

# JAMES LITCHFIELD, “HAZELDEAN”

## COOMA, NEW SOUTH WALES

- MERINO STUD AND COMMERCIAL WOOL PRODUCTION
- GENETIC INDICES USED TO HELP SELECT ON A COMBINATION OF MEASURABLE DESIRED TRAITS
- FIBRE DIAMETER LOWERED BY TWO MICRONS IN 10 YEARS
- CONSISTENTLY HIGH FLEECE WEIGHTS

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For five generations the Litchfield family has run its renowned Merino stud, “Hazeldean”, Cooma, NSW under the maxim that ‘genetics drive profit’.

Hazeldean Pty Ltd – now running 45,000 sheep and managing landholdings in four states – is an old stud with a fresh attitude.

The stud was founded in 1865 and selection based on measured performance began at “Hazeldean” in 1954 under the direction of Jim’s grandfather, James Francis, and later his father, James.

So it is little surprise that the fifth generation Litchfield to take the helm of the hefty enterprise, Jim Litchfield, says a single genetic database will drive the wool industry towards a brighter future.

“There is a diversity of opinion among stud Merino breeders as to the value of objective measurement but I’m certain the single genetic database will deliver much to Merino breeders wanting to choose sires based on specific traits,” Mr Litchfield said.

“Buyers must know what one ram or one bloodline is capable of delivering over another in terms of productivity per head.

“Until we get this sort of specific information, which is impossible to deliver without the use of numbers, the industry will continue to endure the glacial rate of progress that has been a feature of the breed for the past 50 years.”

“Hazeldean’s” track record in gains made via objective measurement is impressive: the stud has dropped its fibre diameter by two microns in 10 years and ewes now cut 7.5 kilograms of 19.5 micron wool on average. An elite flock of 2,000 three to six year-old ewes has a fibre diameter range of 17.5 - 19.5 micron.

“Performance testing has definitely delivered all it promised for “Hazeldean” and we’re very satisfied with the results we’ve achieved,” Mr Litchfield said.

“It can definitely be used by the whole industry to improve genetic merit.”

Mr Litchfield says Merino Benchmark (an across-stud performance evaluation of sires and rams), Central Test Sire Evaluations and wether trials have all been used to assess “Hazeldean’s” performance against other Merino bloodlines.

“The best looking and best performing ram is completely useless if he doesn’t produce progeny better than himself,” Mr Litchfield said.

“The only way to tell whether a ram or bloodline is breeding well is to undertake a progeny test and assess all offspring for the traits that matter most to your breeding goals. That is the basis of Merino Benchmark, Central Test Sire Evaluation and other performance programs.”

Performance testing at “Hazeldean” hinges on an adjustable index – a calculation that determines selection priorities.

“Rather than trying to weigh up fleece weight, fibre diameter, body weight and possibly many other traits in your head and then apportioning the correct value to each when selecting sheep, it is possible to combine all measured traits and present them as one figure or index,” Mr Litchfield said.

“In addition to making the job of selecting much easier, it is possible to place more emphasis on one particular trait over another when calculating the index. This way you can push your flock



in the direction you want it to go much more easily.

“At “Hazeldean”, we want to reduce fibre diameter at a faster rate than we increase fleeceweight, so we place a 12% premium on the value of fibre diameter when we calculate our index.

“We also want to increase staple strength. As staple strength and coefficient of variation of fibre diameter (CV) are correlated traits we include in our index calculation an emphasis on lower CV. This system ranks animals on their capacity to reach our breeding objective as quickly as we possibly can.”

The Litchfields also select for fertility, worm resistance, growth rate and carcase value.

Mr Litchfield says visual selection to remove obvious faults is paramount before selection pressure is applied to improve productive characteristics.

He says it took about 10 - 15 years for his clients to make the best use of the figures provided when buying seedstock but he believes the single SGA database will make it easier for producers generally to use objective measurement.