

Oats as a multi-purpose crop in high rainfall environments

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By careful variety selection and *crop* management oats sown in early autumn and used for grazing can be further used to produce high yields of grain or hay.

An experiment was conducted to compare the forage production and recovery for hay an/or grain production of recently released oat varieties with traditional varieties.

Method

A replicated experiment was conducted over three years (1983 - 85) near Ballarat, Victoria.

Dry matter production (for fodder) was sampled by cutting by hand approximately 2 cm above ground level to simulate close grazing by sheep.

Hay was cut when the late cultivars had reached milky dough stage using a reciprocal mower. Dry matter was determined and hay yield (85% DM) calculated.

Results and discussions

Table 1. Forage, hay and grain production of oat cultivars (t/ha).

	Forage production 1983-85		Hay 83-85	Grain yield 84-85
	1st cut-autumn	2nd cut-winter		
Algeribee	0.96	1.47	4.92	1.69
Blackbutt	0.70	1.59	9.31	3.52
Carbeen	0.65	1.92	7.99	2.26
Coolabah	0.98	1.53	5.91	2.66
Esk	0.93	1.81	9.65	3.40
Lampton	0.88	1.11	5.58	1.51
Nile	0.99	1.55	9.34	4.16
Saia	1.04	0.97	6.40	2.54
Swan	1.04	0.84	3.87	1.54

An initial report on this and other work (1) indicated that the later maturing cultivars were clearly superior in herbage production and recovery for grain and hay production than the early and mid-season cultivars.

The superiority of Esk, Nile and Blackbutt as multipurpose cultivars was confirmed in each year of the experiment. These cultivars most closely fitted the requirements of a multipurpose cultivar in that they exhibited excellent yields for each potential end use.

Their superiority was considered to be due to their more prostrate growth habit which makes them less prone to damage of the growing point by cutting or grazing by sheep compared to more erect cultivars. As reported elsewhere (2) the prostrate varieties tended to have greater residual leaf area after cutting which enabled them to recover more quickly.

Esk, Nile and Blackbutt also appeared to have greater tillering capacity frequently exhibiting 8 - 12 tillers per plant.

Esk has been successfully introduced into the Ballarat district and has since become popular elsewhere in Victoria where a multi-purpose oat is required.

1. McLeod, G.D., et al, 1985. Proc. 3rd Aust. Agron. Conf., Hobart.
2. Abdul-Rahman, M.S, et al, 1987. Proc. 4th Aust. Agron. Conf. Melb.