

## GUIDE TO SHEEP GENOTYPING FOR BREEDERS

### KEY POINTS

- **Parentage testing is available for all breeds**
- **To receive ASBVs, you need to submit pedigree and trait records to Sheep Genetics**
- **Parentage results will be supplied by the Genotyping lab, and breeders must submit this to Sheep Genetics**

1. Parentage testing is available to all sheep breeds.
2. The benefit of higher density genomic testing for ASBVs varies between breeds. Sheep Genetics staff can make sure you get the best value from genotyping.
3. For genotypes to be included in the Sheep Genetics analysis for ASBVs you need to have submitted your data to Sheep Genetics with pedigree and some trait records.
4. Contact a MLA approved sheep genotyping lab. A list of approved labs is on the Sheep Genetics website <http://www.sheepgenetics.org.au/resources/genomics>. Discuss your requirements with your genotyping lab.
5. Collect samples. Follow sampling instructions carefully to avoid contamination so failures are minimised.
6. Provide an electronic file including sample ID, animal's 16 digit ID, sex, year of birth and animal type (sire, dam, progeny) to your lab.
  - Provide a complete list of the sires and dams you used. We need this list to assign parents to your animals.
  - Check your file carefully for duplicate animal and sample IDs. Make sure there is a record for every sample.
  - Always use a 16 digit ID to identify the animal where possible. You will only get breeding values on animals with a 16 digit ID as it is used to match genomically tested animals to animals in the database.
7. Send the electronic file and samples to your genotyping lab.

8. Your genotyping lab will place your order with Sheep Genetics/MLA and process the samples.
  - If you have questions regarding the timing of your genotyping, contact your genotyping lab.
9. Once the samples are processed Sheep Genetics/MLA will run the parentage analysis and return the results to the genotyping lab.
  - You will receive parentage information from your genotyping lab.
  - If you have any questions regarding your parentage results, please contact your genotyping lab.
10. Enter your parentage results into your software and submit data to Sheep Genetics to be included in the genetic evaluation
11. Higher density genomic test results will be included in the following MERINOSELECT or LAMBPLAN evaluation runs.
  - Animal data (pedigree and performance records) must be submitted with corresponding 16 digit IDs to contribute to ASBVs.
  - Do not send your higher density genomic results to Sheep Genetics. Sheep Genetics/MLA will already have these and will include them in the evaluation.
12. Who to contact with common queries:

Query	Genotyping lab	Sheep Genetics
To get animals genotyped	<b>X</b>	
To get a flock code		<b>X</b>
For information about parentage testing, ASBVs, Flock profile testing, genetic conditions and recessive genes.	<b>X</b>	<b>X</b>
To change IDs, submit further sires/dams for parentage testing.	<b>X</b>	