

FACTS ON APPLIED SIRE-EVALUATION PROCEDURES FOR DAIRY PRODUCTION TRAITS

COUNTRY	SWEDEN
Breed(s)	Swedish Friesian, Swedish Red and White Cattle
Traits evaluated and units of measurement	Milk, fat, prot. and FCM (kg), % fat, % prot.
Number of lactations	1
Genetic parameters applied	$h^2 = 0.25$
Inclusion and extension of records	Sire and maternal grandsire (dam) of the same breed. Age at calving 20-36 months 46-305 days in lactation, records of culled cows and records in progress shorter than 305 days are extended
Sire categories evaluated	All sires with daughters contemporary with daughters of AI-sires
Effects considered	
by preadjustment	Age and month at calving, days open
by model of evaluation	Herd-year-season, group of sires, sire, group of maternal grandsires, maternal grandsire
Base for age adjustment	28 months
Use of genetic groups/relationships/pedigree	Genetic groups and relationships between sires based on sire and maternal grandsire
Method of evaluation used	Single trait BLUP
Expression of genetic merit	RBV (% of mean)
Genetic base, kind/definition	Rolling base, average RBV of the three last years of tested bulls = 100
Minimum requirements for official publication of sire proofs	15 efficient daughters with 305 days lact.
Use of selection index or total merit index	Milk index = index of RBV for fat and protein. Total merit index for milk production and other traits used
Name and address of organization responsible for sire evaluations and publishing of results	Swedish Association for Livestock Breeding and Production Hållsta S-631 84 ESKILSTUNA
Key references on methodology applied	Danell, B. 1984. Sire evaluation for milk production in Swedish dairy cattle breeding. IDF/EAAP Symposium on progeny testing methods in dairy cattle breeding, Prague 14-16 sept. 1984.

Country: Sweden

App. 1

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

Year of birth	No. of sires	Relative Breeding Value							
		FCM kg		Fat kg		Protein kg		Milk-index	
		\bar{x}	S.D.	\bar{x}	S.D.	\bar{x}	S.D.	\bar{x}	S.D.
Breed: Swedish Red and White (SRB)									
1970	171	96.0	5.2	95.3	5.6				
71	152	97.5	5.7	96.9	5.7				
72	151	98.3	5.8	97.8	5.8				
73	162	99.8	5.9	99.6	6.0				
74 ¹⁾	161	98.9	5.7	98.5	5.5				
75 ¹⁾	168	98.7	5.4	98.1	5.5				
76 ¹⁾	151	98.5	5.3	98.5	5.6	98.1	5.2	98.1	5.1
77 ¹⁾	160	100.5	5.8	100.7	6.3	98.7	5.2	98.6	5.1
78 ²⁾	194	100.8	6.6	100.7	7.2	100.2	5.7	100.5	5.7
79 ²⁾	108	100.0	5.9	99.5	6.2	100.8	6.2	100.7	6.5
						100.4	5.3	99.9	5.4
Breed: Swedish Friesian (SLB)									
1970	47	94.2	6.1	93.8	6.4				
71	42	97.4	6.9	96.7	7.1				
72	45	95.4	6.7	94.7	7.2				
73	61	96.2	7.5	96.1	7.4				
74	53	97.5	5.7	96.9	6.2				
75 ¹⁾	78	98.1	6.1	97.8	6.5				
76 ¹⁾	74	97.4	6.8	97.3	7.6	98.2	5.5	98.0	5.8
77 ¹⁾	69	101.1	7.2	101.3	7.2	98.2	6.0	97.7	6.5
78 ²⁾	79	100.9	6.2	101.1	6.5	100.7	6.6	101.0	6.6
79 ²⁾	65	100.9	6.7	100.9	7.7	100.7	6.6	100.9	6.1
						101.6	5.6	101.2	6.3
1) Included in the base									

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2) Mainly lactations in progress

Country: Sweden

App. 2

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

Year of calving	Traits			
	FCM kg	Fat kg	Fat %	Protein %
Breed: Swedish Red and White (SRB)				
1975	4914		4.11	
76	4910		4.10	
77	4911		4.13	
78	4997		4.18	
79	5260		4.20	
80	5340		4.22	
81	5345	218	4.21	3.42
82	5436	222	4.20	3.43
83	5688	232	4.22	3.45
84	5772	236	4.24	3.43
Breed: Swedish Friesian (SLB)				
1975	4810		3.89	
76	5027		3.87	
77	4883		3.88	
78	4921		3.98	
79	5282		4.01	
80	5355		4.02	
81	5322	211	3.93	3.37
82	5383	214	3.94	3.40
83	5545	221	3.95	3.40
84	5635	225	3.98	3.40