

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	Protein and 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 age at calving 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	RBV, standardized variation (S.D. = 10)
Genetic base, kind/definition	Rolling, average of three latest 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	Syv��jarvi, 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

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

		Relative breeding value (standardized)			
Year of birth of bull	No. of bulls	Protein yield		FCM yield	
		$\bar{x}$	S.D.	$\bar{x}$	S.D.
Breed: Finnish Ayrshire					
1970	176	—	—	90.0	8.9
71	169	—	—	95.4	7.6
72	177	—	—	94.5	8.3
73	216	98.3	7.7	95.9	10.0
74	206	99.7	9.8	99.4	9.6
75	173	101.1	11.7	100.3	11.0
76	171	95.1	10.7	97.1	10.1
77	154	99.6	9.6	99.3	9.9
78	186	99.7	10.4	97.7	10.2
79	166	99.3	9.7	99.7	10.1
80	209	102.7	9.3	102.3	9.3
81	158	107.3	10.7	106.8	10.5
Breed: Finnish Friesian					
1970	26	—	—	89.7	8.3
71	25	—	—	96.2	8.2
72	27	—	—	95.9	10.6
73	31	93.2	7.3	90.2	9.5
74	32	91.0	7.3	90.5	8.1
75	42	95.1	10.9	94.5	10.9
76	30	90.0	8.1	92.0	8.6
77	34	96.6	11.7	96.6	12.5
78	39	98.9	10.3	99.9	10.2
79	39	101.5	8.7	100.6	9.1
80	40	99.6	10.9	99.5	10.8
81	39	102.3	9.4	103.0	8.9
Breed: Finncattle					
1970	14	—	—	96.1	11.8
71	9	—	—	95.0	7.4
72	20	—	—	95.8	10.4
73	15	95.3	10.0	99.7	11.3
74	17	90.3	8.6	96.8	9.9
75	10	96.0	7.6	98.3	5.5
76	10	90.1	11.5	94.2	11.2
77	9	101.4	7.7	102.1	11.3
78	9	102.4	8.2	101.3	7.6
79	5	96.6	12.2	97.8	9.0
80	8	102.3	6.3	103.8	8.2
81	1	97.0	—	99.0	—

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

Year of evaluation (calving)	Traits	
	Protein kg	FCM kg
Breed: Finnish Ayrshire		
1975	-	4815
76	-	4964
77	-	4920
78	159	5058
79	160	5113
80	163	5189
81	154	5002
82	164	5307
83	161	5286
84	161	5298
85	161	5339
Breed: Finnish Friesian		
1975	-	4604
76	-	4803
77	-	4740
78	153	4765
79	155	4874
80	157	4932
81	148	4789
82	159	5066
83	158	5116
84	158	5093
85	156	5091
Breed: Finncattle		
1975	-	4014
76	-	4158
77	-	4074
78	133	4175
79	131	4198
80	131	4315
81	135	4146
82	127	4425
83	138	4476
84	137	4469
85	137	4458