Recording Scanning Information

BREEDPLAN

TIP SHEET

BREEDPLAN calculates EBVs for carcase traits based on two main sources of information – live animal ultrasound scanning and abattoir carcase data. While abattoir carcase data is usually collected through structured research or progeny test trials (see the Recording Abattoir Carcase Information tip sheet, available in the BREEDPLAN Help Centre, for further information), ultrasound scanning allows beef producers to collect carcase information on live animals. With improved carcase yield and quality now considered in the breeding objectives of many cattle producers, Carcase EBVs provide the best tool to evaluate and select animals that will produce progeny with improved carcase attributes.

WHAT IS LIVE ANIMAL ULTRASOUND SCANNING?

Live animal ultrasound scanning is a non-invasive technology that allows the beef producer to assess the carcase merit of an individual animal whilst still alive, as opposed to the collection of carcase data in the chiller. The carcase attributes commonly measured by ultrasound scanning include:

- ***Rump Fat Depth***

  Rump Fat Depth is measured at the P8 rump site. The P8 rump site is located at the intersection of the line from the high bone (third sacral vertebrae) with a line from the inside of the pin bone. Rump Fat Depth will be reported to the nearest mm (e.g. 10 mm).

- ***Rib Fat Depth***

  Rib Fat Depth is measured at the 12/13th rib site. The 12/13th rib site is located on the longissimus dorsi muscle (eye muscle) between the 12th & 13th rib. Rib Fat Depth will be reported to the nearest mm (e.g. 7 mm).

- ***Eye Muscle Area***

  Eye Muscle Area is measured as the cross sectional area of the longissimus dorsi muscle between the 12th & 13th rib. EMA is reported to the nearest cm^2 (eg.110 cm^2). Eye Muscle Area is also referred to as Rib Eye Area.

- ***Intramuscular Fat (IMF)***

  The carcase benchmark for intra-muscular fat is the chemical extraction of all fat from a meat sample taken as a slice off the longissimus dorsi between the 12th & 13th ribs. Ultrasound scanning for IMF uses a longitudinal image of the longissimus dorsi muscle between the 12th & 13th ribs. IMF is reported as a percentage (e.g. 3.5%)

HOW DO I RECORD ULTRASOUND SCAN DATA?

BREEDPLAN can analyse the scan performance from animals that are between 300 – 800 days of age when measured. The majority of animals are scanned as rising two year olds (i.e. around 600 days of age).

Ultrasound scan data for BREEDPLAN must be recorded by an accredited ultrasound scanning technician. A list of accredited scanners can be accessed in the Help Centre on the BREEDPLAN website or by contacting staff at your BREEDPLAN processing centre.

WHAT CONSIDERATIONS SHOULD BE MADE WHEN RECORDING ULTRASOUND SCAN DATA?

- Condition of stock should be the most important consideration when choosing when to scan your animals. Animals should be scanned when they are in as good a condition as possible. This ensures that there will be enough variation between animals to allow genetic differences to show up and for BREEDPLAN to make effective use of the scan data.

As a rough guide, animals should have:

- Minimum average rump fat depth of 4-5 mm.
- Minimum average rib fat depth of 3 mm.
- IMF results will be further optimized if most animals have between 2-8% IMF when scanned.

Additionally, animals should have been on a rising plane of nutrition prior to scanning. Animals that have been in poor condition and put on the required levels of fat in a short time period may still not exhibit enough variation to allow genetic differences to show up (particularly for IMF). If you are in any doubt as to when to scan your animals, please discuss your situation with an accredited ultrasound scanner or contact staff at your BREEDPLAN processing centre.

- BREEDPLAN can only analyse one set of ultrasound scan data per animal (i.e. one EMA, one rib fat, one rump fat and one IMF measurement on each animal). While these measurements are typically measured on the same day, BREEDPLAN can analyse the scanning performance for an animal when the individual traits have been recorded at different times.
- While bulls are more commonly scanned, it is recommended that breeders also scan their heifers and steers. Heifers provide valuable data for marbling as they mature earlier than do the males and may also represent a better cross-section of the herd (usually subjected to less selection pressure for carcase traits compared to bulls). Scanning steers will provide useful information for their sires and dams.
- It is important to try and scan as many of your animals within each management group as possible. Submission of scan data for only a selection of your calves (e.g. only submitting the scanning performance of your sale bulls rather than the entire bull drop) may result in data biases and the subsequent calculation of carcase EBVs that do not reflect the true genetic merit of your animals.
- If there is no accredited ultrasound scanning technician located near you, it may be worth checking with nearby studs to see who does their scanning. Some accredited ultrasound scanning technicians will travel outside their area/state.

HOW DO I SUBMIT ULTRASOUND SCAN DATA?

Submission of ultrasound scan data to BREEDPLAN is the beef producer's responsibility, and not that of the ultrasound scanning technician. Ultrasound scan data can be submitted to your BREEDPLAN processing centre using any of the following methods:

- The BREEDPLAN paper performance recording forms (forms can be requested by contacting staff at your BREEDPLAN processing centre).
- The BREEDPLAN compatible Microsoft Excel template (available to download from the Help Centre on the BREEDPLAN website).
- A BREEDPLAN compatible herd recording computer program.
- The web services area offered on some Breed Society/Association websites.

Alternatively, the recording sheet completed by the scanner at the time of scanning can be submitted to BREEDPLAN; however, it must be presented in an acceptable format. Details like Herd ID, date of scanning and the **full Breed Society/Association ident** of each animal must be provided (not just tattoo). Sheets should also be clean and clear to read. It is also critical to ensure that management group information is included on the scanning sheets.

Please see the Methods of Submitting Data to BREEDPLAN tip sheet, available in the Help Centre on the BREEDPLAN website, for further information.

For more information regarding how to record scanning information or Carcase EBVs in general, please contact staff at your BREEDPLAN processing centre.