:FStatus as of:

Form BEEF

DESCRIPTION OF BEEF NATIONAL GENETIC EVALUATION SYSTEM

Country (or countries) Czech Republic

Trait name: Group of traits „Field test“ - calving easy, birth weight, weight 120d, weaning weight 210d, yearling weight

DATA COLLECTION

Breed(s)	aberdeen angus, beef simmental, belgian blue, blonde d'Aquitaine, galloway, gasconne, hereford, highland, charolais, limousine, piemontese, salers
Trait definition	Weights at birth, at age of 120, 210 and 365 days
Method and frequency of measurement	Weighting of animals in recorded herds. Unit is kg.
Who does the performance recording?	Employee of Czech Beef Breeders Association (see details: http://www.cschms.cz/DOC_LEGISLATIVA_svaz/130_The_methodology_of_beef_performance_recording.pdf)
Method of collecting data	Level "A": weights at age of 120 days: 90-170 days, 210 days: 171-290 days, 365 days: 291-450 days. Level "B": 210 days: 90-250 days Animals are weighted 3 times: cca 70 % of animals at age of 120 days, 50 % of animals at age of 210 days, 35 % animals at age og 365 days.
Which animals get recorded?	Weaned calves until age of 450 days (pure and crossbreds) present on farm that should be recorded
Is birthday recorded?	Yes
Is day of recording available?	Yes
Are the data adjusted and/or selected? If yes please describe the methodology applied	Live weights are adjusted to defined age - see above.
Time period for inclusion of records	Since 2000

Criteria (data edits) for inclusion of records	No
Is embryo transfer applied? How are ET animals been identified?[1] Is recipient mother ID recorded?	The ET is rarely applied. ET animals are identified with specific code which is different from ID. The recipient ID is recorded.
How do you treat incomplete data?	Delete
MODEL	
Model used for genetic evaluation[2a]	MT-AM with DAM and MPE, multibreed. In the model calving easy, birth weight, weight 120d, weaning weight and yearling weight are included. All traits as both direct and maternal effects. Ranking of animals separately for each breed.
Environmental effects[2b]	HYS (many, R) Sex (4, F) Age of dam (4, F) Heterosis (FR) Heterosis of dam (FR) Birth year (many,F) Maternal permanent environment (R)
Use of genetic groups and relationships	Relationship matrix with genetic groups based on the breed.
Genetic parameters in the model [3]	
Adjustment for heterogeneous variance in evaluation model	No
System validation	Comparison of subsequent evaluation results.
Definition of genetic reference base Next base change	Rolling base.
Assessment of index quality (computation of reliability, connection)	No
PUBLICATION	
Expression of genetic evaluations	Estimated and expressed as a relative breeding value for birth, 120, 210 and 365 days weights - direct and maternal effect
Criteria per official publication of evaluations	No
Number of evaluations / publications per year	4
Anticipated changes in the near future	

Key reference on methodology applied	Přibyl, J., Misztal, I., Přibylová, J., Šeba, K. (2003) Multiple-breed, Multiple-traits evaluation of beef cattle in the Czech Republic. Czech J.Anim.Sci., 48, 519-532. Veselá Z., Přibyl J., Kučera J., Šeba K., Vostrý L. (2007): Current system of beef evaluation in the Czech Republic. Interbull Bulletin 36, 33-36. All methodic are available in English on Assosiation web-site: http://www.cschms.cz/index.php?page=leg_svazova
Key organization: Contact person, address, phone, fax, e-mail, website	Czech Beef Breeders Association (Český svaz chovatelů masného skotu) Těšnov 17, 117 05 Praha 1, Czech Republic Kamil Malát, executive director Phone: +420 221 812 865, Cell phone: +420 724007860 E-mail: malat@cschms.cz http://www.cschms.cz Institute of Animal Science, Department of Genetic and Breeding of Farm Animals Přátelství 815, 104 00 Praha Uhříněves, Czech Republic Ing. Zdeňka Veselá, PhD. Phone: +420267009664 E-mail: vesela.zdena@vuzv.cz http://www.vuzv.cz

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.

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Appendix I BEEF

Parameters used in genetic evaluation

Country: Czech Republic
Main trait group: calving easy, birth weight, weight 120d, weaning weight 210d, yearling weight
Breed: aberdeen angus, beef simmental, belgian blue, blonde d'Aquitaine, galloway, gasconne, hereford, highland, charolais, limousine, piemontese, salers

Trait[(1)]	Definition	h_d^2	h_m^2	$r_{g(d,m)}$	c^2	σ^2_p
Calving easy		0,12 without σ^2_{HYS} (0,09 with σ^2_{HYS})	0,05 (0,04)	-0,18	0,04 (0,03)	0,099 (0,14)
Birth weight		0,29 (0,07)	0,16 (0,04)	-0.14	0,08 (0,02)	9,9 (43,2)
Weight 120d		0,32 (0,15)	0,20 (0,09)	-0,18	0,08 (0,04)	462,5 (1017,5)
Weaning weight	Weight at 210 days of age	0,32 (0,11)	0,20 (0,07)	-0,18	0,08 (0,03)	962,2 (2744,4)
Yearling weight	Weight at 365 days of age	0,34 (0,09)	0,05 (0,01)	-0,18	0,04 (0,01)	2039 (7722)

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.

	CE_D	$W0_D$	$W120_D$	$W210_D$	$W355_D$	CE_M	$W0_M$	$W120_M$	$W210_M$	$W365_M$
CE_D		0,30	0,15	0,15	0,10	-0,18	-0,10	-0,08	-0,07	-0,05
$W0_D$			0,33	0,29	0,28	-0,09	-0,14	-0,05	-0,05	-0,02
$W120_D$				0,70	0,63	-0,04	-0,09	-0,18	-0,15	-0,10
$W210_D$					0,72	-0,05	-0,05	-0,15	-0,18	-0,14
$W365_D$						-0,04	-0,05	-0,14	-0,14	-0,18
CE_M							0,30	0,15	0,13	0,08
$W0_M$								0,29	0,17	0,03
$W120_M$									0,81	0,45
$W210_M$										0,62
$W365_M$										

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Appendix II BEEF

Sample of ET animal IDs

Country:
Main trait group:
Breed:

ET animal ID