Recording Days to Calving Information

TIP SHEET

Days to Calving EBVs are estimates of genetic differences between animals in the time from the start of the joining period (i.e. when the female is introduced to a bull) until subsequent calving. Days to Calving EBVs are expressed in days and are currently calculated from the natural joining details of both heifers and mature cows.

WHY SHOULD DAYS TO CALVING INFORMATION BE RECORDED?

Reproductive performance is a key determinate of profitability in a beef cattle enterprise. Consequently, selection for improved reproductive performance should be an important consideration for all beef cattle producers.

One major component influencing a beef enterprise's reproductive performance is the fertility of the female herd. The job of a female in a beef producing herd is to conceive (preferably as early in the joining period as possible), carry a foetus during gestation, deliver a live calf and raise it until weaning, within every 12 month period of her breeding life. A female that does not do this is failing to do her job and eroding herd profitability.

While many producers manage the reproductive performance of their female herd using different management strategies, in particular the culling of females that fail to get in calf, research has shown that female fertility is influenced by the genetics of the breeding herd. Consequently, Days to Calving EBVs provide a useful tool that breeders can use to improve the genetics of their females for fertility, in association with their routine management and culling strategies.

WHAT INFORMATION NEEDS TO BE RECORDED FOR THE DAYS TO CALVING EBV?

Breeders interested in the Days to Calving EBV need to record all 'events' associated with the joining of their females from the start of the mating period in each breeding season through to when the subsequent calves are born.

Broadly, the information to be collected should include:

1. Joining details of **all** females mated within the herd.
2. Details of **all** females removed from the herd, particularly those present at joining that were no longer with the herd by the time of the subsequent calving.
3. Details of **all** calves (dead or alive) that are born as a result of these joinings.

Please note that, currently, the Days to Calving analysis will only utilise information for females that have **only** been naturally joined within the breeding season (i.e. they have not also been included in artificial insemination (AI) and/or embryo transfer (ET) programs, or artificially induced to cycle prior to joining with the bull outside of such programs). However, research is underway to utilise AI records. Breeders who undertake such programs followed by a natural "backup" joining are strongly encouraged to submit details of their AI programs to assist in this research.

1. RECORDING JOINING DETAILS

Record each joining event to which a female (cow or heifer) is exposed within the breeding season, whether this was the successful joining or not. For situations where females are joined to several bulls in the mating season, record **all joinings** for the female, not just the first or successful joining.

For each joining event within the breeding season, record the bull that the female was joined to, the date she was joined ("bull in" date) and the date that the bull was removed ("bull out" date). Knowing the end of the joining period is important in analysing the Days to Calving trait.

Record management group information to identify any female or females within a joining group whose fertility may have been affected either prior to or during the joining program due to non-genetic factors. For example, a cow that had significantly different nutrition to the rest of the mob, or that experienced sickness or injury. A maximum of three characters (letters and/or numbers) can be used to describe each management group.

2. RECORDING DAYS TO CALVING DISPOSAL INFORMATION

Record the date and reason for any female removed from the herd, particularly those females that were present at the start of joining but are no longer with the herd by the time of subsequent calving.

This disposal information is critical to the Days to Calving analysis. It is used to determine whether females that have a joining record but not a subsequent calf should be penalised for infertility. For example, females that were culled as empty following a pregnancy test would be penalised, whereas females that were culled for non-fertility reasons (e.g. structural problems, disease) would not be penalised.

Please note that the **Days to Calving disposal codes are specific to BREEDPLAN** and are separate to the fate codes routinely submitted to your breed society. Fate codes submitted to your breed society **will not** be used in the calculation of the Days to Calving EBVs, and likewise the Days to Calving disposal codes submitted to BREEDPLAN **will not** be utilised by your breed society. The codes to be used for Days to Calving disposal information are described opposite.

3. RECORDING CALF DETAILS

All calves that are born as a result of these joinings (including calves that are stillborn or die shortly after birth) need to be recorded with your breed society.

Failure to record all calves with your breed society will reduce the accuracy of the Days to Calving EBVs. This is because the analysis will penalise for infertility any female that has been joined but does not produce a subsequent calf.

Culled or sold:

Code	Description
A	Cast for age
B	Sold surplus breeding female – but not code J or F
C	Calving incident (e.g. dystocia, prolapsed)
D	Disease (e.g. pesti, bloat)
E	Eyes (e.g. pigment, hooding)
F	Not in calf (i.e. failed preg test or did not calve)
G	Genetic condition (e.g. carrier of genetic condition)
H	Horns
J	Culled unjoined heifer surplus to requirements
K	Coat type
P	Poor performance (e.g. poor milking, low body condition)
Q	Appearance (e.g. type, colour, markings, Breed Society standards)
R	Reproductive abnormality (e.g. freemartin, mal-formed uterus, small pelvic area)
S	Structural problem (e.g. feet, legs, navel)
T	Poor temperament
U	Udder or teat problems
V	Poor EBVs
W	Calved but failed to rear calf to weaning
X	Susceptible to parasites (e.g. ticks, buffalo fly, worms)

Died or missing:

Code	Description
C	Calving incident (e.g. dystocia, prolapsed)
D	Disease (e.g. pesti, bloat)
M	Missing assumed dead
X	Susceptible to parasites (e.g. ticks, buffalo fly, worms)
Y	Unknown cause
Z	Accident (e.g. injury, drowned, poisoned)

RECORDING PREGNANCY TEST RESULTS

Optionally, where pregnancy test results are available, these can be submitted to BREEDPLAN. Breeders should record the date and result of the test for each female joined.

