



Sheep CRC ASBV Case Studies

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ANDREW & PAULINE ROBERTS KAYANABA DANGARAGAN, WA

- * Rams in the top 30% for the Carcase Plus Index are used to produce 20-22kg carcase lambs.
- * Superior genetics allow early turn off of lambs under high stocking rate conditions.

Surrounding the small town of Dandaragan, in the Wheatbelt region of Western Australia, Andrew and Pauline Roberts operate a mixed sheep, cattle and cropping enterprise on "Kayanaba."

In the local aboriginal language, Dandaragan is thought to mean 'good kangaroo country', however with the help of Australian Sheep Breeding Values (ASBVs), the Roberts' have proven that it is perhaps even better sheep country.

"Kayanaba" supports a total of 6500 ewes in a 2-way cross breeding program. 3000 Merino ewes are joined to BreedersBEST Prolific rams, a maternal composite breed utilising East Friesian, Finn, SAMM and NZ composite genetics. The resulting 1st cross ewe progeny are then joined to Poll Dorset rams to produce



a lamb targeted at a 20-22kg carcase weight, at 20-22 weeks of age.

"I've always used ASBVs to select the Poll Dorset rams," Andrew said. "We base our selection on the Carcase Plus Index, which has a good balance of traits and I have 100% confidence in the information used."

The Roberts, now purchase their rams from Hillcroft Farms Poll Dorset stud, near Narrogin in Western Australia. They made the change a few years ago after the original stud they purchased rams from changed ownership and stopped using ASBVs.

"The Hillcroft Farms catalogue has a big selection of rams on offer that have a Carcase Plus Index of higher than 175," Andrew said. "This means they are in the top 30% of the breed which is what we use for our cut-off."



The Roberts' have so much confidence in the system of ASBVs that they rarely attend a ram sale. Instead they opt to do their research prior to sale day with the catalogue in a less pressured environment and then have someone else bid at the sale on their behalf.



ANDREW & PAULINE ROBERTS KAYANABA DANGARAGAN, WA

“We sit down with the catalogue and mark out the rams we are interested in according to the Carcase Plus Index,” Andrew said. “We are willing to pay more for rams with a higher index as we know they will perform better in our enterprise.”

“At the end of the sale we hope to have achieved a team of rams with a high average Carcase Plus Index at a good average price.”

As for the visual traits that many other commercial breeders focus on when selecting rams, the Roberts’ leave that up to the stud owner.

“Whilst we have a great deal of confidence in ASBVs, we are also confident that the stud will not offer rams with poor visual characteristics,” Andrew said. “We’ve been buying about 20 rams per year lately and we are really happy with what we are getting.”

The Carcase Plus Index has a focus on high post-weaning growth (PWT) as well as eye muscle depth



(EMD) and fat depth (FAT). This suits the Roberts’ as they are chasing early stage growth in their flock to meet the market for new season lambs.

“Our enterprise is pushed fairly hard with high stocking rates and lambs being turned off early,” Andrew said. “Being able to turn off lambs early is a real economic benefit to us.”

“We wouldn’t be able to turn off lambs as quickly as we do, given our high stocking rates, without the superior genetics we have gained through the use of ASBVs,” Andrew said “If we couldn’t turn them off early, we would need to carry them through summer and sell them after shearing.”



“This would mean a huge reduction in the ewe numbers we could maintain, alternatively we would need to lot feed the lambs over summer. Neither of which would be as profitable as what we are doing now.” The Roberts selection of rams based on post weaning growth, through their use of the Carcase Plus Index to ensure lambs are turned off early, has been demonstrated to be successful in a number of independent trials. One such trial was coordinated by the NSW Department of Primary Industries (NSW DPI) and involved the comparison of a high post weaning weight (PWT) Poll Dorset sire group to a low PWT sire group, joined to 1st cross ewes (Border Leicester / Merino).



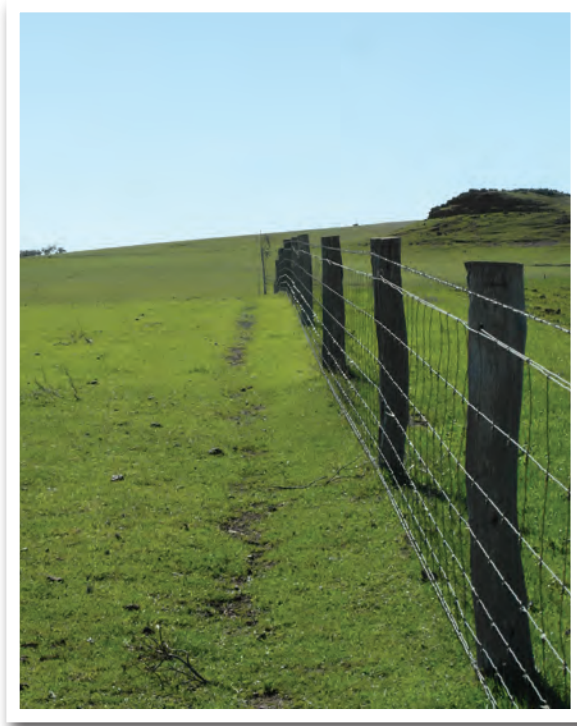
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The results showed that 57% of the progeny from the high PWT sire group reached the target carcase weight of between 20-26kg at 20 weeks. This compared to only 26% of the low PWT sire group. Of those carcasses that reached the target weight at 20 weeks, the high PWT sire group were 1.7kg heavier than the low PWT sire group.

