



Sheep CRC ASBV Case Studies

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JAMES AND LUCIE PEDDIE PENSHURST, VICTORIA

- * ASBVs are used to breed a self replacing maternal flock
- * The wethers are sold as early maturing domestic trade lambs
- * The ewe portion is retained or sold for joining at 13 months



For James and Lucie Peddie, sheep breeding is a relatively new venture having first cut their teeth farming as dairy producers, before moving into sheep production in 2002 and the subsequent purchase of their current property “Yalunga”, just outside of Peshurst in Western Victoria, in 2004.

Now running 6700 ewes in a self-replacing maternal flock, this progressive family farm operation has its sights set on growing the business even further after a recent purchase of additional land.

Both James and Lucie have a background in the dairy industry, which gave them an appreciation for performance breeding through the use of breeding values from early on in their farming careers.

“The dairy industry has used performance recording, progeny testing and breeding values for many years and as a result has achieved considerable rates of genetic gain,” James said. “We wanted to use that knowledge to help breed more productive and profitable sheep.”

The Peddies’ early sheep purchases included a range of genetics and consisted of a mixture of first-cross and composite ewes which were joined to terminal sires.

“The composite ewes weaned considerably more lambs and seemed more suited to our environment, so we decided to go down that track and breed a self-replacing maternal flock,” James said.



So using their knowledge of breeding values gained from the dairy industry, the Peddies prepared a breeding objective to get the most of out of their production system and environment.

“Our breeding objective is aimed at producing an early maturing animal for the domestic market, delivering high muscle content and reasonable fat, coupled with moderate adult weights,” James said.



JAMES AND LUCIE PEDDIE PENSHURST, VICTORIA

The end result is a business that turns off large numbers of domestic trade weight lambs targeting carcase weights of between 22-24kg. All the ewe progeny are either retained within the flock, or sold as replacements to other breeders. Success in breeding an early maturing animal is demonstrated in the Peddie's flock by an increase in scanning percentage of maiden ewes that are joined to lamb at 13 months, from 93% in 2009 to 128% in 2011.

With maternal flocks becoming more common, the Peddies know they have to stay in front of the pack if they are to stay competitive.

"To ensure a premium for our surplus ewes we need to focus on sourcing the right genetics to make sure we are breeding what the buyers are looking for," James said.

For the Peddies, sourcing the right genetics comes down to ram selection, which they do with the assistance of ASBVs.



"We don't buy rams exclusively from one stud, but shop around and will purchase rams based on their performance data rather than where they come from", James said.

"If a stud doesn't provide ASBVs on their rams we don't buy rams from them as we don't know how the rams are going to perform. It's too big a risk."

The Peddies focus on those traits that are important for their lamb production system and aim to buy rams in the top 5% for post weaning (PWT) and yearling weight (YWT), eye muscle depth (EMD), fat Depth (FAT) and worm egg count (WEC).

"I use the Maternal index as an initial screening, but look at the traits for the ultimate selection," James said.



"I don't worry too much about number of lambs weaned (NLW) as we already have terrific fertility and I know that I can have a positive impact on this trait through my management."

With an average requirement of 12 rams every year, James invests a considerable amount of time in researching his purchases prior to attending ram sales.



JAMES AND LUCIE PEDDIE PENSHURST, VICTORIA



"I make sure I get the catalogue early and go through it and make the rams that meet our requirements of being at the top of the traits that are important to us," James said.

"I then use the Sheep Genetics website and look at the other information that may not be published in the catalogue, like WEC and the accuracies of the ASBVs."

Accuracies are particularly important in maternals due to the composite nature of the animals. The higher the accuracy, the more confident I am in the ram's performance.

"On the day of the sale, we check the rams' visual traits, but ASBVs are our primary tool. If a particular ram stands out visually above all others, but doesn't stack up on ASBVs, we won't bid on him".

"With a joining rate of only 1% less 1, the rams in the Peddie flock are highly valued, and with 85% of ewes in lamb within the first 24 days, they are clearly meeting their requirements.

"With our low joining rates we can probably afford to spend a bit more on rams," James said.

"This has led to rapid progress in genetic gain as only the top rams are purchased each year."

Whilst it is difficult for the Peddies to put a figure on what this genetic gain has meant in terms of finances, the independent benchmarking analysis that the Peddie's are involved in suggests they are certainly at the top of their game with the amount of lamb produced per hectare per 100mm of rainfall, increasing over from 19kg of carcase weight in 2008 to 22kg in 2010.

Over almost 750 hectares, this has led to an increased turn off of almost 2250kg of additional lamb per annum, or an extra \$12000 at today's value.



"Our business is not just about good management, good pasture or good genetics; it's about having all those three as good as they can possibly be and then continuing to make them better," James said.



JAMES AND LUCIE PEDDIE PENSHURST, VICTORIA



“Using the figures”

James and Lucie use ASBVs to help them select 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 its 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 LAMBPLAN 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 LAMBPLAN have increased since 1990 (Weaning Weight), while others will have declined (Worm Egg Count) or stayed about the same (Fat).

The LAMBPLAN Percentile Band Report is an important tool for selection of James and Lucie’s rams. It provides a basis for comparing the performance of all rams born in 2010 and identifies the ones that meet their selection criteria.

TRAIT	PWT	YWT	YEMD	YFAT	WEC
What James & Lucie are looking for	Rams in the top 5%	Rams in the top 5%	Rams in the top 5%	Rams in the top 5%	Rams in the top 5%
ASBV value required	Rams with an ASBV greater than 10.2 kg	Rams with an ASBV greater than 11.5 kg	Rams with an ASBV greater than 1.3 mm	Rams with an ASBV less than -0.5	Rams with an ASBV less than -42%

