

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 %, prot. %
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 without extension Rec. from culled cows are excluded Rec. in progress are not utilized
Sire categories evaluated	All sires
Effects considered	
by preadjustments	
by model of evaluation	Herd-year, sire
Base for age adjustment	
Use of genetic groups/relationships/pedigree	
Method of evaluation used	CC
Expression of genetic merit	RBV (% of mean)
Genetic base, kind/definition	Rolling, average yield of daughters (cows) of all sires with production last year
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 Dep. of Agriculture Private Bag X2, Irene 1675 Rep. of South Africa
Key references on methodology applied	

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

Year of first proof	Number of bulls	RBV		Breeding Values			
		Milk yield		Fat yield kg		Protein yield kg	
		\bar{x}	S.D.	\bar{x}	S.D.	\bar{x}	S.D.
Breed: Friesian							
1976	11	99	12.5	-2.0	4.6		
77	13	96	6.2	-3.4	7.6		
78	23	94	6.6	-3.3	4.3		
79	15	99	7.4	-0.7	5.7	-0.2	4.9
80	18	101	12.0	+0.6	6.8	+0.9	7.7
81	30	100	11.2	+0.9	7.7	+0.3	7.6
82	28	101	9.8	-0.2	7.0	+0.9	6.4
83	36	100	8.7	0.0	6.1	-0.6	5.5
84	46	100	7.4	+0.3	5.3	0.0	5.4
Breed: Jersey							
1978	5	101	7.6	-0.8	6.0		
79	5	99	6.1	+1.4	3.4	+0.4	2.5
80	3	106	9.5	+0.9	4.0	+2.9	2.6
81	4	101	5.8	-0.3	5.3	-0.5	4.7
82	9	103	9.5	+1.6	6.0	+2.3	4.7
83	9	100	6.5	-1.8	4.6	-1.6	4.0
84	10	97	6.0	-1.1	5.2	-1.4	4.0

Country: South Africa

App. 2

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

Year of calving	Traits		
	Milk kg	Fat kg	Protein kg
Breed: Friesian			
1976	3738	135	-
77	3748	135	-
78	3800	137	-
79	3789	138	125
80	3971	145	131
81	4087	148	136
82	4175	152	139
83	4323	155	142
84	4321	154	142
Breed: Jersey			
1976	2769	134	-
77	2818	134	-
78	2771	131	-
79	2770	131	104
80	2859	134	107
81	2992	138	114
82	3066	143	118
83	3172	144	120
84	3120	142	119