in the progeny. What we breed for is what we get.”



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Whilst all the White Suffolk rams the Trengoves purchase each year have ASBVs published in the sale catalogue, it's not always the case with Merinos.

"We would prefer that all rams we bought had ASBVs, however at the moment in Merinos that is not always the case and sometimes we have to compromise," Tom said.

"We would definitely be prepared to pay more for rams from a stud that has the same breeding objective as ours and actively uses the technology of ASBVs, as we would be buying them with the confidence that they were going to add to our profitability."

The "Broughton Park" Merino breeding program is aimed at delivering big, plain-bodied Merinos, producing high-quality wool. To achieve this, Tom focuses on breeding values for fibre diameter, clean fleece weight, body weight and uses the Dual Purpose 7% index as an initial drafting gate when selecting rams.



"I mark up the sale catalogue before the sale based on the index and when it comes to the sale, I won't come below that cut off point," Tom said. "For the White Suffolk rams, the ASBVs and the indexes are the most important part of selection."

"Our crossbred lamb operation is all about meat production and traits like post-weaning weight (PWT), fat (PFAT) and eye muscle depth (PEMD) are things that you can't see when you first look at a ram."

"ASBVs give us the confidence that a ram has the genes to provide his progeny with those traits we are looking for."

When buying the Merino rams, Tom says visual assessment of wool quality is equally important as ASBVs.

"We look for rams that stack up on ASBVs as well as have the quality of wool we are aiming for," Tom said. "Because there aren't ASBVs for wool quality, we use a balanced approach between visual selection and using ASBVs."

Replacement ewes are selected on "Broughton Park" with the assistance of individual fibre diameter measurements that are taken up the race prior to their first shearing.





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“We are really lucky to have the services of Paul Cousins as both our On Farm Fibre Measurement (OFFM) operator as well as our sheep classer,” Tom said. “Paul really understands ASBVs, so he also helps with our ram selection.”

Currently all wethers are sold as lambs with a target carcase weight of 24kg. To achieve this, the wethers are run on the dryland lucerne paddocks that used to be reserved for the Shorthorns (the property receives an annual average of 450mm of predominantly winter rainfall). The wethers are also given access to barley through self-feeders.



“Previously the wethers were finished in a feedlot,” Tom said. “However that was very intensive and since the cattle have been dispersed we’ve found that we now have the room to finish them in the paddock with access to grain.”

With the change of finishing systems, it’s difficult to accurately put a number on the decrease in turn off time that has been achieved by selecting rams based on growth traits. Whilst Tom says the crossbred lambs are of course much faster to finish than the Merinos, the focus on plain bodies and growth in the rams has certainly improved the Merinos finishing time.

The Merino lambing on “Broughton Park” averages about 85% from the first joining. After scanning, the dry ewes are given a second chance and rejoin which results in an overall higher lambing percentage. Tom conceded there is room to improve this production trait and is currently working on improving the number of ewes getting in lamb during the first joining through management practices.

“We don’t currently focus on fertility as a genetic trait when selecting rams. The same goes for worm egg count,” Tom said. “That’s not to say we mightn’t in the future, but for now we think we can manage for improvements in those production traits without making our breeding objective too complex.”

And given the current breeding objective focuses on the key profit drivers of fibre diameter, fleece weight and body weight, the Trengoves look set to reap the benefits that Merino production has to offer in their environment.



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“Using the figures”

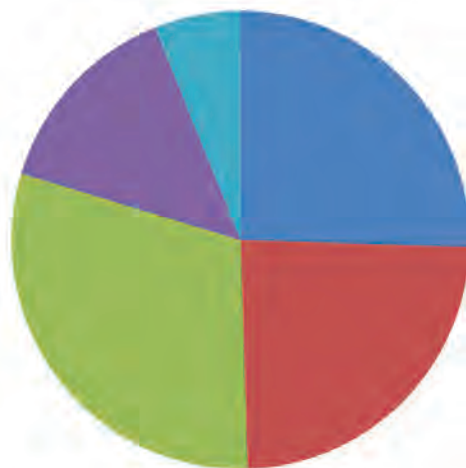
The Trengove family use the Dual Purpose 7% Index when purchasing rams. The index provided by MERINOSELECT is an important tool for screening rams prior to sale. It combines the ASBVs for traits that the Trengoves are interested in – body weight, fleece weight as well as micron and fertility - into one simple figure which can be used to rank the rams offered for sale.

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 its dam was a maiden or adult. ASBVs and indexes made up of a combination

of ASBVs remove these effects so that sheep producers can directly compare the genetic value of rams with greater confidence.

The pie chart below illustrates the traits which make up the Dual Purpose 7% Index and the amount of emphasis that is placed on each of those traits in brackets.

Dual Purpose 7% Index



- Clean Fleece Weight - CFW (25.5%)
- Fibre Diameter - FD (24%)
- Weight - WT (30.2%)
- Number of Lambs Weaned - NLW (14.2%)
- Staple Strength - SS (6.1%)

Over a ten year period, selecting rams on this index, the Trengoves can expect to achieve the following improvement in the traits of interest;

- 2.9% improvement in Clean Fleece Weight (CFW)
- -0.6 micron reduction in Fibre Diameter (FD)
- 4.9 kg improvement in Body Weight (WT)
- 2.5% improvement in Number of Lambs Weaned (NLW)
- 0.2 N/ktex improvement in Staple Strength (SS)

