Are Your Animals Structurally Sound?

Since cattle were first domesticated, it has been recognised that animals should conform to certain structural requirements to ensure high levels of production and adaptability to the environment. The list of structural requirements can be quite exhaustive but importantly, when structural integrity is not maintained, substantial financial loss can occur. These losses could be due to such things as complete bull breakdown, bulls not being able to adequately cover the allocated cows resulting in lower conception rates, increased calving difficulty, steers being unable to finish a long feeding program, or cows with badly structured udders being unable to rear their calves properly. Thankfully, most of the structural traits are under some genetic control and so can be improved by selection.

To assist in the selection of animals that will produce progeny with more desirable structural soundness, BREEDPLAN has recently developed software that enables the calculation of EBVs for five important structural traits:

- Front Feet Angle (FA)
- Front Feet Claw Set (FC)
- Rear Feet Angle (RA)
- Rear Leg Hind View (RH)
- Rear Leg Side View (RS)

The new Trial Structural Soundness EBVs provide an estimate of genetic differences between animals in the percentage of progeny that will have desirable structural soundness for each particular structural trait. In other words, animals with higher EBVs are expected to produce a greater percentage of animals with desirable structural soundness for that particular trait. Further information on the new Trial Structural Soundness EBVs is available from the Tip Sheets page within the Technical area on the BREEDPLAN website (http://breedplan.une.edu.au).

While the software now exists to enable the calculation of Trial Structural Soundness EBVs, there is not sufficient information currently recorded on the Murray Grey Beef Cattle Society (MGBCS) database to facilitate the calculation of EBVs for the Murray Grey breed. As a result, the MGBCS is currently encouraging members who are interested in having Trial Structural Soundness EBVs calculated for their animals to collect and submit structural soundness information to Murray Grey BREEDPLAN.

What Structural Soundness Information is Required?

Trial Structural Soundness EBVs are calculated from structural score information recorded on animals by an accredited scorer when the animals are younger than 750 days of age. A list of accredited scorers can be found in the Technical area on the BREEDPLAN website (http://breedplan.une.edu.au) or by contacting staff at BREEDPLAN. The majority of animals are usually scored as rising 2 year olds (ie. around 600 days of age) at the same time that they are scanned for the carcase traits.

When recording structural score information, the accredited scorer will use the Beef Class scoring system to assess the animal’s structure on a scale of 1 – 9 for each of the five traits as shown on the next page.
Front Feet Claw Set

Open Divergent (OD) desirable Scissor claws (SC)

Reference: Shape (primarily curl) and evenness of the claw set.

Front & Rear Feet Angle

Steep feet angle (SA) desirable Shallow feet angle (SH)

Reference: Strength of pastern, depth of heel and length of foot.

Rear Legs Side View

Straight rear leg (ST) desirable Sickle hocked rear leg (SI)

Reference: Angle measured at the front of the hock.

Rear Leg Hind View

Bow Legged rear leg (BL) desirable Cow hocked rear leg (CH)

Reference: Direction of the feet when viewed from the rear.

Structural score information can also be collected for a range of other traits such as sheath and navel scores, udder evenness and attachment, teat size and shape and capacity. These scores are not currently included in the BREEDPLAN analysis however they may be used to develop Structural Soundness EBVs for these traits in the future.

Once collected, structural score information should be submitted directly to the BREEDPLAN office at ABRI. There are several methods of submitting the structural score information, including:

- Electronically using a BREEDPLAN compatible herd recording computer program (eg. Herdmaster, StockBook)
- Electronically via a BREEDPLAN compatible Microsoft Excel template (available from BREEDPLAN)
- On paper using the structural score form that is provided by the accredited scorer
On paper using a specific BREEDPLAN structural score recording form (available from BREEDPLAN).

Importantly, the submission of structural score information to BREEDPLAN is the breeder’s responsibility NOT the accredited scorers.

For further information regarding the recording and submission of structural scores or Structural Soundness EBVs in general, please contact Andrew Byrne at SBTS by phone on (02) 6773 3357 or 0418 412 042.

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