

# Finding Where You Fit: New Entrants to BREEDPLAN

For beef breeders of established seedstock herds who are considering joining BREEDPLAN for the first time, one understandable concern is that their animals will be disadvantaged in comparison to seedstock herds who have been performance recording for a long time. Fortunately, there are several things that producers can do to help both the starting EBVs and the EBV accuracy that their animals are assigned when entering the BREEDPLAN analysis for the first time. This article will outline these options in more detail.

## New Animals Do Not Start at Zero

One common misconception is that new animals entering the BREEDPLAN analysis will be assigned starting EBVs of zero. Where some information is known about a new animal (e.g. pedigree information or performance of relatives), this will be used to calculate its EBVs. If a new animal has no information in the analysis that can be used to calculate EBVs, the new animal is given a “starting” EBV based on a similar genetic group (that is, animals of similar breed, age, sex, country of origin and proximity to performance data downstream). This “genetic group solution” is not set at zero; rather, it reflects the likely performance of the new animal based on what is known about it (and other “similar” animals).

One limitation of this approach is that the starting EBVs for new animals are typically of low accuracy. The EBV accuracy will increase as progeny or other close relatives have performance data entered into the BREEDPLAN analysis; for parents, this typically takes several years to achieve.

## Genomics (Where Available) Can Help New BREEDPLAN Herds

In BREEDPLAN analyses where genomic information is being utilised alongside pedigree and performance information to calculate EBVs (currently Angus, Brahman, Hereford and Wagyu), genomic information can also be of assistance to new BREEDPLAN herds. The benefit is that genomics can assist the BREEDPLAN analysis to make a more informed calculation of an animal’s EBVs (particularly where the animal has limited performance information and/or would otherwise have been giving a starting EBV based on a “genetic group solution”). This will be reflected



in higher EBV accuracies than would be achieved without genomic information.

## Submitting Historical Performance Data

In situations where herds new to BREEDPLAN have been collecting performance information (e.g. weights) on their animals historically, they are strongly encouraged to submit this to BREEDPLAN for inclusion in the analysis. Doing so will assist with EBV accuracy (generally, herds with a deeper level of performance records have higher EBV accuracies). However, we recommend that producers who are putting historic information into the BREEDPLAN analysis start with their most recent records/animals first. The reasons for this are two-fold; firstly, information on animals most closely related to the current crop of calves

(e.g. older siblings, sires and dams) will have the biggest impact on the EBVs of the current calf crop. Secondly, some herds have many years of records, and recording a large amount of historic data with BREEDPLAN can be a potentially time-consuming and/or expensive process (e.g. breed society registration fees for animals not already registered). It makes sense to start with the historic data that will give your herd the biggest benefit.

### **Use Outside Bulls with High Accuracy EBVs**

One of the advantages of joining the BREEDPLAN analysis is the ability to benchmark your own herd against other herds within the same BREEDPLAN analysis. This is achieved via a process known as genetic linkage. One of the quickest ways to achieve strong genetic linkage is to use an outside bull with high accuracy EBVs alongside your home-bred sires (e.g. via AI). When the progeny of the home-bred bulls and the outside sire are raised together, their performance can be directly compared, and thus the BREEDPLAN analysis can gain a good understanding of where your herd sits. Whilst this may take more time to

achieve than submitting historic performance information and using genomics (where available), all herds, whether they are new to BREEDPLAN or not, will benefit from forming strong genetic linkage to outside herds.

### **Summary**

While for some the thought of their established seedstock herd joining BREEDPLAN for the first time can be daunting, there are several things that producers in these situations can do to ensure that the EBVs calculated by the BREEDPLAN analysis for their animals are as informative as possible. The submission of historical performance data will help inform starting EBVs, as can genomic information (where available).

In addition, using an outside sire with high accuracy EBVs alongside your home-bred sires will allow you to benchmark where your herd is sitting in comparison to the rest of your breed. For further information about joining BREEDPLAN, or to discuss any of the points raised in this article, please contact staff at SBTS or TBTS.