

FACTS ON APPLIED SIRE-EVALUATION PROCEDURES FOR DAIRY PRODUCTION TRAITS

COUNTRY	NETHERLANDS
Breed(s)	Black and White (Friesian), Dutch Red and White (MRY), Eye Spotted (BLA)
Traits evaluated and units of measurement	Milk (kg), fat and protein (kg, g/day and %)
Number of lactations	1
Genetic parameters applied	$h^2 = 0.25$ (all traits)
Inclusion and extension of records	BLA, Friesian: 22-33 months of age at calving MRY: 23-34 - " - $P_{305} = P_t \cdot 405 / (\text{lact. length} + 100)$ for records between 260 and 305 days (P_t = Production after t days lactation)
Sire categories evaluated	All sires
Effects considered	
by preadjustments	Age, month of calving
by model of evaluation	Herd-year-season, sire, group of sires
Base of age adjustment	24 months
Use of genetic groups/relationships/pedigree	Genetic groups of bulls/purebred vs. crosses with HF/relationship matrix used/sire and maternal grandsire
Method of evaluation used	Single trait BLUP
Expression of genetic merit	BV (kg, %)
Genetic base, kind/definition	Stepwise, average BV of all young bulls evaluated and published June -82
Minimum requirements for official publication of sire proofs	Rpt ≥ 0.55
Use of selection index or total merit index	1. Net profit index (guilders) = $0.316BV_{\text{milk}} + 260BV_{\text{fat}\%} + 500BV_{\text{prot}\%}$ 2. Total merit index for conformation traits
Name and address of organization responsible for sire evaluations and publishing of results	Royal Dutch Cattle Syndicate P.O. Box 454 6800 Al Arnhem The Netherlands
Key references on methodology applied	Jansen, Dommerholt, Wismans. 1983. Breeding values for milk production traits in The Netherlands. Report B-211 of The Research Institute for Animal Prod. "Schonoord"

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

		Traits									
Year of first proof	No. of bulls	Milk kg		Fat g/day		Prot. g/day		Fat %		Protein %	
		$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.
Breed: Black and White (Friesian)											
1980	308	-123	410	-19.7	48.8	-14.5	40.2	-0.020	0.170	0.001	0.110
81	654	-49	448	-8.3	53.0	-5.5	44.0	-0.010	0.160	0.001	0.110
82	523	0	510	0	65.2	0	50.7	0	0.162	0	0.102
83	402	156	522	21.9	66.8	16.1	50.3	0.007	0.161	-0.005	0.103
84	267	138	502	20.4	64.0	14.5	47.6	0.012	0.164	-0.004	0.097
Breed: Dutch Red and White (MRV)											
1980	111	-24	291	-6.5	35.7	-5.5	29.3	-0.027	0.150	-0.016	0.080
81	297	7	288	0.2	37.6	0.3	28.9	-0.007	0.140	-0.006	0.080
82	136	0	328	0	43.8	0	33.2	0	0.154	0	0.093
83	147	26	395	2.3	49.1	3.4	39.8	-0.007	0.145	0.004	0.102
84*	102	17	420	-4.5	48.2	0.4	39.2	-0.044	0.131	-0.009	0.097
Breed: Groninger Eye Spotted (BLA)											
1980	5	-108	244	-1.5	24.7	-5.4	23.8	0.083	0.100	0.050	0.040
81	37	-19	221	0.9	25.2	0.5	22.2	0.023	0.160	0.020	0.070
82	18	0	259	0	30.6	0	24.6	0	0.138	0	0.085
83	17	-85	233	-10.3	25.4	-10.2	24.6	0.005	0.118	-0.008	0.061
84*	14	-121	185	-14.5	21.5	-9.2	14.8	0.010	0.135	0.035	0.062

*period dec 1983 - may 1984

Country: The Netherlands

App. 2

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

Years of calving	Milk kg	Fat %	Protein %	g fat + prot./day
Breed: Black and White				
1976	4149	4.10	3.38	1017
77	4292	4.10	3.35	1048
78	4377	4.12	3.38	1076
79	4555	4.13	3.40	1124
80	4528	4.14	3.38	1116
81	4511	4.14	3.36	1109
82	4636	4.21	3.37	1152
83	4754	4.23	3.37	1184
84	4764	4.24	3.34	1183
85	4835	4.26	3.37	1209
Breed: Dutch Red and White				
1976	4139	3.88	3.39	987
77	4239	3.88	3.36	1006
78	4284	3.89	3.40	1023
79	4448	3.93	3.43	1073
80	4454	3.95	3.42	1076
81	4431	3.96	3.40	1069
82	4474	4.04	3.42	1094
83	4541	4.04	3.41	1109
84	4520	4.07	3.40	1106
85	4460	4.10	3.44	1102
Breed: Groninger				
1976	3738	4.08	3.48	926
77	3896	4.02	3.47	956
78	3979	4.03	3.47	978
79	4065	4.04	3.50	1004
80	3996	4.08	3.48	990
81	4058	4.04	3.46	997
82	4105	4.11	3.47	1019
83	4161	4.11	3.49	1037
84	4133	4.11	3.45	1024
85	4072	4.13	3.47	1015