



# PollTest

## Product Information

### Background

The Poll Test has been developed by the Sheep CRC using measurements on animals in the Information Nucleus Flocks and data from the 50k SNP chip.

The Poll Test is for use with Merinos. Research has validated the test in the Merino breed so while the test may be used in other breeds, we are unable to guarantee the results.

Breeders ordering either the Parentage Test or the Genomic Test will receive results for the Poll Test at no additional cost as the Poll Test forms part of the same set of SNPs that are used in the Parentage Test & Genomic Test.

### Product Description

This test provides an opportunity for breeders to identify Polled/Horned (P/H) sires and dams to speed up progress towards a purely poll flock. Refer to our Practical Wisdom case studies on our website at [www.sheepdna.com.au](http://www.sheepdna.com.au) for evidence of the benefits of poll testing.

Identification of polledness only requires sampling individuals of interest. In most situations, this involves sampling only the rams and possibly some ewes being selected for a breeding program. The information on poll status of both parents provides a prediction of the progeny's poll status.

Based on Sheep CRC research and data from the Information Nucleus program, the test provides a predictive breeding value for poll status.

The breeding value reports that the animal has one of three possible genotypes:

- PP – Polled
- PH – Half poll
- HH – Horned

This test has been developed using a single SNP on the 50 k SNP panel used in the Sheep CRC Pilot Project. This SNP is not the direct marker, or the actual gene causing polled status. However, it is highly associated with polled and horn phenotypes, and is closely linked to the polled gene in this region, which has been independently confirmed in other studies.

This means that while using this SNP does not result in a simple 'yes/no' outcome, sires with the "PP" genotype will produce significantly more offspring with polled status than sires a 'heterozygous' "PH" genotype or the "HH" genotype.

As it is a predictive test, it is important to understand the probabilities of different outcomes when mating PP and HH rams to either horned or polled ewes. The table below summarises the probabilities of various poll-horn outcomes associated with the different status of sires and dams.

While not reported, outcomes for PH dams will lie somewhere between the probabilities shown for the PP and HH dams. Animals that have knobs or scurs are neither polled nor horned, and have not been included in Table 1.

*Table 1: Sire breeding values for horn status (Probability of progeny phenotype)*

	Male Progeny		Female Progeny	
	Horned	Polled	Horned	Polled
When mated to PP 'polled' dams				
PP sire	0.03	0.82	0.01	0.92
PH sire	0.03	0.65	0.01	0.87
HH sire	0.04	0.49	0.01	0.82
When mated to HH 'horned' dams				
PP sire	0.03	0.49	0.01	0.82
PH sire	0.37	0.27	0.05	0.50
HH sire	0.70	0.06	0.08	0.18

Animals with knobs or scurs have been classified as neither polled nor horned and probabilities do not add to 1.0. Estimates are based on 2300 Merino progeny in the CRC information nucleus

## Product use guidelines

### 1. Buy a SheepDNA sampling kit

- Use the SheepDNA online ordering portal to buy SheepDNA sampling kits - blood cards or TSUs. TSUs are also available through Allflex Australia Pty Ltd - [www.allflex.com.au](http://www.allflex.com.au).

### 2. Selecting sheep to sample

- Identify animals to be tested.

### 3. Taking DNA samples

- Please consult the sampling collection information sheet supplied with your Collection Kit or available on the SheepDNA website;
- Help desk: for any information on the correct sampling methods contact the SHEEPDNA office. It is essential to submit samples that they are correctly collected and clearly labelled.

### 4. Submitting samples

- Send your samples to the SHEEPDNA office along with a completed and signed SheepDNA testing form supplied with your sampling kit or available at [www.sheepdna.com.au](http://www.sheepdna.com.au);
- Upload the sheep data file (if available) via your SheepDNA account;
- Ensure you have placed an order for your tests through our online portal at [www.sheepdna.com.au](http://www.sheepdna.com.au).

### 5. Sample confirmation & test payment

- Samples are checked and confirmed by our trained team;
- An email will be sent to you requesting payment for your tests;
- Note: Tests will not be processed until payment is made.

### 6. Results generated

- The Poll Test identifies Polled/Horned sires and dams to help breeders speed up progress towards a purely poll flock in Merinos.

