

Interim BREEDPLAN EBVs

What is an INTERIM BREEDPLAN analysis?

The GROUP BREEDPLAN analysis makes use of all available pedigree and performance information on a breed society's database to derive EBVs for individual animals. It is an across-herd analysis in which calves and their parents have their EBVs calculated for all BREEDPLAN traits. Due to the size of the analysis, only those animals with performance records are included, along with their parents and grandparents. While it is a very powerful analysis, it is also considerably demanding in terms of computing resources and time. Most Breed Societies have therefore opted to run only one or two GROUP BREEDPLAN evaluations each year.

For some breeders, the scheduling of GROUP BREEDPLAN evaluations does not always coincide with their requirements for up-to-date EBVs. The INTERIM BREEDPLAN analysis is designed to meet this need. It is run for a nominated herd each time the herd submits additional calf performance records. The analysis uses the latest GROUP EBVs for the herd as a starting point, and updates the calf EBVs based on the extra performance information. These INTERIM EBVs can then be compared directly to the latest GROUP EBVs and INTERIM EBVs reported for other herds.

Which animals are included in an INTERIM analysis?

All animals bred or currently owned by the relevant herd are included in an INTERIM analysis, irrespective of whether or not they have performance records. The parents and grandparents of these animals are also included for pedigree information.

Which animals will have EBVs updated in an INTERIM analysis?

The analytical complexity of the current BREEDPLAN model has meant that it is only possible to run Interim evaluations on the *current* data within a herd whilst holding the rest of the information, and specifically all parents, at the GROUP values. Therefore only animals born in the last 3 calving years - as determined by the youngest animal in the analysis - can have their EBVs updated in an Interim BREEDPLAN analysis. All other animals are held constant at their last GROUP EBVs. Importantly, the sire and dam of the animal must have GROUP EBVs available for INTERIM EBVs to be calculated. Even new calves without any performance information can have INTERIM (mid-parent) EBVs calculated as long as both parents have GROUP EBVs available.

Note that the EBVs of the sire and dam are not updated with the new performance information on their progeny until the next GROUP BREEDPLAN analysis. Also, animals common to a number of herds (ie "across-herd" animals) only have EBVs updated in a GROUP BREEDPLAN analysis.

Which traits are considered in an INTERIM analysis?

An INTERIM BREEDPLAN analysis only updates EBVs for the following calf traits: Birth Weight, 200 Day Growth, 400 Day Weight, 600 Day Weight, Scrotal Size, Carcase Weight, Rump Fat, Rib Fat, Eye Muscle Area, Intra-muscular Fat and Retail Beef Yield

Gestation Length, Mature Cow Weight, Calving Ease, Days to Calving, 200 Day Milk and other maternal traits are not included in an INTERIM analysis.

While the INTERIM BREEDPLAN analysis makes some attempt to re-evaluate animals that have had pedigree changes (sire, dam, birth date, sex, etc) since the GROUP BREEDPLAN analysis, the full impact of the pedigree change may not be reflected in Interim EBVs.

What about the accuracy of INTERIM EBVs?

The accuracy of an EBV is not re-calculated in an INTERIM analysis. Therefore the accuracy calculated in the last GROUP analysis is assigned to the INTERIM EBV as a guide to the minimum likely accuracy of the respective EBV. For calves not included in the last GROUP run, the accuracy of the EBV from each parent is used to calculate the accuracy of the calf's EBV. This provides an estimate of the minimum accuracy for the EBV of the calf, even if the calf has not been measured for the particular trait.

What are the reporting criteria for INTERIMS?

The same "reportability" logic applies to INTERIMS as applies to the GROUP BREEDPLAN analysis. This logic for determining the reporting of EBVs is based on minimum accuracy values for "observed" and "non-observed" traits. The INTERIM analysis updates the trait-indicator flags (ie the flags indicating performance analysed for each animal) for young animals as appropriate.

Note that because all parent animals are being held constant at their GROUP EBVs, the progeny counts and trait-indicator flags for parents are also held constant.

What is reported from an INTERIM analysis?

The herd report that is sent to breeders following an INTERIM BREEDPLAN analysis includes EBV reports for calves only, ie for heifers, steers and bulls. Parents are not included in the report, as their EBVs have not been updated since the GROUP BREEDPLAN herd report was produced. The layout of the INTERIM report is similar to that of the GROUP herd report. In addition to the reports for the calves, there is a calving spread report, showing the annual calving spread of the herd over time.

The EBV diskette files that are provided to breeders using PC-based herd management software contain the reportable EBVs of all the animals analysed for this herd. Hence the diskette files contain both Interim EBVs for the current calf crops as well as the GROUP EBVs for the older animals (parents and non-parents).

Summary

INTERIM BREEDPLAN analyses are undertaken each time BREEDPLAN herds submit new performance data. These analyses update the GROUP BREEDPLAN EBVs for current calves (less than 3 years of age) and **are comparable** with GROUP BREEDPLAN EBVs.

It is strongly recommended that:

- Interims be viewed as a means of analysing new data on existing animals (rather than as an alternative to the GROUP run), and
- as much pedigree and performance data as possible is submitted prior to GROUP analyses, so that the reliance on Interim EBVs is reduced.

Remember that Interim GROUP EBVs are directly comparable to the GROUP EBVs and are set to the same base level as the GROUP EBVs.