

3.5.2 DUAL PURPOSE CEREAL TRIAL (TASMANIA)

Location: Riccarton (Campbell Town)

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Growing season rainfall (Feb-Nov): 297mm

Background:

Dual purpose oats, and to a lesser extent wheat, have been traditionally grown in many areas of Tasmania. In the mid 1980's dual purpose wheat cultivars such as Isis and Macquarie proved to be very susceptible to stripe rust and area declined significantly to almost zero. With the release of rust resistant dual purpose wheat cultivars from CSIRO there is again the opportunity to grow wheat for both grazing and grain. In the Campbell Town area this is particularly timely given potential cutbacks in malting barley contracts.

Aim:

To assess new dual purpose wheat and triticales cultivars for dry matter production and grain yield in comparison with Bass Oats.

Results and Discussion:

There was virtually no rainfall post-sowing until May and consequently initial establishment was patchy. However there were no significant differences in establishment between cultivars and by mid spring little difference could be seen within plots.

Dry matter production: Jackie triticales produced the highest dry matter (in t/ha) followed by Bass oats and Brennan wheat. Some of the wheat lines produced very low amounts of dry matter. This data takes into consideration differences in moisture content and of interest the oats had the lowest % dry matter (approx 25%).

Methodology:

Entries and their origin are listed below:

wheat	Tennant	CSIRO
	Brennan	CSIRO
	MacKellar	CSIRO
	LH49E2	CSIRO
	LH55G14	CSIRO
	ISR594-34	Wrightson Seeds
triticales	Jackie	University of Sydney
oats	Bass	Tasmanian Institute of Agricultural Research

Sowing date: 8 March 2002

Harvest date: Dry matter - 21 June 2002

Grain - 13 January 2003

Fertiliser: basal - 300kg/ha 4:6:8,
topdressing - 50kg N/ha

Weed Control: 1.4//ha Brominil, 1.5//ha MCPA

After dry matter cuts were taken in July, the paddock (Tennant wheat) was grazed. Growth over winter was surprisingly good and consequently duration of grazing was probably longer than ideal ie. over 2 months. Nitrogen was topdressed after stock were removed.

All other cereals averaged around 31% DM except for the wheat line LH55G14 which was significantly higher (38% DM).

After DM cuts were taken, the paddock was grazed for over 2 months and so actual DM production was well in excess of the figures in Table 47. The stock showed a preference for Bass oats and grazed these plots heavily (and to a lesser degree, Jackie triticales). Oats would normally produce considerably more total dry matter if plots were cut for dry matter more than once. More intensive grazing will be required in future dual purpose trials.

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Table 47: Dual Purpose Cereal Trial -Dry Matter Production and Grain Yields

Dry Matter Production		
Variety	Yield (t/ha)	%Tennant
Jackie	2.96	352.1
Bass	1.69	201.3
Brennan	1.43	169.6
MacKellar	1.01	119.9
Tennant	0.84	100.0
ISR594-34	0.76	90.6
LH49E2	0.51	60.5
LH55G14	0.44	52.5
Isd	0.16	

Grain Yields		
Variety	Yield (t/ha)	%Tennant
ISR594-34	6.40	121.9
LH49E2	5.52	105.1
Brennan	5.43	103.5
LH55G14	5.41	103.1
Tennant	5.25	100.0
MacKellar	5.11	97.4
Jackie	4.77	90.9
Bass	1.66	31.5
Isd	0.24	

Grain yield:

Given the dry finish to the season, yields were good. The highest yielding line was ISR594-34. Other wheat yields were similar although MacKellar was significantly lower yielding than Brennan and the newer wheat lines. The yield of Jackie triticale was lower than the wheats but this was probably due to greater grazing pressure over winter. The low oat grain yield is almost certainly a result of the preferential grazing. With reasonable rainfall in late spring, Tennant could be expected to perform better.

Grain yields were considerably higher in this trial than the grain only trial. The dual purpose trial was conducted on a heavier soil type and so may have been able to "hang on" better with the dry finish to the season.

Conclusions:

Wheat grain yields following grazing were surprisingly high and it would appear grazing was not detrimental to grain yield. Reduced dry matter from grazing may have resulted in less water use- age early in spring with more then being available during grain fill. Of the wheat varieties, the grain yield of the line ISR594-34 was particularly high. Dry matter production (from the one cut taken) was significantly lower for the wheat varieties but given the current high grain price dual purpose wheat is an attractive option.

Acknowledgement:

Thanks to Crosby Lyne for preparing ground and fencing the trial.

Further details:

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