

## FACTS ON SIRE EVALUATION PROCEDURES APPLIED FOR PRODUCTION TRAITS

<b>COUNTRY: NEW ZEALAND</b>	
Breed(s)	Ayrshire, Holstein-Friesian, Jersey, Brown Swiss, Shorthorn, Simmental, Guernsey
Trait(s) evaluated and unit(s) of measurement	Milk (l), fat and protein (kg, %).
Number of lactations	All
Genetic parameters assumed	$h^2 = 0.25$ $t = 0.6$ between lactations $r_{g1:2.....n \text{ lact.}} = 0.8$ $r_{g2:3.....n \text{ lact.}} = 1.0$
Criteria for inclusion and extension of records	Age at calving < 10 years. Lactation records of 100-305 days normally included without extension. Lactation records of 100-200 days excluded if terminated for non-production reasons. All records > 200 days included without extension. Records in progress not utilized
Sire categories evaluated	All sires
Environmental effects considered by pre-adjustment	-
by evaluation model	Herd*year*age, breed of sire
Base for age adjustment (months)	-
Use of genetic groups and/or relationships	No genetic groups (Daughter production regressed on parent average)
Method of evaluation	MCC
Expression of proof	RBV (yields), EBV (fat and protein %)
Genetic (reference) base	Fixed, average RBV (EBV) of all bulls (Simmental 1974, Brown Swiss 1977, Guernsey 1986) evaluated in 1968
Criteria for official publication of sire proofs	Limited: 6 daughters and $REL \geq 0.25$ Widespread: 20 daughters in 6 herds, $REL \geq 0.50$ and the herd with the most daughters in the current season contains no more than 33.3 % of all the daughters in the sire's proof
Number of evaluations/publications per year	3/2
Use of production index	Total merit index used
Name, address and faxnumber of organization responsible for sire evaluation and publication	Livestock Improvement Corporation Ltd. New Zealand Dairy Board Private Bag 3016 New Zealand Fax: 0-7-856-2428

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Key references on methodology applied

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Number of AI bulls (NB) tested, means (X) and standard deviations (SD) of proofs (RBV) from most recent run, by bull's year of birth (YB) and breed

		Milk		Fat		Protein		Fat %		Protein %	
YB	NB	X	SD	X	SD	X	SD	X	SD	X	SD
<b>Breed:</b>		Ayrshire									
1975	13	112	8.2	118	10.2						
1976	8	111	12.2	119	10.5						
1977	9	119	7.0	118	7.2						
1978	9	115	6.4	123	8.0						
1979	3	122	2.3	125	2.5						
1980	5	125	5.7	133	2.9						
1981	3	119	6.6	129	3.1						
1982	5	124	6.8	130	10.2	119	7.5				
1983	5	121	6.7	129	5.4	117	4.9				
1984	6	124	11.2	130	9.6	121	8.8				
1985	7	126	8.4	136	4.9	125	7.3	4.6	0.23	3.5	0.09
1986	2	130	7.1	141	12.7	129	9.2	4.7	0.21	3.5	0.07
1987	4	123	12.5	133	7.2	119	9.5				
<b>Breed:</b>		Friesian									
1975	91	112	7.0	123	8.1						
1976	97	115	7.8	124	7.5						
1977	87	114	6.8	124	7.4						
1978	82	115	7.8	125	7.5						
1979	62	119	6.6	127	6.6						
1980	69	120	7.6	130	7.0						
1981	73	116	7.3	130	7.3						
1982	78	121	7.6	134	7.1	123	6.5				
1983	82	121	6.6	136	7.8	121	6.6				
1984	87	125	8.0	136	7.1	124	6.9				
1985	74	124	7.8	136	6.7	124	6.1	4.3	0.25	3.1	0.14
1986	63	131	7.2	141	7.6	130	7.4	4.2	0.21	3.1	0.11
1987	81	126	9.1	142	7.3	127	7.6				
<b>Breed:</b>		Jersey									
1975	109	113	9.7	121	8.9						
1976	85	116	9.4	122	8.2						

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		Milk		Fat		Protein		Fat %		Protein %	
YB	NB	X	SD	X	SD	X	SD	X	SD	X	SD
1977	76	116	8.6	125	9.0						
1978	79	117	7.5	129	7.2						
1979	72	116	7.3	128	7.9						
1980	74	120	7.7	131	7.5						
1981	58	121	8.1	131	9.1						
1982	58	121	8.3	134	8.8	122	7.4				
1983	63	127	7.6	138	7.2	125	6.2				
1984	57	124	6.1	138	6.5	124	5.4				
1985	44	126	6.4	142	6.3	126	6.0	6.4	0.28	4.0	0.11
1986	38	129	6.6	145	6.8	129	5.2	6.4	0.33	4.0	0.11
1987	47	129	6.8	147	6.7	129	6.1				