DESCRIPTION OF NATIONAL GENETIC EVALUATION SYSTEMS

Country (or countries)	NZL
Main trait group[1]	Conformation
Breed(s)	All
Trait definition(s) and unit(s) of measurement[2]	Attached
Method of measuring and collecting data	Inspector scores (1-9 scale) on two year old heifers
Time period for data inclusion	All records since 1987
Age groups (e.g. parities) included	First parity
Other criteria (data edits) for inclusion of records	Heifers are required to be in milk at time of inspection
Criteria for extension of records	Not applicable
Sire categories	All sires are included in the evaluation, including natural mating sires
Environmental effects[3], pre-adjustments	Not applicable
Method (model) of genetic evaluation[3]	Single record MT AM for body traits analysed together. Single record MT AM for udder traits analysed together. Single record ST AM for Udder Overall composite Overall Conformation: Linear combination of Udder Overall and Body Conformation Overall (equally weighted) with EDC and Reliability from Udder Overall ST AM.
Environmental effects[3] in the genetic evaluation model	HYS (F), stage of lactation when scored (F), age at calving (F).
Adjustment for heterogeneous variance in evaluation model	None
Use of genetic groups and relationships	The relationship matrix is augmented to include phantom parents without records. The grouping is based on breed, birth year, sex, country.
Blending of foreign/Interbull information in evaluation	None
Genetic parameters in the evaluation	Reported below
System validation	Interbull trend validation test III
Expression of genetic evaluations	BV (in units of scoring)
Definition of genetic reference base	2000 born cows of all breeds and crosses with records for each of milk, fat, protein and 17 traits other than production in 2002.
Next base change	June 2016
Calculation of reliability	Information source method. Harris and Johnson, 1998, *J Dairy Sci* **81** : 2723-2728
Criteria for official publication of evaluations	Enrolment in the national genetic evaluation system

Number of evaluations / publications per year	4 – February, May, October and December
Use in total merit index[4]	Only indirectly. Legs, Udder Overall, and (body) Dairy Conformation records are used as predictors in a Multiple Trait evaluation that includes Survival from first to fifth lactation (Surv15); and Surv15 is included in the Breeding Worth index.
Anticipated changes in the near future	
Key reference on methodology applied	Harris, B.L., and Montgomerie, W.A. (2007) Multiple trait national genetic evaluation for cow longevity, *Proceedings New Zealand Society of Animal production*, **67** (submitted).Klei, B., Mark, T., Fikse, F., and Lawlor, T., (2002) *Interbull Bulletin* **29** : 178-182
Key organisation: name, address, phone, fax, e-mail, web site	DairyNZ Jeremy Bryant Private Bag 3016 Hamilton NEW ZEALAND Phone: +64 (0)21 814 163 jeremy.bryant@dairynz.co.nz Website: http://www.dairynz.co.nz/animal/animal-evaluation/

Parameters used in genetic evaluation

Country (or countries): NZL
Main trait group: Conformation
Breed (repeat as necessary): HOL, JER, RDC

Trait	Definition	ITB[a]	h^{2b}	genetic variance[b]	official proof standardisation formula[c]
Stature	Height at the shoulders	x	0.376	0.1944	
Chest Width	Strength and depth of chest and body	x	0.22	0.1427	
Body Depth	Strength and depth of chest and body	x	0.22	0.1427	
Angularity					
Rump Angle	Angle of rump from hips to pins	x	0.25	0.0988	
Rump Width	Width of pins hips and thurls	x	0.19	0.0995	
Rear Leg Set	Straightness or curvature of rear legs	x	0.07	0.0202	
Rear Leg Rear View					
Foot Angle					
Fore Udder	Strength of attachment to the body wall	x	0.20	0.1813	
Rear Udder Height	Height and width of rear udder attachment	x	0.20	0.1774	
Udder Support	Suspensory ligament and udder depth	x	0.204	0.1613	
Udder Depth					
Front Teat Placement	Placement of front teats	x	0.25	0.1020	
Teat Length					
Rear Teat Placement	Placement of rear teats	x	0.28	0.1708	
Overall Conformation Score	Overall conformation (composite trait)	x	0.19	0.1564	
Overall Udder Score	Overall udder score	x	0.23	0.2073	
Overall Feet & Leg Score					