

## Palatability and cultivar selection in the *eragrostis curvula* complex

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*E. curvula* (Schrad) Nees is an apomictic, C4, tussock-forming perennial grass native to Southern Africa. Although relatively unpalatable, it is highly regarded for live stock and hay production and for soil conservation purposes in Southern Africa, America and Argentina.

In New South Wales the species is potentially valuable for pastoral and soil conservation purposes in drier areas (1), but its usefulness is offset by highly unpalatable, aggressive, naturalized types occurring in Tableland and Coastal areas. Research began in 1974 aimed to define more palatable types from a large and variable population with a view to selecting commercial cultivars.

### Methods

Sheep have been allowed periodic free choice access to replicated spaced rows of selected *E. curvula* accessions. During grazing, palatability was

rated on a ten-point scale according to forage consumption, on a daily basis, for each row. At the conclusion of grazing, scores were summed for each accession over replicates and grazing days and the result expressed in proportion to the least grazed accession (relative palatability rating).

### Results and discussion

Relative palatability rating for five of the selected accessions for a number of grazing periods at a number of sites is given in Table 1. Palatability rankings were not consistent throughout the year but showed reasonable agreement between trial sites.

**Table 1. Relative Palatability Ratings of Selected Cultivars of *E. curvula***

Cultivar	Date of Assessment										
	1979		1980			1981					
	2/2	20/3	11/2	14/3	29/7	15/1	3/3	27/4	30/4	19/5	9/9**
SCS 809*	10	30	22	10	20	14	8	55	18	66	0
SCS 4625	50	120	54	27	13	10	25	62	18	48	0
SCS 4650	120	120	60	27	45	23	15	43	20	63	6
SCS 4660	40	40	34	21	33	33	51	76	25	99	10
Consol	90	120	60	43	27	28	48	91	26	104	6

\* Naturalized type; \*\* Palatability of frosted mature herbage.

The palatable accession Consol is distinguishable from all known naturalized types of *E. curvula* in New South Wales. It was selected and recommended for registration to the State Herbage Plant Liaison Committee as being of particular value as a soil conservation and pastoral species. Accessions SCS 4660 and 4650 are also highly palatable but less distinguishable from naturalized types.

Consol is an erect winter dormant *E. curvula*. It is compatible with cool season annual species and is highly persistent. Although not the most productive accession it is likely to be particularly useful for spring sowing on lighter, wind erosion-prone soils. Further investigations with the cultivar are continuing.

1. Johnston, W.H. and Cregan, P.D. 1979. Proc. 7th Asian-Pacific Weed Sci. Soc. Conf. 161-164.