



# DNA Sampling

*DNA hair samples can be used for many purposes; from DNA profiling and parent verification, to testing for diseases and genetic conditions.*

The Association currently requires a DNA profile of all bulls which are being registered, as well as all bulls which are having their progeny registered (if they do not presently have a DNA profile). The samples are analysed and a DNA profile compiled. Sire verification is also carried out at the time of the analysis.

Quality samples are the key to getting good DNA from your cattle. A quality sample of hair is taken from the tail and has the follicle, or root, still attached to the hair. Tail hair is used rather than the short fine hairs found in the coat of an animal, due to the size of the root bulb that is extracted from the tail versus the coat. The hair bulbs are a reliable source of DNA.

*Collecting Hair Samples using the Zoetis sample cards.*

1. While holding the end of the tail switch, pull a pencil-thickness tuft of hair (at least 20 – 25 hair roots) from the tail switch, making sure hair roots are attached. Roots are under the skin of the tail and extract easily when pulled correctly. Pull



*Pulling the hairs from the switch of a tail.*

the hair "up and away" from the way it lays to get as many roots as possible. Always collect dry hair samples and make sure the roots are not contaminated with faeces.

2. Open the hair sample collector completely. Place the hair on the back of the printed flap of the collector, with the roots close to the joined end. Peel off the backing paper, starting from the joined end, to expose the sticky backing of the flap.

3. Press the sticky plastic side down on top of the hair roots. Make sure the edges of the plastic are sealed around the collector. Also, verify that the roots are covered. Trim the excess hair to the edges of the sample collector - see photo above right for a good example. The hairs are placed well on the sample card and the hair roots or bulbs can be clearly seen.

Write the animal's identification (usually the tattoo) on the front of the sample card.

When forwarding the hair sample for analysis, the following information is required:

- The bull's identification/tattoo, eg XYZ Q1
- Date of birth



*A good hair sample placed on a sample card.*

- The name the animal will be registered with
- Advice of type of Galloway: Galloway, Belted Galloway or Miniature Galloway
- Sire identification/tattoo (if unknown it can be checked by a herdbook search on the Association's database on the website.
- The dam's details will also need to be included in the information if a parent verification for both sire and dam is required.

Forward the sample to the Association's office. Initial results generally take four weeks to be processed, although may be longer depending on the work load of the laboratory.



*If a test card is not on hand, a tail hair sample can be forwarded in an envelope with the relevant details included. A knot should be tied in the hairs, close to the roots to keep the sample together.*