At 27 weeks of age, the high PWT sire group achieved 97% of lambs reaching the target weight versus only 77% of the low PWT sire group. Again the high PWT sire group were 1.3 kg heavier than the low PWT sire group.

Weaning rates on “Kayanaba” currently sit around 130% which is good for this region.



“Being a maternal composite, the BreedersBEST Prolific rams that we join to the Merino ewes gives us a 1st cross ewe that has about one-sixth Finn and one-sixth East Friesian and two-thirds Merino,” Andrew said. “This composite ewe works really well for us and gives great fertility on the maternal side.”

Pauline, who operates the Dandaragan vet hospital and also provides sheep management advice throughout the area, notes that to increase weaning rates, management is the big issue.

“We’ve been feeding lupins through lick feeders to the ewes to increase lamb survival, but we still have production losses between scanning and weaning which we will continue to work on,” Pauline said.

In an aim to push the productivity of the enterprise even further, this year the Roberts joined their 1st cross ewe lambs at 7.5 months. Whilst only about one quarter of them scanned in lamb, it was a valuable learning experience.

“We know that the ewe lambs are genetically capable of getting in lamb at 7.5 months,” Andrew said. “We just need to get the nutrition right to harness that genetic potential.”

“In the future we would really like to run more 1st X ewes, as when joined to high indexing Poll Dorset rams they are such a productive animal,” Andrew said.

And with rapid genetic gain coming from both their ram supplier’s flock as well as their own, this enterprise is set to become even more productive in the future.



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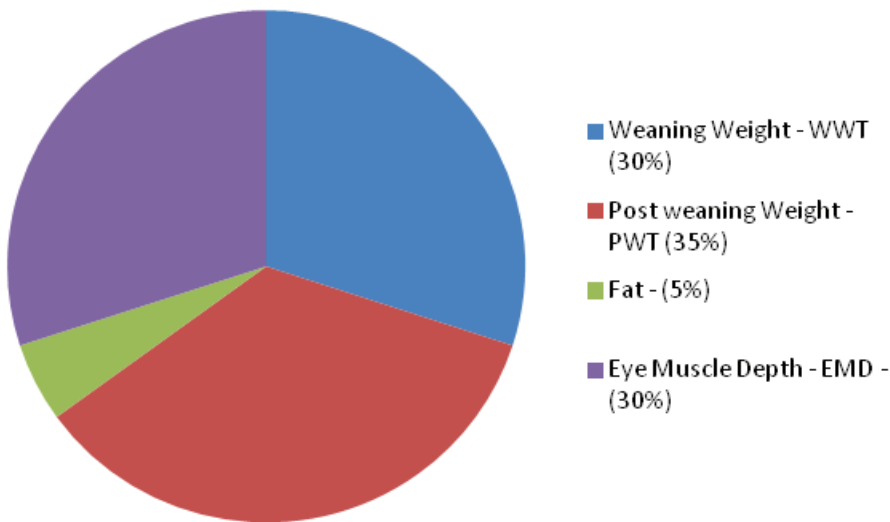


“Using the figures”

The Roberts family use the Carcase Plus Index when selecting rams. The index provided by LAMBPLAN is an important tool for screening rams prior to purchase. It combines the ASBVs for traits that the Roberts are interested in – weaning weight, post weaning weight, fat and eye muscle depth – into one simple figure which can be used to rank the rams on offer. A ram’s appearance is affected by the level of feeding, its age, whether it is a single or twin, if it was born to 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 Carcase Plus Index and the amount of emphasis that is placed on each of those traits in brackets.

Carcase Plus Index



Over a 10 year period, selecting rams on this index, the Roberts can expect to achieve the following improvement in the traits of interest.

- 2.2 kg increase in weaning weight
- 3.4 kg increase in post weaning weight
- 0.2 mm increase in fat depth
- 1.2 mm increase in eye muscle depth

