

2.7 Winter Wheat Sowing Rate Trial

Researcher

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DNRE – Hamilton

Site

Hamilton – Blackwood

Aim

To determine the optimal sowing rate for winter wheat in the Hamilton district.

Management

Sown to Paterson wheat on the 2/6/99 with 100 kg/ha of DAP.

Background

Sowing rates for wheat in the southwest has traditionally been in the order of 100 kg/ha but anecdotal evidence suggests that winter wheat requires a heavier sowing rate. Higher plant densities are usually required where stresses such as weed competition and waterlogging are a threat to the crops potential yield, and even though individual plants may tiller less, the increased plant density more than compensates for the decrease in tillers per plant.

RESULTS

Sowing Rate (kg/ha)	1998 yield (t/ha)	1999 yield (t/ha)
60	4.16	3.77
80	4.42	3.78
100	4.69	4.15
120	4.91	4.06
140	4.52	4.07
160	4.53	4.21
180	4.47	4.30
LSD (5%)	0.73	0.44

There is no significant difference between any of the sowing rates over 100 kg/ha this year, although the higher yields were obtained with the higher rates. This is probably due to the dry conditions killing off a large number of secondary tillers at the lower rates, while the increased plant densities at the higher rates with fewer secondary tillers resulted in more grain per hectare.



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