

## Irrigated Oat Grazing Recovery Trial

This trial was established to examine the recovery from grazing of 3 milling oats, Bannister, Durack (WAO20302-9) and Yallara. The trial was sown on May 24<sup>th</sup>, targeting 180 plants/m<sup>2</sup>.

The “grazing” was achieved by mowing at 90 mm on August 10<sup>th</sup>, when Durack was at first node (Z31), Yallara was at Z30 and Bannister was not quite at Z30. Statistically, there was no difference between varieties for dry matter yields ( $p=0.107$ ,  $cv\% = 8.4$ ).

Variety	DM Yield (t/ha)
Bannister	0.89
Durack	0.99
Yallara	0.81

The trial was then topdressed with two rates of urea: 100 kg/ha on the ungrazed plots and 150 kg/ha on the “High N” treatment on ungrazed plots and the grazed plots, with the 50 kg reflecting the estimated loss of N by grazing. This gave a total N budget of 210 kg N/ha for the “Not Grazed” treatment and 235 kg N/ha for the “grazed” and “High N” treatments.

Variety		Yield (t/ha)	Screenings %	Test Wt kg/hl
Bannister	Not Grazed	9.00 <sup>ab</sup>	4.6	52.5
Bannister	Grazed	7.37 <sup>b</sup>	8.3	51.6
Bannister	High N	8.22 <sup>ab</sup>	5.1	52.3
Durack	Not Grazed	5.72 <sup>c</sup>	1.6	57.6
Durack	Grazed	5.11 <sup>c</sup>	3.7	56.9
Durack	High N	5.57 <sup>c</sup>	2.1	57.1
Yallara	Not Grazed	5.09 <sup>c</sup>	1.8	57.2
Yallara	Grazed	5.48 <sup>c</sup>	3.6	56.8
Yallara	High N	4.69 <sup>c</sup>	2.2	58.5
	p	<0.001	<0.001	<0.001
	lsd	1.22	1.35	2.10
	cv%	8.2	21.2	2.2

Bannister was clearly the highest yielding variety despite any treatment. It also had higher screenings and lower test weight than Durack and Yallara. This may have been as a result of the trial not receiving a spring irrigation and with Bannister being a later maturing variety, may have run out of moisture for complete grain fill.

Grazing reduced the height of each variety by approximately 100 mm. Extra N (50 kg urea/ha) did not increase crop height or grain yield in any variety.

Grazing did reduce the grain yield of Bannister, but not the yields of Durack and Yallara.

Grazing did increase screenings in all varieties.

Test weight was not affected by grazing.

Given Bannister grain yields of 9 t/ha, it confirms the reputation of oats as a low input crop. The N budget applied to this trial is equivalent to the N inputs required by a 6 t/ha barley crop.