3.3.2 BARLEY VARIETY TRIALS (CONMURRA, FRANCES SA)

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Location: Conmurra and Frances in the South East of South Australia

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Summary:
At Conmurra there was significant net blotch. In this case GairdnerPlus produced greater grain yields of better quality grain than Gairdner. No other diseases were recorded. At Frances, no significant disease was noted and higher yielding varieties were Capstan, Flagship and Gairdner.

Background:
These trials were conducted to evaluate the range of barley varieties available.

Objectives*:* The objective of these trials was to evaluate the yield and quality of a range of barley varieties and breeders lines.

Methodology: Three replicate trials were established with plot size of 8 rows at 15 cm row spacing by 8 m long. April to October rainfall was 310 mm at Frances and 415 mm at Conmurra. Trials at Conmurra were sown dry on 2 June and at Frances on 26 June.
Fertilizer applied at sowing was 130 kg/ha of NPKS 13:16:0:7, with a further 30 kg/ha N applied in August.

Weeds were controlled with Hoegrass and Buctril at Conmurra and Achieve and Buctril at Frances. TiltXtra (500 ml/ha) was applied at Conmurra on 12 October and at Frances on 27 September.

Table 3-25: Soil Test Data From Barley Sites

Site	mg/kg NITRATEN	mg/kg AMMONIUM	mg/kg PHOS	% ORGCARBON	dS/m CONDUCTY	pH PH_H2O
Conmurra	35	15	58	4.36	0.215	7.6
Frances	21	4	39	2.35	0.177	5.9

Results and Discussion

Table 3-26: Yield And Quality Of Barley Varieties Sown At Frances In 2005

Entry	kg/ha	1000 grain wt	Hectolitre wt	Screenings	Protein
AGGIN	4173	44.5	69.50	0.7	10.0
Capstan	4132	47.4	69.50	1.1	11.9
AGSWPrefect	4090	42.9	70.83	0.6	9.5
Flagship	3962	50.3	71.00	0.8	10.3
Gairdner	3944	48.3	71.08	0.7	9.7
Mackay	3880	45.3	70.50	1.3	9.7
Baudin	3828	44.3	71.08	0.4	10.0
AGSWAntto	3828	44.4	71.00	0.5	9.8
SloopSA	3815	47.7	70.33	0.6	11.5
Sloop	3780	46.7	70.50	0.2	11.1
GairdnerPlus	3755	46.9	70.83	0.6	9.9
Dhow	3697	47.2	68.00	0.5	10.7
Maritime	3628	50.5	70.00	0.2	10.5
WI3416	3615	51.3	66.33	0.5	9.7
SloopVic	3601	48.2	69.50	0.5	11.3
Schooner	3552	45.9	71.33	0.5	11.3
Barque	3471	50.5	68.33	0.3	10.9
Keel	3166	48.3	69.17	0.6	10.7
Torrens	2941	43.4	74.00	1.7	13.7
Site Mean	**3729**				
CV %	**5.89**				
LSD (0.05)	**376.0**				

Table 3-27: Yield And Quality Of Barley Varieties Sown At Conmurra In 2005

Entry	kg/ha	1000 grain wt	Hectolitre wt	Screenings	Protein
GS05FB1	5161	42.3	69.8	2.4	10.0
Baudin	4807	41.2	68.7	3.1	9.7
Capstan	4735	42.6	67.0	5.3	9.9
WI3416	4638	48.2	69.1	1.7	9.2
Mackay	4581	39.8	68.5	6.1	9.9
GS05MB2	4556	36.5	66.7	3.4	10.1
Flagship	4552	48.6	70.3	3.1	10.2
GairdnerPlus	4244	44.2	69.3	2.3	10.1
GS05MB1	4234	41.1	67.8	2.1	9.9
AG-Gin	4173	42.7	67.1	3.0	10.1
SloopSA	4163	47.1	69.1	1.8	10.6
Sloop	4117	45.0	69.6	1.6	10.6
AGSW-Prefect	4104	40.5	68.7	2.2	10.0
Dhow	3974	41.6	64.2	3.2	11.1
Maritime	3977	47.8	67.3	2.3	9.9
Buloke	3963	45.1	66.0	5.0	10.1
AGSW-Antto	3914	39.4	68.8	5.6	10.1
GS05FB2	3879	35.0	60.4	20.2	10.1
GS05FB3	3850	36.9	65.7	8.6	10.3
Schooner	3761	40.1	68.3	3.7	10.3
Keel	3757	45.6	67.5	2.5	10.7
Torrens	3721	44.9	72.4	2.3	11.6
SloopVic	3510	44.1	68.0	3.1	11.2
Barque	3455	43.5	70.0	3.8	10.8
Gairdner	3271	37.4	65.3	17.8	10.1
Site Mean	4124				
CV %	8.89				
lsd (0.05)	607.0				

At Conmurra there was significant net blotch. In this case GairdnerPlus produced greater grain yields of better quality grain than Gairdner. No other diseases were recorded. At Frances, no significant disease was noted and higher yielding varieties were Capstan, Flagship and Gairdner. Baudin produced good yields at both sites, indicating that leaf rust was not an issue in 2005. Grain yields were significantly lower than wheat yields produced at the same sites.