

Recording *days to calving*

Comprehensive mating data can be used to calculate the fertility EBV Days to Calving (DC). These EBVs are calculated on the number of days from which a cow was first joined/mated in a given mating period to when she eventually calves (see Chapter 8.5.5 for more detail). Both AI and paddock/natural matings should be recorded.

The current “first mating for next year’s calf” concept of recording mating information is being extended as we move to potentially including AI matings into the DC analysis. Due to the complexity of including AI matings into the DC analysis, herds will need to supply complete mating, pregnancy test, cow fate and calf birth details for the whole recorded herd. That is, all cows and heifers in the recorded herd need to be recorded for this trait to accurately reflect the cow fertility in the herd. For Societies using cow inventory systems, current inventory cows plus all yearling heifers that were mated that may not yet be on inventory need to be recorded.

There are a number of methods for submitting the DC information. Please contact your Society for their specific method and data requirements. However, the following outlines the information required for the DC analysis:

- Mating/joining details (see Figure 2.2 for an example input form)
 - The first mating/joining (AI, natural, etc) needs to be recorded for each cow within the mating period even though it may not be the successful mating.
 - Include details for all heifers in the mating program, not just the matings for those heifers which subsequently calve.
 - Include management group information with the matings to indicate which cows have been managed similarly for this mating program.
 - For natural matings, include both the date that the bull was put out with the cows as well as the date that the bull was taken out of the cow herd. Knowing the end of the mating period is important in analysing the DC trait.
 - For AI matings, describe the broad technique used in the AI program based on the following list:
 - I – Insemination on observed standing heat for a number of days and then heat synchronisation applied to all non-inseminated females. Insemination is after observed standing heat. Also use this code for programs where insemination is wholly based on observed standing heat without synchronisation.
 - S – Heat synchronisation given to all females at start of artificial insemination program, with insemination after observed standing heat
 - F – Heat synchronisation given to all females at start of artificial insemination program, with blanket insemination after appropriate elapsed time
 - O- Other type of AI program that does not fit into the broad categories outlined above.
- Cow fate/disposal details
 - Record the date and reason for cows leaving the herd. Note that for this analysis, the most important thing is to distinguish between those females that are culled as pregnancy tested empty or failed to calve, from those that were culled for other reasons - whether pregnant or not. Pregnancy tested empty and culled for fertility fate codes are useful information for a DC analysis, whereas other culls may not be included in the analysis.

Herds may also record the following information which may be used in an extended DC analysis that may include pregnancy test data and AI matings:

- Mating/joining details
 - Record **all** matings/joinings (AI, natural, etc) for each cow and heifer within the mating period, not just the first mating.
- Pregnancy Test results (see Figure 2.3 for an example input form)
 - Record all pregnancy test results, whether pregnant or not
 - For pregnant cows, preferably record estimated number of weeks pregnant (rather than just “pregnant”, although this option is available).
- Donor Cow embryo/ovum flushes
 - Record date that a cow was flushed to retrieve embryos/ovums

Herds that use herd recording packages on PCs should be able to extract this data electronically. Contact your software supplier if you have any problems with this.

When more days to calving data of this extended type is available, further research will be done towards incorporating AI matings and pregnancy test data into the DC evaluation.

In the meantime, only natural/paddock matings will be used in the evaluations.

The key points to remember when recording the mating/joining details are:

- We are not trying to find the sire of the calf. We are looking at when the cow was mated in the mating season.
- Record the first mating, and preferably all matings, in the season (whether natural or AI). Record the mating even if you know the mating was unsuccessful.
- Record all the cows and heifers that were mated (ie whole herd). It is important to include all cows and heifers mated, irrespective of whether:
 - they calved last year or not
 - they were subsequently pregnancy tested empty
- Ensure that you record all heifers joined – not just the one's that calve. information on heifers is very important as many herds cull heifers that do not conceive in the first year of mating. The heifers that do not calve supply as much information to the analysis as those that do calve.
- Accurately record the fate codes of all females leaving the herd. In the DC analysis, this Fate/Disposal code information is very important in determining whether a female should be penalised for being “culled for fertility” or not penalised because, say she was culled for structure, etc.
- Supply pregnancy test data where possible. This information may be significant in future DC evaluations.