

Status as of: .

Form BEEF

DESCRIPTION OF BEEF NATIONAL GENETIC EVALUATION SYSTEM

Country (or countries) South Africa (ZAF)

Trait name: Birth Weight (bwt)

DATA COLLECTION

Breed(s)	Charolais (CHA)
Trait definition	Birth Weight (bwt)
Method and frequency of measurement	Measured before 5 days of age in Kg. Once at birth
Who does the performance recording?	The farmer
Method of collecting data	Scale
Which animals get recorded?	Calves that was born
Is birthday recorded?	Yes
Is day of recording available?	Yes
Are the data adjusted and/or selected? If yes please describe the methodology applied	No
Time period for inclusion of records	1980
Criteria (data edits) for inclusion of records	Biological limits on phenotypes
Is embryo transfer applied? How are ET animals been identified? ¹ Is recipient mother ID recorded?	Yes. This is recorded at birth of the calf and is available In some cases, other cases are mothers not on database
How do you treat incomplete data?	Will remove the phenotype from data set

MODEL

Model used for genetic evaluation ^{2a}	AM with maternal effects
Environmental effects ^{2b}	Sire by Herd (R), Contemp. (F), sex of animal(F), Calf from Heifer of Cow (F), Wean age (C) & Dam Age ² (C), nth day the calfe was born in calving season (C)

Use of genetic groups and relationships	Genetic groups - Yes Country of origin and birth year (group within 10year periods)
Genetic parameters in the model ³	
Adjustment for heterogeneous variance in evaluation model	No
System validation	Validation on biological norms & deviations from previous runs
Definition of genetic reference base	Base year base on birth year all animals born in 1990
Next base change	(Next base change - NA)
Assessment of index quality (computation of reliability, connection)	Using PEVs (PEVs obtained from Pest2) Publish accuracies ((PEV*PEV)/Additive Variance)

PUBLICATION

Expression of genetic evaluations	EBVs and EBV indices (100 is breed average of all animals alive with a stddev of 12 index points)
Criteria per official publication of evaluations	Publication criteria: Accuracy > 5%
Number of evaluations / publications per year	12
Anticipated changes in the near future	NA
Key reference on methodology applied	PEST2 & MIX99
Key organization: Contact person, address, phone, fax, e-mail, website	SA Stud Book and Animal Improvement Association Bobbie van der Westhuizen 118 Henry Street, Westdene, Bloemfontein, South Africa +27828026606, bobbie@studbook.co.za, www.studbook.co.za/www.sabeefbulls.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
aww	Weaning Weight	0.31	0.10	-0.03	SxH=0.03	14.75

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.