Pregnancy test results should be reported as:

- N = Not pregnant
- And P = Pregnant, or a number between 3-20,

denoting the number of weeks pregnant as advised by a qualified technician. If the foetus is over 20 weeks old, a "P" should be used.

While not currently included in the Days to Calving analysis, pregnancy test results may be utilised in the future to either enhance the calculation of Days to Calving EBVs, or for the calculation of other female fertility EBVs.

WHAT CONSIDERATIONS SHOULD BE MADE WHEN RECORDING DAYS TO CALVING INFORMATION?

- Joining details for **all** females in the recorded herd need to be collected in order to accurately reflect the cow fertility in the herd. Simply recording the cows that have a calf or those cows that remain on inventory in the next year is **not adequate**.
- Ensure that you record details for **all** heifers joined – not just the ones that calve or are added to inventory. Information on heifers is very important as many herds cull heifers that do not conceive in the first year of joining. The heifers that do not calve supply just as much information to the analysis as those that do calve.
- Record the details of all joining events in which the female was involved even if you know that the joining was unsuccessful. For situations where females are joined to several bulls in a mating season, record **all joinings** for each female within the joining period, not just the first or successful joinings.
- Recording Days to Calving disposal codes for all females that leave the herd between joining and calving is extremely important. This information is used to determine whether females that have a joining record but not a subsequent calf should be penalised for infertility.
- Joining details for females that have been joined to multiple sire groups (rather than a single sire) should also be recorded. In this scenario, the sire ident that is specified should be the multiple sire ident, rather than the ident of the individual sire that resulted in the calf. Please see the Multi Sire Usage: BREEDPLAN Considerations tip sheet, available in the Help Centre on the BREEDPLAN website, for further information on recording multiple sire joinings.
- Similarly, joining details for females that have been mated to sires not recorded with the breed society (e.g. sires of another breed) should also be submitted.
- Herds with either a very wide calving spread (e.g. cows joined all year around) or several calvings each year (e.g. an autumn, winter and spring calving) may have difficulty collecting joining information that is useful for the calculation of Days to Calving EBVs. Please contact staff at your BREEDPLAN processing centre for further advice.
- If your joining may have been compromised by health (e.g. pestivirus outbreak) or physical issues (e.g. bull breakdown) that could lead to reduced or failed reproduction, please contact staff at your BREEDPLAN processing centre for further advice.

HOW DO I SUBMIT DAYS TO CALVING INFORMATION?

Joining details and Days to Calving disposal information for your females should be submitted directly to your BREEDPLAN processing centre. As previously mentioned, please note that any joining information or fate codes that are submitted to your breed society as part of your calf registrations and/or cow inventory is **not** included in the Days to Calving analysis.

There are two different methods available to submit the joining details and Days to Calving disposal codes to BREEDPLAN:

- A BREEDPLAN compatible herd recording computer program. Those who require assistance to enter the joining details of their herd and/or to extract the joinings and Days to Calving disposal information are advised to contact their software supplier directly.
- The BREEDPLAN compatible Microsoft Excel templates (available to download in the Help Centre on the BREEDPLAN website). Several templates are available, and are described on the following page:

1. ***Submitting DTC Information – Natural & AI Joinings***

Used for: Providing natural joining and/or AI program information to BREEDPLAN.

Often submitted: At completion of joining.

2. ***Submitting DTC Information – ET Programs***

Used for: Providing ET program information to BREEDPLAN.

Often submitted: At completion of joining.

3. ***Submitting DTC Information – Preg Test Results***

Used for: Providing pregnancy test results.

Often submitted: At completion of pregnancy testing.

4. ***Submitting DTC Information – DTC Disposal Codes***

Used for: Providing DTC disposal codes for any female that left herd between joining and calving.

Often submitted: At completion of pregnancy testing and/or subsequent calving.

Please see the Methods of Submitting Data to BREEDPLAN tip sheet, available in the Help Centre on the BREEDPLAN website, for further information. If you are unable to submit Days to Calving information using either of the above methods, please contact staff at your BREEDPLAN processing centre to discuss alternative methods.

For more information regarding how to record days to calving information or Days to Calving EBVs in general, please contact staff at your BREEDPLAN processing centre.