Enhancements to Brahman GROUP BREEDPLAN

A number of significant enhancements will be applied to the BREEDPLAN software used to calculate EBVs for Brahman animals. They will be applied first in the June 2014 Brahman GROUP BREEDPLAN analysis, then in all subsequent analyses.

The enhancements include:

- Upgrade to BREEDPLAN Version 6.2 – The latest version of the BREEDPLAN software has several enhancements including:
  - A revised method for the calculation of accuracy values for Days to Calving (DTC) EBVs. This results in an increase in accuracy of DTC EBVs for animals (i.e. dams, sires with daughters) that have multiple natural joining records analysed, and their relatives (e.g. bull progeny).
  - The addition of Shear Force EBVS as part of the routine monthly BREEDPLAN analysis. Shear Force EBVs are expressed as differences in the kilograms of shear force that are required to pull a mechanical blade through a piece of cooked meat. Lower, more negative, Shear Force EBVs are more favourable. That is, lower EBVs indicate that less shear force is required and hence the meat is more tender. For example, a bull with an EBV of -0.90 would be expected to on average produce progeny with meat that required a shear force of 1 kg less than a bull with an EBV of +1.10. Click here for further information.
  - The addition of Flight Time EBVs as part of the routine monthly BREEDPLAN analysis. Higher (ie. Longer) Flight Time EBVs are more favourable and indicate a relatively longer time taken to exit the crush and hence better temperament. For example, a bull with an EBV of +0.80 would be expected to on average produce progeny that took 0.7 of a second longer to exit the crush than a bull with an EBV of -0.60. Click here for further information.
  - The ability to "blend" genomic prediction information into the analysis. However note that genomic prediction information is not currently being included in the Brahman analysis however the pathway is available through version 6.2 to allow this to happen when genomic predictions relevant to Australian Brahman are available.

- Revised method for handling different groups of "base" animals – Animals without complete pedigree in the BREEDPLAN analysis (ie. where one or both parents do not have EBVs) are referred to as "base" animals and the analysis must determine how to allocate a "starting value" for these animals. The starting value is set to reflect the origin of the genetics and the expectation of these genetics based on how other "similar" animals have performed. Similar animals in the analysis are grouped together, called a genetic group, and the average of these animals' starting values is referred to as a genetic group solution. A revised method for forming the different "genetic groups" of base animals within the Australian Brahman BREEDPLAN

analysis will be implemented as part of the upgrade to BREEDPLAN v6.2 software. The revised method results in an increased number of groups which better represent the source of the genetics. As additional information becomes available for an individual animal (e.g. progeny performance) the EBVs will change to reflect this information, including an increase in EBV accuracy.

If you have any questions regarding the enhancements to Brahman GROUP BREEDPLAN please contact Paul Williams Brahman TBTS Technical Officer (P: 07 4927 6066, E: paul@tbts.une.edu.au) or Brahman BREEDPLAN (P: 02 6773 3555, E: brahman@breedplan.une.edu.au)