

# Multiple Sire Usage: BREEDPLAN Considerations



## TIP SHEET

A multiple sire joining occurs when a mob of cows is joined to a group of sires at the same time, rather than being joined to just a single bull. This is a common practice on extensive cattle properties, where a single paddock can often be sized in the hundreds or thousands of acres.

This tip sheet outlines the main considerations that breeders undertaking multiple sire joinings should make to ensure that they obtain the most effective BREEDPLAN EBVs for the resulting progeny.

### **CAN BREEDPLAN CALCULATE EBVS FOR THE PROGENY RESULTING FROM MULTIPLE SIRE JOININGS?**

Yes! BREEDPLAN has the ability to calculate EBVs for the progeny resulting from multiple sire joinings where the individual sire has not been identified.

However, it is important to note that the evaluation of progeny by multiple sire joining groups should not be viewed as an easier alternative to individual sire identification. In general, the EBVs calculated will be of lower accuracy and consequently much less effective where the individual sire has not been identified. The “multiple sire option” offered by BREEDPLAN is only intended for situations where no practical alternative is available.

*Please note: This option is not currently being utilised by all breed societies.*

### **HOW DOES THE ANALYSIS OF PROGENY FROM MULTIPLE SIRE JOININGS DIFFER TO THOSE FROM SINGLE SIRE JOININGS?**

BREEDPLAN functions most effectively when animals have their full pedigree recorded. This is because BREEDPLAN calculates EBVs for an animal based on not only its own performance,

but also the performance of its relatives. Where the individual sire is not known, the BREEDPLAN analysis will use the average EBVs of the component bulls in the multiple sire joining group as the “sire EBV”.

### **HOW DO I RECORD MULTIPLE SIRE JOININGS?**

Multiple sire joinings should be recorded with your breed society when you are recording the progeny of the multiple sire joining group. As such, you will need to contact your breed society for information regarding their particular recording requirements.

Generally speaking, when recording multiple sire joinings:

- Each multiple sire joining group should be given a unique ident (e.g. ABC MULTI Z1).
- The component sires that were included in the multiple sire joining group should be identified and recorded with the breed society.

The unique ident assigned to the multiple sire joining group should be specified anywhere that that breed society requests information on the sire (e.g. calf recording, mating/joining information etc.).

### **WHAT STRATEGIES CAN BE USED TO OPTIMISE THE EFFECTIVENESS OF PERFORMANCE RECORDING OF THE PROGENY RESULTING FROM MULTIPLE SIRE JOININGS?**

- Minimise the number of bulls in the multiple sire joining group. Groups of up to five bulls are recommended, with a maximum of eight allowed. Multiple sire joining groups containing more than eight bulls cannot be utilised by BREEDPLAN. The effectiveness of the analysis decreases proportionally as the number of bulls increases.
- Ideally, all bulls in a multiple sire joining group should have both known pedigree and EBVs.

Utilisation of bulls that were themselves bred in multiple sire mobs is strongly discouraged.

- Ensure all sires in a multiple sire joining group are of similar breed. If you are using crossbred or composite sires, all sires need to be of similar breed composition.
- Endeavour to minimise the variation in BREEDPLAN EBVs amongst the bulls used in a multiple sire joining group. As BREEDPLAN will essentially utilise the average EBVs of the component bulls as the “sire” EBV, the closer each sire’s EBV is to the average EBV, the better the reliability of the subsequent EBV that is calculated for the calf.
- Consider using half brothers in your multiple sire joining group. Using bulls that are by the same sire will help to reduce genetic variation amongst the multiple sire joining group.
- Consider the utilisation of DNA parentage

verification to identify the actual bull from the multiple sire joining group that sired the calf. This effectively turns the multiple sire joining into a single sire joining.

#### **ARE THERE ANY OTHER CONSEQUENCES THAT I NEED TO CONSIDER IF I HAVE MULTIPLE SIRE JOINING GROUPS?**

Care should be taken when recording joining details for inclusion in the calculation of Days to Calving EBVs. If you are recording joining details for multiple sire joining groups, it is recommended that you contact staff at your BREEDPLAN processing centre to discuss the issues you need to consider.

**For further information regarding the analysis of calves resulting from multiple sire joinings, please contact staff at your BREEDPLAN processing centre.**

