COMPETITIVE CLOVERS

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The use of subclover cultivar mixes is becoming increasingly common in southern Australian pastures. These mixes usually occur where;

1. new improved cultivars are sown in areas containing undesirable ones with a view to replacing the latter.
2. the mixture is sown with the aim of obtaining greater pasture productivity and/or stability.

There is little doubt that the success or failure of a cultivar in the mixture will depend on its seed producing ability but competition between the cultivars can have a major effect on this seed production.

Data collected from Marulan on the NSW Southern Tablelands, indicates changes to subclover pasture composition through changes in seed pool composition, where two cultivars were sown in 50/50 and 75/25 proportional mixes.

TABLE 1. Percentage composition of seed pool

The cultivars used in this experiment were: Woogenellup (WG), Dalkeith (DK), Larisa (LAR) and Enfield (ENF).

Cultivar	1985		1986	
	cv1	cv2	cv1	cv2
50/50				
WG/LAR	56	44	79	21
WG/DK	46	54	84	16
WG/ENF	44	56	55	45
DK/LAR	60	40	49	51
DK/ENF	48	52	27	73
LAR/ENF	38	62	27	73
75/25				
DK^{75}/WG^{25}	78	22	34	66
WG^{75}/DK^{25}	72	28	91	9
DK^{75}/LAR^{25}	82	18	76	24
LAR^{75}/DK^{25}	66	34	54	46
WG^{75}/WAR^{25}	79	21	92	8
LAR^{75}/WG^{25}	70	30	41	59

Woogenellup, a prolific seed producer in this environment, dominates the mixture in all situations by the second year, even when sown at 25% (by weight) in 1985. Enfield is the dominant cultivar when sown with Larisa or Dalkeith but shows depressed seed production with Woogenellup. Dalkeith and Larisa have virtually disappeared when sown at 25% with 75% Woogenellup but basically maintain their original proportions when sown together.