



Sheep Poll Test



The Sheep Poll test was developed by the Sheep CRC using measurements on animals in the Information Nucleus Flocks and data from the 50K SNP chip. Research has validated the test in the Merino breed, results are unable to be guaranteed in other breeds.

Breeders ordering either Smart Flock Elite or Smart Flock Parentage will receive results for the Sheep Poll test at no additional cost as the Sheep Poll test forms part of the same set of SNPs that are used in Smart Flock Elite and Smart Flock Parentage.

This test provides an opportunity for breeders to identify homozygous polled sires and dams to increase the progress towards a purely polled flock. Identification of a poll gene 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.

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

PP – Homozygous polled

PH – Heterozygous polled

HH – Homozygous horned

This test uses two SNPs on the 50K SNP panel. These SNPs are not the direct markers, or the actual genes determining poll status. However, it is highly associated with polled and horn phenotypes, and is closely linked to the poll gene in this region, which has been independently confirmed in other studies.

This means that while using these SNPs does not result in a simple 'yes/no' outcome, sires with the "PP" genotype will produce significantly more polled offspring than sires with the '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. Table 1 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.

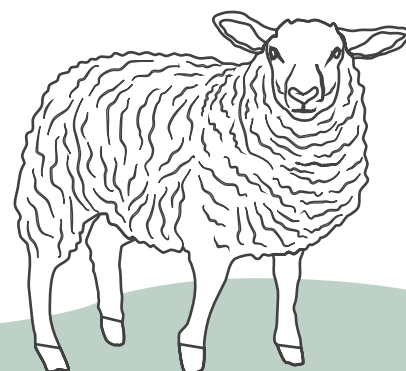
Table 1: Sire breeding values for horn status (Probability of progeny phenotype).

	Male Progeny		Female Progeny	
	Horned	Polled	Horned	Polled
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
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

When mated to PP 'polled' dams

When mated to HH 'horned' dams

Animals with 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 sheep CRC information nucleus.



Purchase a SheepDNA Collection Kit

Create or login to your Neogen SheepDNA account (sheepdna.com.au) to purchase your Collection Kit directly from the website.

Selecting Sample Animals

Identify animals to be tested.

Taking DNA Samples

TSU Applicator Instructions or a TSU Collection Protocol video are available at sheepdna.com.au, or contact the Neogen office.

Submitting Samples

Complete the sheep submission form with TSU and animal details, then email this form to naa-sheep@neogen.com.

Send your samples to 14 Hume Drive, Bundamba QLD 4304 along with a completed and signed sample ID form. Forms available at sheepdna.com.au or by contacting Neogen.

Confirmation and Payment

Samples are checked by our Quality Assurance staff before a confirmation email is sent prompting payment. Testing will not commence until payment is received in full.

Results

All Poll test results will be emailed out to clients via the nominated email address on the SheepDNA submission form.

Reveal your flock's potential – Contact us today to find out more!

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