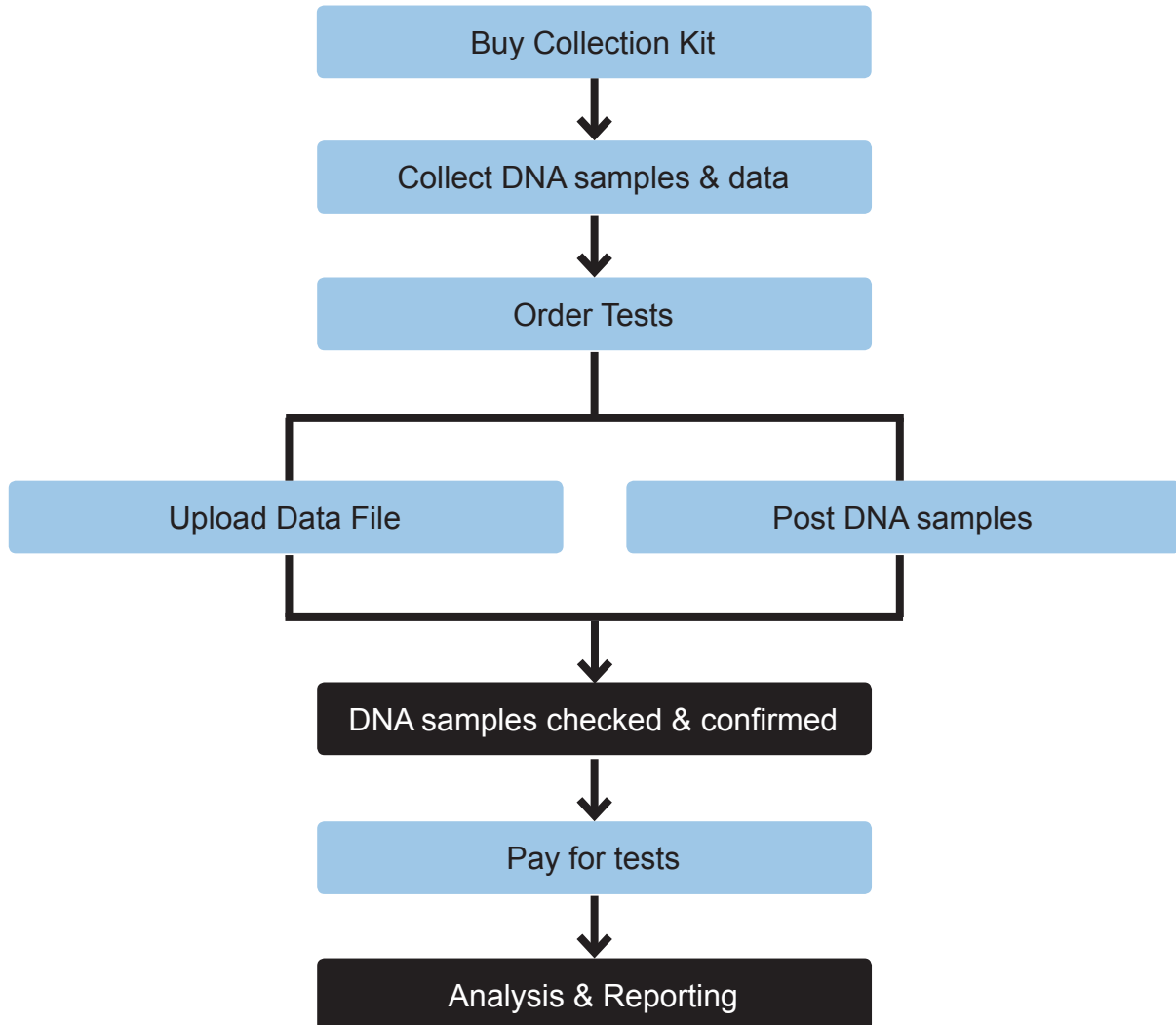
### 7. Reports received

- Poll Test results are emailed to the contact nominated on the order.

## Getting Started



[www.sheepdna.com.au](http://www.sheepdna.com.au)



## Help Desk

Please direct all enquires to our SheepDNA team

### SheepDNA Office

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