

Status as of: 23/07/2010

Form BEEF

DESCRIPTION OF BEEF NATIONAL GENETIC EVALUATION SYSTEM

Country (or countries) : Ireland

Trait name: Calving ease

DATA COLLECTION

Breed(s)	All breeds
Trait definition	Direct calving ease / Maternal calving ease
Method and frequency of measurement	Calving difficulty recorded on a 1 (no assistance) to 4 (veterinary assistance) scale
Who does the performance recording?	Farmers
Method of collecting data	Paper or electronic at time of calf registration by the farmer
Which animals get recorded?	All calves
Is birthday recorded?	Yes
Is day of recording available?	Yes
Are the data adjusted and/or selected? If yes please describe the methodology applied	Calving difficulties 3 & 4 grouped together for evaluation purposes.
Time period for inclusion of records	All eligible records included since collection began in 2001. ET calves are excluded
Criteria (data edits) for inclusion of records	Known ancestry, minimum of 5 calving records in a 6 month period
Is embryo transfer applied? How are ET animals been identified? ¹ Is recipient mother ID recorded?	ET animals are excluded. ET calves are recorded by the farmer or herdbook. Recipient mother ID is recorded
How do you treat incomplete data?	Set to missing

MODEL

Model used for genetic evaluation ^{2a}	Multi-breed AM-DAM
Environmental effects ^{2b}	HYS (F), Parity(F), sex(F), Heterosis & Recombination (dam and

	embryo), age calving (linear & quadratic),
Use of genetic groups and relationships	Yes
Genetic parameters in the model ³	See Appendix
Adjustment for heterogeneous variance in evaluation model	No
System validation	Check on incoming data Correlations with previous runs
Definition of genetic reference base	AI bulls born between 1996 and 2000 from the main dairy and beef breeds with at least 20 records in the evaluation.
Next base change	None scheduled
Assessment of index quality (computation of reliability, connection)	Reliabilities are computed using the mix99 software using the Mistztal and Wiggans (1988) calculation method.
PUBLICATION	
Expression of genetic evaluations	Percent serious calving difficulty.
Criteria per official publication of evaluations	None
Number of evaluations / publications per year	3
Anticipated changes in the near future	Separate evaluations for heifer vs later parity New genetic parameters Inclusion of foreign breeding values
Key reference on methodology applied	The mix99 software package is used for the genetic evaluations (Lidauer and Strandén, 1999; Vuori et al., 2006)
Key organization: Contact person, address, phone, fax, e-mail, website	ICBF Francis Kearney Highfield House, Shinagh, Bandon, Co. Cork, Ireland. aeu@icbf.com www.icbf.com

- 1) Use Appendix II BEEF for sample ID of ET animals
- 2a) Use abbreviation listed in the attached list of abbreviation to define the type of model.
- 2b) Use abbreviation for most common effects as listed in the attached list of abbreviation indicating, also, if the effect is treated as random (R) or fixed (F).
- 3) Use Appendix I BEEF for heritability/genetic variance estimates.

Parameters used in genetic evaluation

Country:

Main trait group:

Breed:

Trait ⁽¹⁾	Definition	h_d^2	h_m^2	$r_{g(d,m)}$	c^2	σ_p^2
CE	Calving Ease	0.25	0.04	-0.70	0.02	0.78

h_d^2 : direct heritability; h_m^2 : maternal heritability; $r_{g(d,m)}$: genetic correlation between direct and maternal effects; c^2 : repeatability of (maternal) permanent environmental effects; σ_p^2 : phenotypic variance.

1) If you have more than one trait provide the correlations between traits.

