

RANKINS SPRINGS CWFS ROW SPACING X SEEDING RATE X SOWING DATE TRIAL 2010

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Key Points

- Row spacing and seeding rate made no difference to yield when sown on 4 May.
- When sown 24 May, yield decreased with wider row spacing's, and slightly increased with higher seeding rates.
- The variation in this trial was large due to previous seasons header rows.

Trial aim

To compare yield at three row spacing's (25, 50 and 75cm) and two seeding rates (20 and 40 kg/ha) when sown early and late.

Trial details

Soil type: Red Sandy Clay Loam
Soil test: 0 – 10 cm: pH = 5.5, Al% = 0.4
CEC = 14; Colwell P = 35 mg/kg
Previous crop: Fallow
Fertiliser: 60 kg/ha MAP
Herbicide: Roundup at sowing, MCPA + Ally in crop.
Fungicide: Folicur in August
Insecticide: Nil
Harvest date: 15th Dec

Treatments

Varieties

EGA Gregory

Sowing date

Sowing time 1 – 4 May
Sowing time 2 – 24 May

Row spacing's

25, 50 and 75cm

Seeding rates

20 and 40 kg/ha

Seasonal review

The trial paddock began with over 150mm of plant available water. Continued wet weather and a cool spring allowed this trial to grow without moisture or heat stress. The biggest issue in this trial was water logging and yellow leaf spot, and would have been the major limiting factor for yield.

Table 1: Monthly rainfall and temperature at Rankins Springs

	Rainfall (mm)	Minimum temperature (°C)	Maximum temperature (°C)
Jan	2	19.1	35.7
Feb	104	20.1	32.1
Mar	110	14.9	29.3
Apr	38	12.1	25.1
May	43	6.8	19.9
Jun	24	5.5	16.4
Jul	57	2.8	14.9
Aug	45	4.3	15.0
Sep	61	5.9	18.8
Oct	104	9.8	23.8
Nov	94	13.8	27.3
Dec	120	15.1	30.4
Total	799		
In-crop	370		

Trial results

Yield

There was no difference in yield between any of the row spacing's or seeding rates at the early sowing date.

There was a significant difference in yield between row spacing and seeding rates at the later sowing date, however the differences were small. These figures are found in table 2.

Quality

Yet to be tested.

Discussion

This trial follows a similar trend to many other trials.

The key points are that the effect of seeding rate and row spacing have less impact on yield when sowing early. When sowing later however, increasing row spacing over 25cm tends to decrease yield, and increasing seeding rates (from 20 to 40kg/ha) can increase yield.

It is important to note that the variation in this trial was quite large due to header rows from previous years, and the crop vigour was low due to water logging and yellow leaf spot. This may have affected results slightly.

Table 2: Yield comparisons for the trial.

Sowing date	4 May				24 May			
	25cm	50cm	75cm	Mean	25cm	50cm	75cm	Mean
20 kg/ha								2450 kg/ha
40 kg/ha								2635 kg/ha
Mean				2474 kg/ha	2668	2527	2431	2542 kg/ha
LSD								
Row spacing				ns				115 kg/ha
Seeding rate				ns				115 kg/ha

ns = No significant difference in yield.

Acknowledgement

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Variety Specific
AGRONOMY
Packages

GRDC-supported research project in south/central NSW to develop agronomic information for new varieties of wheat, lupins and winter oilseeds.



Industry &
Investment

GRDC Grains Research &
Development Corporation

Rankin Springs 2009 Field Day

