Form GE

Status as of: 2016-04-08

DESCRIPTION OF NATIONAL GENETIC EVALUATION SYSTEMS

Country (or countries)	GBR
Main trait group[1] **NOTE!** Only one trait group per form!	Conformation
Breed(s)	Ayrshires (RDC)
Trait definition(s) and unit(s) of measurement[2] Attach an appendix if needed	See Appendix CO.
Method of measuring and collecting data	Breed Society Classifier – Breed Society Linear Classification Scheme.
Time period for data inclusion	1983 till present
Age groups (e.g. parities) included	1st Lactation Assessment only. No Re-classifications.
Other criteria (data edits) for inclusion of records	Duplicate Identity check. Primary Identity Check. Stage of Lactation. Age at Classification.
Criteria for extension of records (if applicable)	Not applicable
Sire categories	All sires
Environmental effects[3]**, pre-adjustments**	None
Method (model) of genetic evaluation[3]	Herd Year Visit (F) MT BLUP Animal Model Month (F) Age (LIN & Quad) (C) Stage of Lactation (LIN & QUAD) (C) Animal (R) ST BLUP (Composites)
Environmental effects[3] **in the genetic evaluation model**	See above
Adjustment for heterogeneous variance in evaluation model	None
Use of genetic groups and relationships	Unknown parent are grouped according to country of origin, selection pathway and breed type
Blending of foreign/Interbull information in evaluation	Interbull evaluations are published for national and foreign bulls. The Interbull evaluations of foreign bulls are incorporated into their progeny through adjustment of the parent average
Genetic parameters in the evaluation	See Appendix below
System validation	Extensive checks and validation on input data and results. Comparison of consecutive evaluations. Interbull trend validation test III. Evaluations are done within an ICAR certified process
Expression of genetic evaluations If standardised (e.g. RBV), give standardisation formula in the appendix	Standardized Breeding Values.

Definition of genetic reference base	2010 Cow base
Next base change	2020 using cows born in 2015
Calculation of reliability	Method of K. Meyer LPSci 21 87-100
Criteria for official publication of evaluations	At least 50 percent reliability
Number of evaluations / publications per year	Three runs per year
Use in total merit index[4]	Profitable lifetime index (PLI) = PTA milk *-0.027 + PTA fat *0.08 + PTA protein *1.71 + PTA lifespan *25.4 + PTA SCC * -0.19 + EBV Feet & Legs * 1.13 + EBV Mammary * 1.18 + PTA NR56 * 2.16 + PTA CI * -0.35
Anticipated changes in the near future	None
Key reference on methodology applied	Mrode, R.A. and Swanson, G.J.T. (1994) Genetic and phenotypic relationships between conformation and production traits in Ayrshire heifers. Animal Production 58:335-338.
Key organisation: name, address, phone, fax, e-mail, web site	SRUC, Roslin Building, Bush Estate, Penicuik, Midlothian, EH26 9RG; Tel +44 131 535 3241; mike.coffey@sac.ac.uk; www.sruc.ac.uk

1) Either: Production (e.g. milk, fat, protein), Conformation, Health (e.g. mastitis resistance, milk somatic cell, resistance to diseases other than mastitis), Longevity, Calving (e.g. stillbirth, calving ease), Female fertility (e.g. non-return rate, interval between reproductive events, number of AI's, heat strength), Workability (e.g. milking speed, temperament), Beef production, Efficiency (e.g. body weight, energy balance, body conditioning score), or Other traits.
2) Indicate frequencies per category if the trait is categorical and specify transformation of data if practiced.
3) Use abbreviations for most common effects (see document with list of abbreviations at http://www-interbull.slu.se/service_documentation/General/list_of_abbreviations.rtf) and indicate random (R) or fixed (F).
4) Please give economic weights and indicate how they are expressed (preferably in genetic standard deviation units).

Parameters for national genetic evaluations for udder health traits as provided to Interbull

Country (or countries): GBR
Main trait group: Conformation
Breed(s): AYR (RDC)

Trait	h^{2a}	genetic variance[a]	official proof standardisation formula[b]		
Stature	Same as WHFF	0.55	1.250	1.022	0.889
Chest Width		0.25	0.331	0.135	0.368
Body Depth		0.27	0.395	0.353	0.426
Angularity		0.52	0.862	0.873	0.627
Rump Angle		0.27	0.270	-0.247	0.400
Rump Width		0.38	0.613	0.457	0.529
Rear Leg Set		0.27	0.363	-0.026	0.321
Rear Leg Rear View		N/A	N/A	N/A	N/A
Foot Angle		0.31	0.565	0.169	0.362
Fore Udder		0.26	0.374	0.210	0.370
Rear Udder Height		0.40	0.686	0.590	0.475
Udder Support		0.10	0.077	0.132	0.184
Udder Depth		0.22	0.327	0.044	0.273
Front Teat Placement		0.25	0.250	0.160	0.312
Teat Length		0.37	0.654	0.049	0.432
Rear Teat Placement		N/A	N/A	N/A	N/A
Overall conformation (Total) Score		0.30	3.781	1.371	1.528
Overall Udder (Mammary) Score		0.30	3.407	0.687	1.255
Overall Feet & Leg Score		0.30	5.317	1.437	1.293

[a] If repeated records are treated as separate traits, provide heritability estimates and genetic variances separately for each trait, as well as for all traits pooled, i.e. for the trait submitted to Interbull.

[b] Expressed as follows:
StandEval=((eval-a)/b)*c+d where a=mean of the base adjustment, b=standard deviation of the base, c=standard deviation of expression (include sign if scale is reversed), and d=base of expression.