

FACTS ON APPLIED SIRE-EVALUATION PROCEDURES FOR DAIRY PRODUCTION TRAITS

COUNTRY	FINLAND
Breed(s)	Finnish Ayrshire, Finnish Friesian, Finncattle
Traits evaluated and units of measurement	Milk, fat, protein, FCM (kg)
Number of lactations	1
Genetic parameters applied	$h^2 = 0.25$
Inclusion and extension of records	Culled cows: not included if shorter than 305 days In progress: not utilized
Sire categories evaluated	All sires
Effects considered	
by preadjustments	Age, season and days open
by model of evaluation	Herd-year, sire, group of sires, maternal grandsire, group of maternal grandsires
Base for age adjustment	Mean actual production of all first lactating cows after 1975
Use of genetic groups/relationships/pedigree	Gen. groups of breeds (3)/relationship matrix used/sire and maternal grandsire
Method of evaluation used	Single trait BLUP
Expression of genetic merit	Relative breeding value, RBV standardized variation ($S.D._{RBV} = 10$)
Genetic base, kind/definition	Rolling, average of three last batches of young bulls
Minimum requirements for official publication of sire proofs	20 daughters
Use of selection index or total merit index	Total merit index used
Name and address of organization responsible for sire evaluations and publishing of results	The Finnish Animal Breeding Association P.O. Box 40 SF-01301 VANTAA 30 Finland
Key reference on methodology applied	Syväjärvi, J., Ojala, M. and Hellman, T. 1984. Application of the direct sire comparison method to the Finnish dairy cattle population. J. Sci. Agric. Soc. Finland 55:525-537.

Number of tested AI bulls, means and standard deviations of proofs by year

Year of birth of bull	No. of bulls	Relative breeding value (standardized)							
		Milk yield		Fat yield		Protein yield		FCM yield	
		$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.
Breed: Finnish Ayrshire									
1970	176	95.0	7.89	96.3	9.28	-	-	95.4	8.97
71	169	98.9	7.25	100.3	7.79	-	-	99.9	7.60
72	177	98.1	8.25	99.7	8.70	-	-	99.0	8.26
73	216	99.9	9.80	100.6	10.20	100.0	7.69	100.4	9.95
74	206	105.0	9.61	102.8	9.85	101.4	9.83	103.9	9.59
75	173	106.0	11.20	103.4	10.69	102.8	11.67	104.8	11.02
76	171	101.8	10.61	100.7	9.74	96.8	10.69	101.1	10.06
77	154	103.2	8.39	103.8	10.22	101.3	8.99	103.8	9.19
78	180	102.8	9.57	101.8	9.21	102.3	9.48	102.0	9.41
Breed: Finnish Friesian									
1970	26	95.4	7.36	96.6	8.98	-	-	95.8	8.26
71	25	100.0	8.96	103.8	8.09	-	-	102.3	8.24
72	27	100.6	10.24	103.9	9.63	-	-	102.0	10.16
73	31	96.8	10.04	96.3	9.09	98.5	7.31	96.3	9.47
74	32	96.8	7.37	97.6	9.21	97.1	7.34	96.9	8.11
75	42	100.3	9.91	101.5	10.78	100.4	10.92	100.6	10.72
76	30	98.9	8.19	98.1	9.19	95.3	8.10	98.1	8.63
77	33	103.5	10.77	101.8	11.76	101.9	13.22	102.7	11.45
78	39	107.7	9.63	104.0	9.05	104.1	9.65	105.8	9.28
Breed: Finncattle									
1970	14	99.3	9.04	100.1	12.13	-	-	99.9	11.82
71	9	101.0	5.42	97.6	8.63	-	-	98.8	7.38
72	20	97.6	11.01	100.8	9.37	-	-	99.6	10.44
73	15	99.5	8.68	103.1	11.09	100.5	10.02	103.5	11.33
74	17	97.8	9.80	102.5	9.62	95.5	8.61	100.6	9.89
75	10	102.7	6.65	101.6	6.17	101.6	7.58	102.1	5.52
76	10	102.3	11.41	95.5	9.88	95.3	11.52	98.0	11.15
77	9	109.4	7.58	102.8	11.02	106.6	9.62	105.9	10.12
78	7	109.2	9.13	106.4	9.37	106.6	9.05	108.6	9.55

Country: Finland

App. 2

Average phenotypic levels of (adjusted) production records included in the sire evaluation procedures

Year of evaluation (calving)	Traits			
	Milk kg	Fat kg	Protein kg	FCM kg
Breed: Finnish Ayrshire				
1975	4500	201	-	4815
76	4637	207	-	4964
77	4607	205	-	4920
78	4729	211	159	5058
79	4802	213	160	5113
80	4875	215	163	5189
81	4699	208	154	5002
82	4968	221	164	5307
83	4999	222	163	5343
Breed: Finnish Friesian				
1975	4468	188	-	4604
76	4663	196	-	4803
77	4634	193	-	4740
78	4676	193	153	4765
79	4786	197	155	4874
80	4844	200	157	4932
81	4717	194	148	4789
82	4991	205	159	5066
83	5073	208	159	5145
Breed: Finncattle				
1975	3674	170	-	4014
76	3804	176	-	4158
77	3753	171	-	4074
78	3848	176	133	4175
79	3871	177	131	4198
80	3991	182	131	4315
81	3888	173	135	4146
82	4148	185	127	4425
83	4157	187	138	4473