

FACTS ON APPLIED SIRE-EVALUATION PROCEDURES FOR DAIRY PRODUCTION TRAITS

COUNTRY	SOUTH AFRICA
Breed(s)	Ayrshire, Friesian, Guernsey, Jersey
Traits evaluated and units of measurement	Milk, fat and protein (kg), fat and protein %
Number of lactations	1
Genetic parameters applied	$h^2 = 0.25$
Inclusion and extension of records	Age at calving 16-40 months Rec. of 240-300 days utilized and standardized to 300 days. Rec. from culled cows excluded. Rec. in progress not utilized
Sire categories evaluated	All sires used in milk recorded herds - AI and natural service
Effects considered by preadjustments	Length of lactation
by model of evaluation	Herd-year, sire, age of calving
Base for age adjustment	
Use of genetic groups/relationships/pedigree	Pedigree relationship used
Method of evaluation used	BLUP
Expression of genetic merit	PD (Estimated Progeny Difference, kg)
Genetic base, kind/definition	Fixed, average yield of daughters (cows) of the 1978 population
Minimum requirements for official publication of sire proofs	Rpt. ≥ 0.40
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	Animal and Dairy Science Research Institute Private Bag X2, Irene, 1675 Rep. of South Africa
Key references on methodology applied	National Dairy Cattle and Progeny Testing Scheme: Republic of South Africa. Official Sire Analyses, Vol. 16, 1987.

Country: South Africa

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

Year of first proof	No. of bulls	Predicted differences (EPD)					
		Milk kg		Fat kg		Protein kg	
		\bar{x}	S.D.	\bar{x}	S.D.	\bar{x}	S.D.
Breed: Friesian							
1987	53	165.9	253.7	4.7	8.1	4.4	8.0
Breed: Jersey							
1987	15	103.8	112.0	5.1	6.3	3.8	3.7
Breed: Ayrshire							
1987	3	18.6	144.8	-1.6	6.1	0.4	4.6
Breed: Guernsey							
1987	5	127.6	135.1	4.0	2.7	4.3	3.2

Country: South Africa

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

Year of calving	Traits			Year of calving	Traits		
	Milk kg	Fat kg	Protein kg		Milk kg	Fat kg	Protein kg
Breed: Friesian				Breed: Jersey			
1976	3738	135	-	1976	2769	134	-
77	3748	135	-	77	2818	134	-
78	3800	137	-	78	2771	131	-
79	3789	138	125	79	2770	131	104
80	3971	145	131	80	2859	134	107
81	4087	148	136	81	2992	138	114
82	4175	152	139	82	3066	143	118
83	4323	155	142	83	3172	144	120
84	4321	154	142	84	3120	142	119
85	4399	157	145	85	3190	143	120
86	4420	159	143	86	3180	143	117
87	4466	159	143	87	3223	145	120
Breed: Ayrshire				Breed: Guernsey			
				1976	3198	142	
				77	3295	147	
				78	3105	139	
				79	3074	134	105
1980	3543	134	120	80	3015	130	104
81	3584	135	124	81	3265	138	115
82	3777	144	130	82	3653	160	131
83	3727	139	128	83	3600	157	128
84	3933	145	135	84	3507	149	126
85	3826	144	131	85	3488	145	124
86	3886	147	131	86	3589	152	125
87	3873	146	131	87	3582	150	124