SKIP ROW SPACING IN CALINGIRI WHEAT

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AIM

To evaluate the effectiveness of skip row spacing of wheat in a medium to low rainfall environment.

BACKGROUND

This trial is an on-farm demonstration for the Liebe Group's GRDC funded adoption project **'Growers critically analysing new technologies for improved farming systems'**.

With the current rise of input prices and a number of lower than average rainfall seasons, it is important to utilise agronomic strategies that conserve water throughout the cropping season. Skip row spacing is the strategy of regularly missing some seeding rows when seeding a crop. In this trial every third seeding row was skipped.

Skip row cropping is designed to optimise water use at key times during the season, with a particular focus on ensuring moisture is available during flowering and seed fill. Lower plant density and reduced tillering is also believed to improve average grain size through increased stored soil moisture.

TRIAL DETAILS

Property	Ross & Lyn Fitzsimons, east Buntine
Plot size & replication	150m x 13.7m x 4 replicates
Soil type	York gum
Sowing date	3/5/08
Seeding rate	70 kg/ha Calingiri Wheat
Fertiliser	55 kg/ha DAP
Paddock rotation	2005 = Pasture, 2006 = Wheat, 2007 = Pasture
Herbicides	3/5/08: 1.5 L/ha Triflur X, 50 g/ha Logran B Power, 500 mL/ha Roundup PowerMAX
Growing Season Rainfall	330mm

RESULTS

Table 1: Yield, grain quality and gross margin of wheat sown with and without skip rows in 2008.

Treatment	Yield (t/ha)	Protein (%)	Screenings (%)	Gross Return ($/ha) [1]
Control	2.77b	9.6	1.34	737
Skip row	2.51a	9.8	1.38	668
LSD (5%)	0.16			

[1]Based on EPR on 25/12/08 for ANW1 $266/tonne (Agracorp daily grain price).

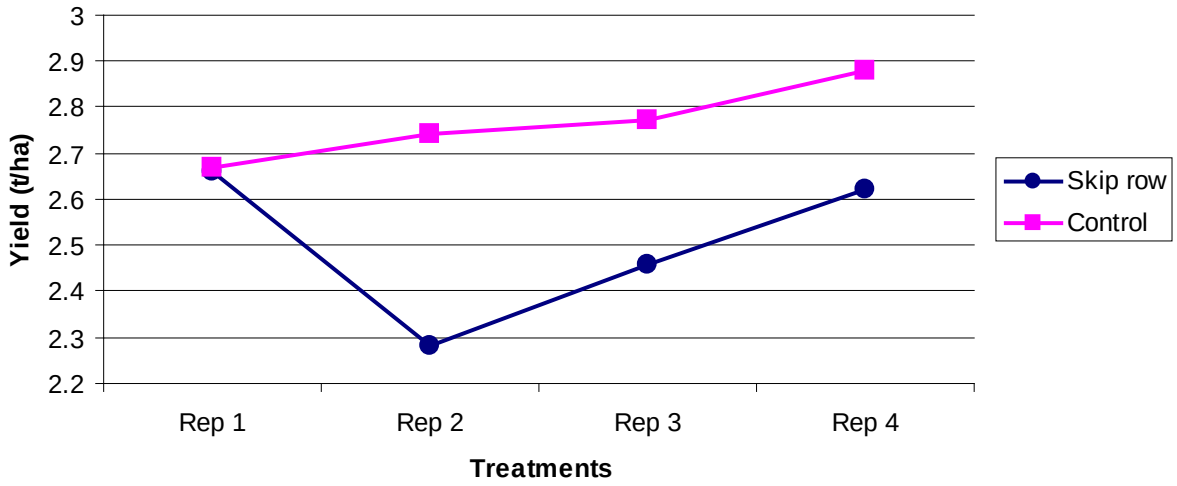

Figure 1: Yield of wheat sown with and without skip rows in 2008.

Results for this trial showed wheat grown in the control plots yielded 10% higher than those grown in a skip row environment, while grain quality was identical for both treatments (table 1). There was variation of results between replicates, particularly in the skip row treatment (figure 1).

COMMENTS

- Skip row seeding is a strategy to target water conservation, however if weeds establish in the skip row they escape competition from the crop and can be difficult to control.

- Furthermore, the total growing season rainfall for the trial paddock was 330mm, meaning plant competition for water was not as intense as it would be in a drier year. Thus, although skip row planting was not beneficial for wheat in 2008, it is possible that it could have a place in the Liebe group area in drier seasons.

ACKNOWLEDGEMENTS

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- Also, thank you to Emma Wilson (formerly Liebe Group) for initial setup of the trial and the CBH Group for grain analysis.

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