

FACTS ON APPLIED SIRE-EVALUATION PROCEDURES FOR DAIRY PRODUCTION TRAITS

COUNTRY	GREAT BRITAIN
Breed(s)	Ayrshire, British Friesian/Holstein Dairy Shorthorn, Guernsey, Jersey
Traits evaluated and units of measurement	Milk, fat and prot. (kg), fat %, prot. %
Number of lactations	1
Genetic parameters applied	h^2 milk, fat and prot. yield = 0.3 h^2 fat % = 0.40 h^2 prot. % = 0.44
Inclusion and extension of records	Lact. not included if <200 days Rec. in progress not utilized Age at calving 22-38 months
Sire categories evaluated	All sires
Effects considered	
by preadjustments	Age and months of calving
by model of evaluation	Herd-year-season, sire, group of sires, maternal grandsire, group of maternal grandsires
Base for age adjustment	31 months
Use of genetic groups/ relationships/pedigree	Year of birth within AI organisation, NS-groups
Method of evaluation used	Single trait BLUP (ICC) for AI/widespread use bulls, CC for limited use or NS bulls
Expression of genetic merit	PD (kg, %)
Genetic base, kind/definition	Fixed, average merit of limited use bulls born 1962-1967 with daughters calving from Dec-68
Minimum requirements for official publication of sire proofs	5 eff. daughters
Use of selection index or total merit index	Total merit index not used
Name and address of organiza- tion responsible for sire evaluations and publishing of results	Milk Marketing Board Thames Ditton, Surrey KT7 OEL Great Britain
Key references on methodology applied	QUAAS, R.L., EVERETT, R.W. and McCLINTOCK, A.E. (1979). Maternal grandsire model for dairy sire evaluation. J. Dairy Sci. 62:1648-1654 MILK MARKETING BOARD. Report of the Breeding and Production Organisation. (Various).

Country: Great Britain

App. 1

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

Year of birth	No of bulls	ICC results									
		Milk kg		Fat kg		Prot kg		Fat %		Prot %	
		$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.
Breed: Friesian/Holstein											
1970	123	131	141	5.9	5.1	3.9	4.2	+0.01	0.07	-0.01	0.04
71	114	109	157	5.2	5.3	2.9	4.4	+0.01	0.09	-0.01	0.06
72	142	107	164	5.8	6.6	3.1	4.8	+0.03	0.10	-0.01	0.05
73	141	88	174	5.7	6.8	2.6	5.1	0.05	0.10	-0.01	0.06
74	137	144	180	6.6	6.7	3.7	4.7	0.02	0.10	-0.02	0.06
75	128	86	177	4.3	6.2	2.3	5.1	0.02	0.10	-0.01	0.04
76	133	32	167	2.5	6.6	1.5	5.1	0.03	0.09	0.01	0.05
77	156	153	175	8.0	6.1	5.0	4.6	0.04	0.11	0.00	0.06
78	132	143	170	7.0	5.9	4.4	4.8	0.03	0.10	-0.02	0.05

Country: Great Britain

App. 2

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

Year of birth of sire	Traits				
	Milk kg	Fat kg	Protein kg	Fat %	Protein %
Breed: Friesian/Holstein					
1970	4809	188.0	158.5	3.90	3.27
71	4570	178.2	149.9	3.89	3.26
72	4673	186.7	153.7	3.99	3.26
73	4511	177.4	148.7	3.93	3.27
74	4537	176.2	149.8	3.88	3.28
75	4538	177.2	150.1	3.90	3.29
76	4520	175.7	150.1	3.88	3.30
77	4676	183.7	153.5	3.92	3.26
78	4594	181.2	150.9	3.94	3.26