Enhancements to be made in the Trans-Tasman Angus GROUP BREEDPLAN Analysis, December 2008

A number of enhancements will be implemented to the BREEDPLAN software that is used to calculate EBVs for Angus animals within the January 2009 Trans-Tasman Angus GROUP BREEDPLAN analysis. These enhancements will all result in the calculation of improved BREEDPLAN EBVs and are part of the normal evolution of the BREEDPLAN software.

A. Changes relating to carcase (abattoir) traits

The following relates only to carcase records derived from abattoirs: it does not relate to ultra-sound scanning records.

A1. Carcase data

A number of progeny test carcase (abattoir) data sets completed since 2006 but withheld from the GROUP analysis will now be included in the analysis, as will USDA-type marble scores now being recorded. Some historic data will cease to be included:

- rump fat values in kill groups that appear to be classed, rather than measured;
- all carcase rib fat measurements since Jan 2001 (due to likely effects of fat trimming);
- some apparent non-MSA marble scores (submitted as being MSA).

Sires with progeny carcase (abattoir) data, and their relatives, are the most likely individuals to be affected by these changes in the carcase data.

A2. Adjustment factors and genetic parameters

The number of heavier carcases (>400kg) included in the analysis has increased in recent years. This has resulted in new adjustment factors being needed for carcase weight, eye muscle area, rib fat, rump fat, retail beef yield and intra-muscular fat, to ensure that more appropriate adjustments of carcase traits at the heavier end of the weight spectrum are being made. All genetic parameters of relevance to carcase traits have been re-estimated. New heritabilities will be implemented for the carcase traits, along with new estimates of the correlations amongst them. In addition, new correlations between ultra-sound scanning traits and the carcase traits will be implemented.

These new adjustment factors and genetic parameters will directly influence carcase trait EBVs, as will the use made of ultra-sound scanning records as indicator traits of carcase merit. Accuracies will also be affected, due to changes in genetic variances and the revised influence of correlated (scanning) traits.

B. Implementation of new analytical software

The increasing size of the Trans-Tasman Angus database and the computational demands of the evaluation have required the development of a more efficient analytical process. One of the benefits of this software is its ability to “work faster” and “get closer” to the true breeding values. While the new analysis will allow greater differences between individuals in EBVs to be evident (ie. more spread in EBVs), the effect is likely to be greatest when comparing animals across years (ie. current vs historic), rather than within year (ie. contemporaries). Another way of putting this is that we will generally see “more genetic trend” for a number of the traits (EBVs will increase for more recent animals and fall for more historic animals).
C. Revised handling of North American Black Angus EPDs

The American Angus Association (AAA) recently modified their genetic evaluation so that ultra-sound scanning traits and carcase (ie. abattoir) traits are now combined into the one analysis. Previously, they undertook the analysis of scanning traits and analysis of carcase traits separately. As AAA carcase EPDs are imported for use in the Trans-Tasman Angus GROUP BREEDPLAN evaluation, changes in the AAA evaluation will have consequences for the Trans-Tasman evaluation. The effect is likely to be more evident amongst US sires that previously ranked differently on their US scan EPDs compared to their US carcase EPDs. Sires that ranked similarly on the previous EPDs (scan and carcase) are likely to be less affected by this change.

D. Improved calving ease analysis

The calving ease analysis has been improved to include additional depth in the pedigree information. This is to overcome limitations in pedigree structures associated with incomplete recording of calving ease scores. Calving Ease EBVs could change significantly for some individuals. Also, more spread in the calving ease EBVs will be evident. EBV accuracy is expected to increase as will the number of animals with calving ease EBVs calculated.

E. New BreedObject $Index values (Australia Only)

Angus Australia has developed 4 new BreedObject $indexes to replace the previous four. The new $indexes are:

- Long Fed / CAAB Index
- Heavy Grass Fed Steer Index
- Short Fed Domestic Index
- Terminal Index

As these are 4 new indexes, it is not valid to compare old and new $index values. The new $index values will also reflect changes in EBVs arising from the changes in analysis as outlined in points A to D above.

Should you require more information on the changes outlined above, please contact either Carel Teseling (02) 6773 4602 or Emma Weatherly on (02) 6773 4601.