



TechTalk June 2016



Collecting Abattoir Carcase Information

Abattoir carcase information, along with live animal ultrasound scanning measurements and genomic information, is used to calculate Carcase EBVs within BREEDPLAN.

This article outlines the requirements for the collection and submission of abattoir carcase information for BREEDPLAN.

Why Collect Abattoir Carcase Information?

Traits such as carcase yield and meat quality are some of the most economically important traits in the beef supply chain.

While the collection of carcase information from ultrasound scanning and genomic tests provides useful information on live animals, abattoir carcase information is of particular value for genetic evaluation as it represents a direct measure of the attributes of a beef carcase.

Obtaining direct abattoir carcase measurements can add considerable accuracy to the Carcase EBVs calculated within BREEDPLAN, and consequently provides a valuable source of information when attempting to identify animals with superior carcase genetics for use in a beef breeding program.



What Abattoir Carcase Information will be Accepted?

Abattoir carcase information must meet certain requirements in order to be accepted for inclusion in BREEDPLAN. These requirements have been put in place to ensure any abattoir carcase information that is analysed within BREEDPLAN meets appropriate data integrity standards.

The most valuable carcase data for inclusion in a BREEDPLAN analysis meets the following requirements;

- It has been collected as part of a structured progeny test program.
- Appropriate measurement collection protocols have been followed to ensure the carcase measurements that are collected are of suitable quality for genetic evaluation.
- Animals are between 300 and 1000 days of age at slaughter (i.e. 10 – 33 months).

Abattoir carcase information that does not meet these criteria, such as kill sheets for small groups of steers or cull heifers, or information collected as part of a carcase competition, is not suitable for analysis in BREEDPLAN.

Establishing a Progeny Test for the Collection of Abattoir Carcase Information

It is very desirable that any abattoir carcase information collected for inclusion in BREEDPLAN is from a structured progeny test program in order to ensure that the amount of useful information generated is maximised. The Tip Sheet “Collecting Abattoir Carcase Information” provides a detailed explanation of how to establish and manage a progeny test.

Abattoir Measurement Collection Protocols to Ensure Data Integrity

When obtaining abattoir carcass information for inclusion in BREEDPLAN, it is important to investigate how the carcasses will be processed at the abattoir and how the carcass measurements will be collected to ensure that any information collected is useful for genetic evaluation.

In reality this can be difficult when carcasses are being processed through commercially operated abattoirs, however abattoir measurements that have not been collected in accordance with appropriate measurement collection protocols can lead to considerable bias in the Carcass EBVs that are calculated for animals within BREEDPLAN.



Use of MSA Accredited Graders

Where possible, animals should be processed at a Meat Standards Australia (MSA) licensed abattoir and have measurements collected by an MSA accredited grader. A list of MSA licensed abattoirs is available from the Meat & Livestock Australia (MLA) website.

It is important that the same MSA accredited grader collects carcass measurements on all animals within a contemporary group. Where carcass measurements are collected by different graders, a different management group (or kill

group) should be specified for the carcasses assessed by each grader.

Animal Identification in the Abattoir

Loss of individual animal and carcass identification is a common problem when collecting abattoir information for genetic evaluation.

All animals will have a management tag and NLIS tag at slaughter, with abattoirs routinely recording NLIS tag and body number. It is important that all identification information is carefully cross referenced to ensure that the abattoir measurements collected are appropriately assigned to the correct animals.

Processing of Carcasses

Several carcass processing procedures routinely practiced in commercial abattoirs can lead to a reduction in the usefulness of any abattoir carcass measurements for genetic evaluation.

1. *Hide puller damage* - Fat can inadvertently be stripped from the carcass when the hide is being removed and can considerably bias the rump and rib fat measurements subsequently collected on the carcass. Fat measurements should not be submitted to BREEDPLAN from carcasses where considerable hide puller damage has occurred.
2. *Trimming* – Fat will routinely be trimmed from carcasses using a whizzer knife prior to carcass measurements being collected, especially from the rib fat measurement site. Rib fat measurements should not be submitted to BREEDPLAN from carcasses that have been trimmed.
3. *Carcass damage/Bruising* - Carcasses that may have considerable damage, bruising or abscesses can have portions removed during processing. Any measurements from these carcasses should be carefully scrutinised and only submitted to BREEDPLAN if the processing of the carcass has not biased the measurements collected.



4. *Quarter site* – Carcasses may be quartered at different sites. It is important that all carcasses from animals in a contemporary group are quartered at the same site, and ideally at the 12/13th rib site. Where carcasses have been quartered at a different site, a different management group (or kill group) should be specified.
5. *Spencer rolling* – Some abattoirs undertake a practice known as “spencer rolling” to improve the shape of the cube roll. By design, spencer rolling distorts the eye muscle and subsequently biases any eye muscle area (EMA) and rib fat measurements that are collected. EMA and rib fat measurements should not be submitted to BREEDPLAN from carcasses that have been subject to spencer rolling.

Submitting Abattoir Carcase Information to BREEDPLAN

Abattoir carcase measurements should be submitted directly to BREEDPLAN using a specific Microsoft Excel template.

A copy of the template that needs to be used can be obtained from staff at BREEDPLAN.

BREEDPLAN currently includes carcase weight, rump fat, eye muscle area, MSA marble score and intramuscular fat measurements in the calculation of Carcase EBVs; however other measurements that have been collected can be submitted for storage and possible future analysis.

Prior to submission to BREEDPLAN, it is important that any abattoir carcase measurements are carefully scrutinised. Specifically, the measurements should be reviewed to ensure they fit within normal expected ranges, and that the variation between measurements reviewed to ensure that measurements follow a normal expected distribution.

For more information regarding the collection of abattoir carcase data, please contact staff at Southern Beef Technology Services (SBTS) or Tropical Beef Technology Services (TBTS) to discuss your options.