

### 3.2.7 WHEAT 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 both sites stripe rust appeared relatively late and fungicide sprays were applied to control the disease. Highest yielding varieties at Frances tended to be the early varieties with winter types producing lower yields. At Conmurra, with early sowing and good late spring rains, some of the winter wheats produced higher grain yields, although several spring wheats still yielded well.

**Treatments:**

**Background:**

These trials were conducted to evaluate the range of wheat varieties available.

**Objectives:**

The objective of these trials was to evaluate the yield and quality of a range of wheat 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 November 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.

**Table 3-16: Soil Test Data From Wheat Sites**

Site	mg/kg NITRATE N	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

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.

## Results and Discussion

Table 3-17: Yield And Quality Of wheat Varieties Sown At Frances In 2005

Entry	kg/ha	1000 Grain wt	Hectolitre wt	Screenings	Protein
Giles	5179	40.5	78.67	2.1	12.7
EGA-Gregory	4947	42.5	81.67	1.6	12.4
GS05.77	4792	35.4	77.67	2.8	13.4
Annuello	4778	37.5	81.25	1.5	13.4
Drysdale	4738	39.7	82.00	1.1	14.2
H123.1	4721	36.3	80.67	1.0	13.3
Excalibur	4712	40.8	77.67	1.6	13.8
Frelon	4710	35.2	79.00	2.9	12.9
Sentinel	4687	42.5	79.58	1.4	13.7
Chara	4679	40.1	80.58	0.9	13.3
EGA-Wentworth	4672	36.6	80.75	1.4	12.7
GS04-103	4657	40.3	76.42	1.4	12.6
Frame	4636	44.7	81.58	1.4	13.3
GBA-Sapphire	4591	37.2	80.17	1.2	13.4
Pugsley	4567	34.1	74.08	2.0	13.0
95102.1	4534	33.9	73.83	3.9	12.8
96054.1	4507	31.2	76.08	2.4	12.1
Amarok	4465	32.2	77.08	3.7	13.0
Janz	4451	36.0	73.17	2.8	13.4
Brennan	4409	38.5	81.33	1.7	12.6
Ventura	4396	41.8	79.67	1.1	14.3
TammarinRock	4372	33.9	74.50	1.3	14.6
GBA-Ruby	4368	38.2	81.00	1.2	13.8
MacKellar	4362	42.7	81.33	1.3	13.4
Kukri	4347	31.6	73.83	3.2	14.4
GS05.78	4342	39.3	77.17	2.3	13.1
H45	4333	34.8	80.75	0.8	12.9
Wyalkatchem	4255	41.4	80.33	1.8	14.8
Yitpi	4239	36.6	80.42	1.3	12.9
LH46A9	4222	27.7	72.67	6.9	13.1
Teesdale	4216	38.9	79.58	1.2	13.6
H46	4184	37.9	80.83	1.0	14.5
K89.44	4094	33.4	78.25	1.3	12.4
Rudd	4093	41.8	79.00	1.5	12.5
Krichauff	4011	41.3	79.92	1.9	14.4
EGA-CastleRock	3925	42.4	81.00	0.8	13.6
EGA-EagleRock	3896	36.1	79.00	1.3	14.5
SW-Odiel	3868	43.3	78.25	1.4	14.3
<b>Site Mean</b>	<b>4446</b>				
<b>CV %</b>	<b>6.55</b>				
<b>LSD (0.05)</b>	<b>530.8</b>				

At both sites stripe rust appeared relatively late and fungicide sprays were applied to control the disease. Highest yielding varieties at Frances tended to be the early varieties such as Giles, EGA-Gregory, Annuello and Drysdale, with winter types producing lower yields. At Conmurra, with early sowing and good late spring rains, some of the winter wheats produced higher grain yields, although several spring wheats still yielded well. Best producers were Sentinel, Amarok, GBA-Ruby and Tammarin-Rock.

**Table 3-18: Yield And Quality Of Wheat Varieties Sown At Conmurra In 2005**

Entry	kg/ha	1000 grain wt	Hectolitre wt	Screenings	Protein
GS04-103	8630	46.7	78.92	1.4	12.9
GS05-78	8548	42.5	76.00	2.5	13.4
Sentinel	8516	43.9	79.25	1.2	13.1
K89.44	8327	41.2	72.33	2.1	12.9
Amarok	8229	37.1	77.33	1.7	12.3
GBA-Ruby	8078	43.3	80.42	1.5	14.1
Tammarin-Rock	8024	44.8	77.42	2.2	13.7
Giles	7999	38.7	78.67	1.4	11.9
Frelon	7919	37.0	77.17	2.8	12.2
Chara	7839	38.1	79.58	2.2	12.7
GS05-77	7835	43.0	75.00	2.4	12.8
95102.1	7829	37.8	74.17	2.0	12.9
MacKellar	7819	35.3	75.58	3.5	12.0
Drysdale	7792	41.7	81.00	1.4	12.7
Annuello	7769	37.5	79.75	2.0	12.8
GBA-Sapphire	7759	38.7	78.83	1.2	12.7
Ventura	7729	44.0	80.17	1.1	13.6
Teasdale	7725	41.2	77.00	1.4	12.9
Wyalcatchem	7594	45.1	79.33	0.6	14.0
H123.1	7585	43.9	75.33	1.3	12.6
H46	7539	38.1	80.17	0.5	12.9
Pugsley	7524	40.4	79.75	2.3	12.2
Rudd	7456	40.9	74.67	0.7	12.7
LH46A9	7443	38.0	74.17	1.6	12.7
SW-Odiel	7333	42.8	78.00	2.1	12.3
AUS29596	7329	51.3	78.92	0.8	13.0
Janz	7239	37.2	78.42	2.1	12.5
Frame	7186	43.1	80.50	1.4	12.1
Kukri	7170	42.9	79.00	1.9	13.3
TZ3.13	7166	40.3	72.83	1.7	13.2
Krichauff	7142	36.5	78.42	0.9	13.7
TZ1	7094	37.5	74.00	1.2	12.6
Excalibur	7053	41.3	76.08	1.5	13.5
H45	7040	35.7	80.17	1.7	11.5
96054.1	6923	34.7	75.42	1.7	12.4
EGA-Castle-Rock	6911	42.5	79.75	1.2	12.8
Brennan	6775	42.4	79.50	1.8	13.0
EGA-Eagle-Rock	6718	37.3	79.58	1.4	14.1
AUS30312	6712	46.0	78.08	0.7	12.7
Camm	6697	36.1	79.50	2.5	12.5
Yitpi	6597	39.4	79.33	2.9	12.7
EGA-Wentworth	6528	32.2	78.33	2.5	13.0
GBA-Combat	6425	36.6	78.67	2.2	12.8
TZ2	6394	33.6	70.00	3.3	13.1
TZ4.9	6223	36.3	71.42	2.4	13.3
TZ5	5621	32.4	71.25	2.9	13.4
Site Mean	7387				
CV %	7.22				
LSD (0.05)	896.3				