

# 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 (kg), fat and protein %, index <sub>F+P</sub> (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, %) and RB-index estimated as $100 + PD \text{ fat(kg)} + 1,4 \text{ PD protein(kg)} - 0.025 \text{ PD milk(kg)}$
Genetic base, kind/definition	Fixed Base = Average of Bulls which had their first daughters recorded in 1981 or 1982
Minimum requirements for official publication of sire proofs	20 eff. daughters, $r_{pt} \geq 0.57$
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	Department of Agriculture and Food - National Breeding programme for dairy cattle - Report Spring 1988 Department of Agriculture and Food, Kildare St., Ireland

Country: Ireland

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

		Predicted differences										RBI 82	
Year of first proof	No. of bulls	Milk kg		Fat %		Protein %		Fat kg		Prot. kg		Fat, prot and milk yield	
		$\bar{x}$	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	-58	149	-0.02	0.04	-0.01	0.03	-2.9	5.8	-2.4	4.8	95	8.8
77	38	-12	128	-0.01	0.06	0.00	0.03	-0.9	4.9	-0.5	3.8	99	7.1
78	28	25	123	-0.03	0.06	-0.02	0.04	-0.2	4.6	-0.2	3.4	99	6.3
79	19	68	115	0.00	0.08	-0.03	0.04	2.7	4.5	0.9	3.2	102	6.6
80	30	54	117	-0.01	0.06	-0.01	0.03	1.6	4.9	1.2	3.5	102	6.8
81	35	-14	142	0.00	0.06	0.00	0.04	-0.6	5.7	-0.5	4.3	99	8.2
82	51	5	115	0.00	0.06	0.00	0.04	0.2	5.0	0.3	3.6	100	7.2
83	34	51	130	0.05	0.08	0.01	0.04	3.8	4.5	2.0	4.0	105	7.1
84	28	70	88	0.09	0.06	0.02	0.03	6.5	3.7	3.3	2.9	110	5.4
85	35	83	120	0.04	0.08	0.00	0.04	4.7	5.9	2.6	3.7	106	8.2
86	36	85	102	0.07	0.06	0.01	0.04	5.9	4.2	3.1	3.0	108	6.0
87	42	75	133	0.05	0.07	0.00	0.04	4.8	4.7	2.7	3.5	107	6.0

Country: Ireland

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 %
<b>Breed: Friesian</b>					
1976	2838	106	94	3.76	3.33
77	3226	120	105	3.74	3.26
78	3503	130	116	3.72	3.32
79	3488	128	115	3.67	3.29
80	3211	116	104	3.63	3.26
81	3073	112	101	3.65	3.29
82	3266	117	108	3.61	3.31
83	3738	133	123	3.56	3.30
84	3947	139	130	3.52	3.27
85	3973	143	131	3.59	3.29
86	4047	147	132	3.62	3.27
87	4100	149	132	3.63	3.23