

DAIRY CATTLE GENE FLOW AS FROZEN SEMEN FROM DOMESTIC BULLS AT
AUSTRALIAN A.B. CENTRES

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As part of the Australian Dairy Herd Improvement Scheme's project C1 (i), a study was undertaken into gene flows in dairy bull breeding in the four Australian States with organisational (as opposed to individual farm) bull breeding schemes.

Sample data are doses of semen despatched from A.B. Centres, with deletion of semen used in official progeny test schemes, or semen sold overseas, or semen which derives from another A.B. Centre. Only one of the two Victorian A.B. Centres was represented and only the major New South Wales Centre.

For New South Wales the data relates to the months of January, February, May, June, September and October of 1980 and for Queensland, it relates to the seven months up to 31 January, 1981. For Tasmania and Victoria it relates to the year ending 31 December, 1980. The relative breeding values given in the Table are those released to farmers at the commencement of the data sampling period, as their semen selections were presumably based on information current at the time of purchase.

Table 1 reveals the predominant use of proven bulls in all States except Tasmania, and that bulls of better than average sales team merit tend to be used more widely than others, despite the disincentive of higher semen prices for such bulls.

TABLE 1: Semen Sales by Breed and A.B. Centre, Sampled During 1980/81

	FRIESIAN					A.I.S.					JERSEY	
	B*	T	V	W	B	B	B	W	B	B	V	W
Proven semen as percentage of total sales for period	87.40	< 7	> 98	46.99	87.53	63.42	100.0	> 94	66.82			
Number of bulls involved in sales (number proven)	23 (20)	22 (5)	18 (14)	35 (8)	8 (6)	28 (6)	8 (8)	15 (12)	20 (5)			
Highest "sales" bull as % of total doses despatched	36.53	< 6	28.14	24.86	26.53	28.77	83.49	24.17	43.88	#		
Number of "sires of bulls" represented among these "sale" bulls	16	2	11	19	7	12	5	10	14			
Range in RBV's for fat yield	92-112	n.a.	103-118	n.a.	97-110	n.a.	95-117	103-127	n.a.			
Correlation between fat yield RBV and semen sales for proven bulls	0.44	n.a.	0.68	n.a.	0.83	n.a.	0.52	0.28	n.a.			
Average fat yield RBV per dose of proven semen sold	107.44	n.a.	110.76	n.a.	107.58	n.a.	116.17	110.66	n.a.			
Average fat yield RBV of proven bulls	102.75	n.a.	108.29	n.a.	105.50	n.a.	106.88	109.17	n.a.			

* B indicates Graham Park A.B. Centre, Berry, N.S.W. V indicates Victorian Artificial Breeders
 T indicates Tasmanian Herd Improvement Organization W indicates Wacol A.I. Centre, Queensland

Based on "proven" bull sales only