

## **Days to Calving - PC software**

We have developed a revised method of collecting and storing matings and pregnancy test data for evaluating Days to Calving (DC) in BREEDPLAN. This will be incorporated into all BREEDPLAN systems in Aust, NZ, South Africa, Namibia and UK.

The concept is that BREEDPLAN herds that wish to collect and submit the DC data for BREEDPLAN processing will do so on a whole herd basis. This BREEDPLAN matings and preg test data will be independent of any similar “Society” information. Our advice to breeders is to submit the information at the end of the mating season (rather than progressively as the events occur).

The data that will be collected as “events” on a cow by cow basis is:

- Start and end mating dates
- Matings (AI, natural, observed, etc)
- Synchronisation events
- Embryo flush dates
- Embryo implant programs
- Pregnancy test results
- Extra events (eg shows, abortions, etc)
- Cow fates / disposals using specific BREEDPLAN codes

A cow will have multiple records, some of which may occur on the same day.

You need synchronisation date as well as AI date as some herds do not AI all the cows that were in the synchronisation program.

### **PC Export File format**

Data will be submitted as fixed record or comma delimited records to be imported into the database (Table 1).

The idea is that cows are grouped together for mating. We need to identify which cows have been in the same mating program and what happened to them within that program.

Both AI and natural matings are important. All matings need to be recorded – not just the successful mating. In particular, all cows that were mated need to be recorded – whether they calve or not.

BREEDPLAN Days to Calving – PC Specifications

**Table 1.** Mating, Flush, Synchronisation, Fate and Pregnancy Test data input file layout (for PC herd management software).

Description	Type	Size	Start	Comment	Field in HERD\$DTCO_DET\$ **
Record Type	alpha	1	1	Always "U" (or "#")	
Herd	alpha	7	2	Observation Herd	MEMBERS-KEY
Cow Ident (Society)	alpha	19	9		ANIMALS-KEY
Date of event	date	8	28	Ddmmccyy	DTCO-DATE
Event Code	alpha	1	36	D – Donor ET/ovum flush E – Embryo transfer implant M – Mating program dates Z – Synchronisation I - Insemination on observed heat (also old O,B & S) A – Insemination on fixed time (also old F) H - hand or observed mating, N (or P) - Natural / Paddock mating R – extra information/result T – pregnancy test result X – Longevity fate/disposal result	DTCO-TYPE
Service Sire's Ident	alpha	19	37	(blank if event code = T,M,Z,R,X)	SIRE-KEY
Out Date	date	8	56	ddmmccyy (mandatory for N/P, optional for M,R)	END-JOIN-DATE
<b>Result</b>	alpha	2	64	Mandatory for T and X events. Optional for D,I,A,H,N/P events	
Mating (I,A,H,N/P)				(optional) S=success, F=failed , A=aborted, blank=na	RESULT
Preg test (T) result				P=pregnant, N=not-pregnant or 3-20 weeks pregnant X=in mob but missed being tested	RESULT
Extra (R) events				A=aborted, E=exhibited/show team	RESULT
Embryos flushed (D)				0-20 number of embryos/ovum	RESULT
Longevity (X) code				Standard DC longevity codes (see Table 2)	RESULT
Management group	alpha	3	66		GRP-CODE

\*\* this column is for ABRI reference purposes only

## Data Edits

The concept is that data will be submitted by members (from their PC herd management packages) at the end of their mating period rather than getting continuous updates as events occur on farm. The data describes relevant “events” in the mating program that may influence the BREEDPLAN DC analysis.

The PC herd management package data input record structure is described in Table 1, but is more simply viewed as follows:

Description	Type	Size	Start	Comment
Record Description	alpha	1	1	Always "U" or "#"
Herd	alpha	7	2	Observation Herd
Cow Ident	alpha	19	9	
Date of Event	date	8	28	ddmmccyy
Event Type (DIOC-TYPE)	alpha	1	36	D,E,M,Z,I,A,H,N,R,T,X
Sire Ident	alpha	19	37	(blank if service code = T,M,Z,R,.X)
Out Date	date	8	56	ddmmccyy
Result	alpha	2	64	
Management group	alpha	3	66	

**Record Description** – “U” for this type of data  
 - if “#”, then record ignored on input (eg headings, comments, etc)

**Herd** - submitting the data must be Society Herd Ident.

**Cow Ident** - must be a valid Society cow ident

**Event Date** - must be a valid date and cannot be a future date.  
 - must be <= members DATE-TO date (if date-to not null)

**Event Type** - single character to describe the event . See further edits below.

**Sire Ident** - optional, must be a valid Society Ident (or multiple sire group) if present

**Out Date** - optional, may be a future (valid) date

**Result** - optional, values depend on event type

**Management Group** – up to three alpha-numeric characters (A-Z, 0-9)  
 - optional for some events

Extra data edits are described by Event Type as different data fields are relevant for the different types of event. These are described below with data examples.

1. **Mating Program dates** (EVENT TYPE = “M”)

This record is optionally used to define the start and end of a mating program for a group of cows.

Rec:	Herd	Cow Ident	Date	Type	Sire Ident	Out Date	Result	Group
U	ABC	ABCA123	12052008	M		25082008		101

Type = M

Date is Start Date of Mating program – must be a valid date

Out Date is the end of the mating program (may be a future date for this event)

Check that (days[out-date – start-date] < 180 days)

Sire-Ident and Result should be blank.

Group is required (ie non blank)

2. **Donor Flush** (EVENT TYPE = “D”)

Describes that a cow has been flushed for embryos/ovum.

