

Condobolin wheat varietal yield and quality trial

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This trial was part of the National Variety Testing Program, sponsored by GRDC.

Key Messages

- The extremely late break to the season highlighted maturity differences very clearly. ■
The long season trial was sown on the same day as the main season trial, favouring heavily the short season varieties.

Long season trial

- Yield varied from 1.9-3.3t/ha.
- The protein levels were all above Prime Hard receival standards because of the short grain filling period and resulting small grain size.
- The screenings levels were all over 10%. While long season varieties like Rosella, Sunsoft 98 and Wylah had screenings values over 30%. This is because of the late sowing date of these trials and the resulting short season.
- The test weight varied from 66.5kg/hl (Currawong) to 79.9kg/hl (Sunbri). The long season varieties typically had lower test weights. Sunbri is a genetically larger seeded variety.

Main season trial

- Yield varied from 1.5 -3.8t/ha.
- The protein levels were generally higher than receival standards for Prime Hard, except for Carinya, 11.1%, H46 11.2% and Young 12.1%. This is because of small grain size.
- The screenings levels were all over 10%, except for EGA-Eagle Rock (7.2%) and H46 (8.4%). Several long season varieties, like Giles and Sunvale, were over 20%. This is because of the later maturity and the resulting shorter grain filling period.
- The test weights varied from 69.0 kg/hi (Rosella) to 82.2 kg/hi (H46). Rosella had the highest screenings value (3#%). Rosella is a long season maturity type, in a short season year.

Background

The aims of these trials were to provide localised data on the yield and quality response of released and near release wheat lines.

Methods

The trials were sown into a long fallow paddock (from lucerne) into good soil moisture on the 16th June 2005 and harvested on the 24th November 2005 (long season) and 10th December 2005 (main season). The long season trial consisted of 13 varieties, where as the main season trial consisted of 23 varieties. All the trials were sown on a red loam soil.

The treatments were replicated 3 times. Plot size was 2m X 15m.

Unfortunately the season didn't break until mid June placing slow maturing varieties at a distinct disadvantage. Cool conditions through spring lengthened the season, allowing main season varieties to compensate in yield.

Varieties were sown at a seeding rate of 50kg/ha with 100kg/ha of Granulock 12 (12N; 16P; 5S).

Results

Table 1. Long Season Trial

	Yield (t/ha)	Testwgt (kg/hi)	Protein (%)	Screenings (%)
EGA Gregory	3.3	73.5	14.5	10.8
Strzelecki	3.2	71.9	14.9	12.1
EGA Wylie	3.0	73.9	15.4	14.1
Chara	3.0	72.9	16.1	26.2
Wylah	2.9	72.7	16	33.1
Whistler	2.9	69.4	17.3	18.9
Currawong	2.7	66.5	16.2	13.4
Giles	2.7	75.6	13.6	22.4
EGA Wedgetail	2.6	67.6	17	21.3
Cunningham	2.5	74.2	15.3	23.8
Sunsoft 98	2.2	70.5	17.3	32.8
Sunbri	2.0	79.9	16.7	16.4
Rosella	1.9	68.7	16.4	32.6

Table 2. Main Season Trial

Variety	Yield (t/ha)	Test wgt (kg/hi)	Protein (%)	Screenings (%)
Wyalkatchem	3.8	78.5	13.1	11.3
Young	3.7	80.1	12.1	12.2
Drysdale	3.5	78.1	12.5	13.5
EGA Wentworth	3.4	76.3	13.6	18.7
Ventura	3.4	78	13.4	12.4
Carinya	3.3	80.1	11.1	10.1
H46	3.3	82.2	11.2	8.4
Pugsley	3.2	77.9	13.4	11.6
Ellison	3.2	76.1	15.3	16.5
Clearfield Jnz	3.2	77.4	12.6	12.9
Annuello	3.2	78.3	13.1	17
GBA Sapphire	3.0	77.5	12.7	13
SW Odriel	2.9	76.1	12.2	13.7
EGA Eagle Rock	2.8	79.1	15.2	7.2
Diamondbird	2.8	75.6	13.2	16.9
Janz	2.5	75.1	14.5	20.2
Chara	2.4	73.9	15	24
Babbler	2.4	75.6	14	15.6
Giles	2.3	75.9	13.3	25.3
Lang	2.1	75	14.7	16
Leichhardt	2.0	75.4	14.2	15.8
Sunvale	1.6	76.6	16.4	22.3
Rosella	1.5	69	16.1	33.4

Discussion

Growing season rainfall for Condobolin was 357mm (June - November). Although the season started quite late, the total in crop rainfall is good. Yields for the main season varieties (Table 2) were helped by cool and wet conditions through September and October. However the long season varieties (Table 1) were still not able to compensate for the short growing season.

Long season varieties like Rosella, Sunbri and Sunvale should not be sown in this region at these very late sowing dates.

The trial will be repeated this year and planted at two sowing dates to optimise the performance of each variety.

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