

SPI Guidance Issue 3

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DNA Testing

The SPI regulations require DNA testing in certain instances. DNA testing is essentially comparing the gene structure to determine the breed or to determine the parents. DNA/parentage verification is establishing that the claimed parents of the animal are correct. A DNA Type is creating a DNA record without the extra step of establishing the true parents of the animal. There is not 100% accuracy with all DNA tests. It will establish non-parents and those most likely to be parents.

This guidance is not a substitute for reading the regulations. Each member should familiarise themselves with the regulations. The following summarises when DNA testing is required:

- SPI may conduct DNA/parentage verification of any animal at its expense. It will conduct parent verification on every 200th calf registered (Section 5C);
- Solid black animals will not be registered unless accompanied with DNA/parentage verification (Section 5E.4);
- When a sire is used for semen collection, you must provide the association with a DNA profile of the sire (Section 4B.1);
- If you are using a dam from embryo collection, you must supply SPI with a DNA type (or an existing blood type) (Section 4C.1); and
- Each sire must have a DNA profile with the association at the time of registering its progeny.

DNA samples are most easily collected by taking tail hair samples. This can be done at any time you are handling the animal in the crush. Generally you select 20-30 tail hairs which ideally should be clean and dry. Wrap the hairs around your finger or pen and pluck with a rapid sharp motion. The hooked or bulbous hair roots from under the skin should be clearly visible. The tail hairs should be placed in a bag and clearly and uniquely marked. These can be stored until you require them. It is prudent to do this with all bulls that you use in the stud and for all bulls that you plan to sell so that you have the information should it be required at a later date.

Testing is done through the University of Queensland (UQ). SPI has an arrangement with UQ resulting in cheaper rates. The prices are at the date of this guidance:

Service	Charge (inclusive of GST)
DNA typing and parentage verification (hair/blood)	\$30.80
DNA typing and parentage verification (tissue/semen)	\$44.00
DNA typing – extra markers (hair/blood/semen/tissue)	\$30.80
Parentage verification (requested after initial sample submission)	\$6.60
Addition of external DNA types to the UQ database	\$6.60

An application form is on the SPI website (www.specklepark.org) which you can download and send directly to SPI Secretariat at Armidale with the requisite payment. SPI will then send you the DNA test kit. UQ require the sample to be in its DNA test kit. UQ shall advise you and SPI of the results. SPI will note the fact that a DNA test has been performed on the animal enquiry site.

UQ contact details: (07) 5460 1974 www.uq.edu.au/vetschool/agl