Rec:	Herd	Cow Ident	Date	Type	Sire Ident	Out Date	Result	Group
U	ABC	ABCX002	19042008	D	XYZD056		3	1

Type = D

Date is flush date

Out Date not required

Result is the number of ovum flushed (value 0-20)

Group is optional

3. **ET Program** (EVENT TYPE = “E”)

Describes that the cow has been included in an Embryo Transfer (implant) program

Rec:	Herd	Cow Ident	Date	Type	Sire Ident	Out Date	Result	Group
U	ABC	ABCB027	12052008	E		28052008		5

Type = E

Date is the implant date

Sire-Ident and Result should be blank.

Out date is the end date of the Implant program

Group is required (ie non blank)

*Only include these recipient cows in the extract if they have a Society Ident*

4. **AI Synchronisation Program** (EVENT TYPE = “Z”)

Cow is part of a group that has started an AI synchronisation program

Rec:	Herd	Cow Ident	Date	Type	Sire Ident	Out Date	Result	Group
U	ABC	ABCC923	15102008	Z				A

Type = Z

Date is start of synchronisation program

Sire-Ident, out-date and Result should be blank

Group is required (ie non blank)

Need both synchronisation date and AI matings recorded as some cows are in the synchronisation program but then not AI'd.

**5. Natural Matings** (EVENT TYPE = N or P)

Cow has been in a paddock with a bull.

Rec	Herd	Cow Ident	Date	Type	Sire Ident	Out Date	Result	Group
U	ABC	ABCB027	12052008	N	USAB27	20082008		123

Type = N (or P but will store as N only)

Date is date bull and cow were put together

Sire Ident is the bull put to the cow

Out Date - date the bull was removed from the cow mob (may be a future date)

Result is not required (will ignore if input)

Group is required (ie non blank)

**6. Artificial Insemination** (EVENT TYPE = I or A)

Cow is artificially inseminated.

Rec	Herd	Cow Ident	Date	Type	Sire Ident	Out Date	Result	Group
U	ABC	ABCX002	19042008	I	XYZD056			1
U	ABC	ABCX002	19042008	A	XYZD056			AA

Date is date of insemination

Type is "I" for insemination on observed heat

Type is "A" for insemination based on fixed time (no heat observation)

Sire Ident is semen sire

Out date and result not required.

Group is required (ie non blank)

**7. Observed Mating** (EVENT TYPE = H)

Mating of cow has been observed or controlled.

Rec	Herd	Cow Ident	Date	Type	Sire Ident	Out Date	Result	Group
U	ABC	ABCX022	19042008	H	YYZD256			1

Date is mating date

Sire Ident is the service sire

Out date and result not required

Group is required (ie non blank)

**8. Pregnancy Test (EVENT TYPE = T)**

Cow has been tested for pregnancy

Rec:	Herd	Cow Ident	Date	Type	Sire Ident	Out Date	Result	Group
U	ABC	ABCB027	12052008	T			7	

Type = T

Date is date of pregnancy test

Sire Ident, out date and Group are not required

Result can be number of weeks pregnant (3 – 20), P=pregnant, N=not-pregnant

X=in mob but missed being tested

**9. Extra Events (EVENT TYPE = R)**

This record is to give extra information on the cow.

Rec:	Herd	Cow Ident	Date	Type	Sire Ident	Out Date	Result	Group
U	ABC	ABCB027	22092008	R			A	
U	ABC	ABCB027	22092008	R		10122008	E	

Type is R

Result of **A** indicates an Aborted calf,

- date is date observed, Sire-Id, out-date and Group not required.

Result of **E** indicates cow exhibited or part of a show team,

- date and out-date define the period of time in the show team

- Sire-Id and Group not required.

**10. Fate / Disposal (EVENT TYPE = X)**

Cow fate/disposal within the DC system **only**. This data must not be included in any Society fates/disposals. That is, a cow can be active on the Society system even though the DC disposal code may say “Culled for fertility”.

Rec:	Herd	Cow Ident	Date	Type	Sire Ident	Out Date	Result	Group
U	ABC	ABCB027	12112008	X			F	

Type is X,

Date is date of fate/disposal (in DC system)

Sire-Ident, Out-date and Group are not required

Result is a special list of BREEDPLAN DC/Longevity fates/disposals (Table 2)

**The codes listed in Table 2 are for the DC data only.** These codes will only apply to the DC data and will **not** be used in the Society system.

Note that the normal Society Fate/disposal codes will apply to the other areas of the Society system.

**Table 2** DC / Longevity Fate/Disposal codes

<b>Culled or sold</b>	
F	not in calf (i.e. failed preg test or did not calve)
A	cast for age
U	udder or teat problems
C	calving incident
D	disease (e.g. pesti, eye cancer, etc)
X	susceptible to parasites (ticks, buffalo fly, worms, etc)
G	genetic condition (e.g. genetic carrier)
V	poor EBVs
P	poor performance (e.g. poor milking, low body condition, etc)
S	structural problem (e.g. feet, legs, navel, etc)
T	poor temperament
H	Horns
E	Eyes (pigment, hooding, etc)
K	Coat Type
Q	Appearance (type, colour, markings, Society standards, etc)
R	reproduction abnormality (eg freemartin, mal-formed uterus, small pelvic area)
W	calved but failed to rear calf to weaning
J	cull unjoined heifer surplus to requirements
B	sold surplus breeding female (e.g. donor cow, breeding cow) - but not code <b>J</b> or <b>F</b>
<b>Died or missing</b>	
C	calving incident (e.g. dystocia, prolapsed)
D	disease (e.g. pesti, bloat, 3day, etc)
X	parasites (ticks, buffalo fly, worms, etc)
Z	accident (e.g. injury, drowned, poisoned, etc)
Y	unknown cause
M	missing assumed dead

Jack Allen, February 2011

Modifications:

JMA 9-Oct-2013 – add preg test result of X (in mob, but not tested)