

STATUS AS OF: April 2020

Form BEEF

DESCRIPTION OF BEEF NATIONAL GENETIC EVALUATION SYSTEM

Country (or countries): Slovenia

Trait group: Adjusted Weaning Weight

DATA COLLECTION

Breed(s)	Limousin, Charolais
Trait definition	Weaning weight of calf, adjusted to the age of 210 days.
Method and frequency of measurement	Weighting of animals in recorded herds. Unit is kg.
Who does the performance recording?	National recording organization & some breeders with national recording organization supervision.
Method of collecting data	Animals are weighted at weaning.
Which animals get recorded?	Calves at the age of 105-315 days present at the farming facility.
Is birthday recorded?	Yes
Is day of recording available?	Yes
Are the data adjusted and/or selected? If yes please describe the methodology applied	Data are pre-adjusted (interpolated) to the age of 210 days: All records of the animal taken between 105 and 315 days of age are determined ($105 \leq x \leq 315$). The record (y) that was recorded closest to the age of 210 days is chosen ($\min x - 210 $) and adjusted to the age of 210 days by equation Weight at 210 days (kg) = $\frac{(y-y_0)}{x} * 210 + y_0$, where y_0 = birth weight (kg)
Time period for inclusion of records	Recording from 01.01.1995
Criteria (data edits) for inclusion of records	Known related information (own and dam ID, gender, birth date, general data, weighting location), age of calf between 105-315 days, minimum suckling period of 4 months.
Is embryo transfer applied? How are ET animals been identified?¹ Is recipient mother ID recorded?	ET is rarely used. Identification is provided according to ICAR rules. Donor is used as mother. Recipient mother is recorded.
How do you treat incomplete data?	Excluded

MODEL	
Model used for genetic evaluation^{2a}	ST-BLUP-AM multibreed model with BREED as a fixed effect, and DAM. After evaluation results are split and published by breed.
Environmental effects^{2b}	F: BREED, YEAR, CSEX, PARI class R: HERD
Use of genetic groups and relationships	Relationship matrix without genetic groups
Genetic parameters in the model³	$\sigma_p^2, h^2_d, h^2_m, c^2, e^2, r_{g(d,m)}$ c^2 = proportion of common herd in environmental variance
Adjustment for heterogeneous variance in evaluation model	No
System validation	Comparison of subsequent evaluation results (breeding value correlation, rank correlation)
Definition of genetic reference base Next base change	Population average of both breeds. The base is updated each evaluation.
Assessment of index quality (computation of reliability, connection)	Computation of reliability.
PUBLICATION	
Expression of genetic evaluations	Standardized and expressed as $N(\mu=100, \sigma=12)$ $BV12 = ((BV-a)/b) * 12 + 100$ a-mean of BV b-standard deviation of BV Published direct and maternal effect.
Criteria per official publication of evaluations	Reliability ≥ 0.3
Number of evaluations / publications per year	3
Anticipated changes in the near future	
Key reference on methodology applied	Web site: http://rodica.bf.uni-lj.si/govedo
Key organization: Contact person, address, phone, fax, e-mail, website	University of Ljubljana, Biotechnical Faculty Department of Animal Science Groblje 3 1230 Domzale Slovenija

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- ¹Use 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). ³Use Appendix I BEEF for heritability/genetic variance estimates.

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Appendix I BEEF Parameters used in national genetic evaluation Country:

Main trait group: Adjusted Weaning Weight

Breed: Limousin, Charolais

Trait ⁽¹⁾	Definition	h_d^2	h_m^2	$r_{g(d,m)}$	c^2	σ_p^2
Adjusted Weaning Weight	Weight at 210 days of age	0.42	0.22	-0.72	0.28	2118.14

- h_d^2 : direct heritability; h_m^2 : maternal heritability; $r_{g(d,m)}$: genetic correlation between direct and maternal effects; c^2 : proportion of common herd within birth year/year of calving in environmental variance; σ_p^2 : phenotypic variance. ⁽¹⁾If you have more than one trait (e.g. AWW at 120d and 210d) provide the correlations between traits.

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Appendix II BEEF Sample of ET animal IDs

Country: Slovenia

Main trait group: Adjusted Weaning Weight

Breed: Limousin

ET animal ID

LIMSVNF000022390604