: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.<br><br>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.<br><br>All methodic are available in English on Assosiation web-site:<br>http://www.cschms.cz/index.php?page=leg_svazova |
| Key organization:<br>Contact person, address, phone, fax,<br>e-mail, website | Czech Moravian Breeders' Corporation Inc.<br>(Českomoravská společnost chovatelů, a.s.)<br>Hradištko 123, Hradištko, Czech Republic<br>Ing. Pavel Bucek<br>Phone: +420 257 896 223<br>E-mail: bucek@cmsch.cz<br>http://www.cmsch.cz<br><br>Czech Beef Breeders Association<br>(Český svaz chovatelů masného skotu)<br>Těšnov 17, 117 05 Praha 1, Czech Republic<br>Kamil Malát, executive director<br>Phone: +420 221 812 865, Cell phone: +420 724007860<br>E-mail: malat@cschms.cz<br>http://www.cschms.cz<br><br>Institute of Animal Science, Department of Genetic and Breeding of Farm Animals<br>Přátelství 815, 104 00 Praha Uhříněves, Czech Republic<br>Ing. Zdeňka Veselá, PhD.<br>Phone: +420267009664<br>E-mail: vesela.zdena@vuzv.cz<br>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.

**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 | $h_d^2$ | $h_m^2$ | $r_{g(d,m)}$ | $c^2$ | $\sigma_P^2$ |
|---|---|---|---|---|---|---|
| Calving easy | | 0,12 without $\sigma^2_{HYS}$ (0,09 with $\sigma^2_{HYS}$) | 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; $\sigma_P^2$: 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 |
| $W365_M$ | | | | | | | | | | |

**Form BEEF**

**Sample of ET animal IDs**

**Country:**
**Main trait group:**
**Breed:**

**ET animal ID**