

FACTS ON APPLIED SIRE-EVALUATION PROCEDURES FOR DAIRY PRODUCTION TRAITS

COUNTRY	IRELAND
Breed(s)	Friesian
Traits evaluated and units of measurement	Milk, fat and protein yield (kg), fat %, protein %, index _{F+P} (yield)
Number of lactations	1
Genetic parameters applied	h^2 : 0.25
Inclusion and extension of records	Sire and maternal grandsire have to be same breed Normal lact. 150-305 days Rec. from culled cows and rec. in progress are excluded Age at calving 18-38 months
Sire categories evaluated	Almost all are AI sires
Effects considered	
by preadjustments	Date of calving, age at calving and breed cross of dam
by model of evaluation	Herd-year-season, sire, group of sires
Base of age adjustment	24 months
Use of genetic groups/relationships/pedigree	Bull groups by year/rel.ship matrix used with sire and maternal grandsire
Method of evaluation used	Single trait BLUP
Expression of genetic merit	PD (kg, %) RB-index based on PD fat and protein (% of mean)
Genetic base, kind/definition	Fixed, average PD of bulls represented by daughters in herds for the pre-1977 progeny tests of reference bulls. The base reflects the population mean in the 1965-1970 period
Minimum requirements for official publication of sire proofs	20 eff. daughters, rpt \geq 0.57
Use of selection index or total merit index	No total merit index used
Name and address of organization responsible for sire evaluations and publishing of results	Department of Agriculture Kildare Street Dublin 2 Ireland
Key references on methodology applied	FLANAGAN, M.J. (1977). Calculation of progeny test proofs by the BLUP procedure. Journal of Department of Agriculture, Dublin. Vol LXXIV, 2-12.

Country: Ireland

App. 1

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

Year of first proof	No. of bulls	Predicted differences										RBI Fat+Prot yield	
		Milk kg		Fat %		Protein %		Fat kg		Prot. kg		\bar{x}	S.D.
		\bar{x}	S.D.	\bar{x}	S.D.	\bar{x}	S.D.	\bar{x}	S.D.	\bar{x}	S.D.		
Breed: Friesian													
1976	34	129	103	0.10	0.04	0.04	0.03	7.2	4.0	4.5	3.3	112.4	7.7
77	38	173	89	0.11	0.06	0.05	0.03	9.2	3.4	6.3	2.6	116.4	6.2
78	28	181	91	0.10	0.05	0.03	0.03	9.1	3.4	5.9	2.6	115.9	6.2
79	19	237	80	0.12	0.08	0.02	0.04	11.8	3.3	7.5	2.2	120.5	5.7
80	30	218	75	0.11	0.05	0.04	0.03	11.1	3.1	7.3	2.3	119.5	5.5
81	34	179	92	0.13	0.06	0.06	0.03	10.1	3.7	6.7	3.0	117.8	6.9
82	45	199	81	0.13	0.07	0.06	0.04	10.9	3.4	7.3	2.6	119.4	6.3
83	34	222	92	0.16	0.09	0.06	0.04	12.5	3.0	8.2	2.8	122.0	5.8
84	28	219	73	0.21	0.07	0.08	0.03	14.4	3.3	8.6	2.4	124.4	5.7

Country: Ireland

App. 2

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

Year of production	Traits				
	Milk kg	Fat kg	Protein kg	Fat %	Protein %
Breed: Friesian					
1976	2832	106	95	3.77	3.35
77	2964	111	97	3.77	3.28
78	3118	115	103	3.71	3.30
79	3114	114	102	3.68	3.29
80	3069	112	101	3.65	3.29
81	2980	109	98	3.65	3.30
82	3100	111	100	3.61	3.28
83	3176	113	103	3.57	3.26
84	3276	119	107	3.66	3.28