Variety Specific AGRONOMY Packages

Canola and Mustard Row Space, Cowra

Canola yield was higher when sown at 15 cm row space than at 30 cm. Hyola 50 was the highest yielding variety at both 15 and 30 cm row spacing.

The trial

This trial investigated five canola and two mustard varieties at two row spacings (15 cm and 30 cm) to measure both the impact of row spacing on yield and variety response to row spacing.

Site details

Location: Cowra

Soil type: red chromosol

Soil test: 0–10 cm, late February.

pH_{CaCl_2}	4.9
Aluminium	<0.1%
Colwell phosphorus	29 mg/kg
Organic carbon	0.29%
Cation Exchange Capacity (CEC)	5.2 Meq/100 g

Rainfall: 497 mm annual total 2007
In-crop rainfall 206 mm

Previous crop: triticale

Management

Sowing rate: 3 kg/ha

Sowing date: 6 June

Fertiliser: 100 kg/ha DAP; 30 kg/ha urea

Herbicide: 5 June–1 L/ha Roundup PowerMAX™ + 75 ml/ha Goal®

Desiccant: 26 November–Reglone® 2 L/ha

Harvest date: 28 November

Treatments

Row spacing: 15 cm and 30 cm

Varieties: canola–Hyola®50, Hyola®75, Bravo TT(ф), Tarcoola(ф), AV-Jade(ф). mustard–Dune(ф) and Selection 2

Seasonal review

The season began with two good rainfall events. The first at the end of April with 28 mm over 4 days, followed by 35 mm two weeks later. Good rain fell during June and July (85 mm) although temperatures were cold and frosty delaying emergence of later sown treatments. August, September, October and November were very dry. The late sowing in a season with so little spring rain dramatically reduced crop growth and yield.

Results

Plant population

The target plant population for canola in southern NSW is 40 to 60 plants/m². In this trial all varieties were sown at 3 kg/ha. Plant establishment achieved (Table 1) was significantly dif erent for both variety and row spacing. The mean of the 15 cm row spacing was 25 plants/m² higher than the 30 cm row spacing. Hyola 50 and AV Jade were particularly high (15 cm spacing). Selection 2 mustard was low at both row spaces. Only Hyola 50 had was higher than 40 in the 30 cm spacing plots.

Table 1: Plant population (plants/m²) and grain yield (kg/ha) for canola and mustard varieties sown at 15 cm and 30 cm row space.

	Plant population (plants/m²)		Grain yield (kg/ha)	
Variety	15 cm	30 cm	15 cm	30 cm
AV Jade	75	32	580	401
Bravo TT	61	36	405	351
Hyola 50	96	45	955	911
Hyola 75	41	23	842	770
Tarcoola	62	36	729	581
Dune	43	24	513	604
Selection_2	21	22	727	706
Mean	**57**	**32**	**679**	**618**
Trial mean			648	
lsd (row space)		9	176	
lsd (variety)		18	188	
lsd (variety x row space)		25	159	

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Yield

Grain yield was significantly higher in the 15 cm than in the 30 cm row spacing (Table 1). There was also significant variation in yield between varieties. Hyola 50 had the highest yield in both row spacing treatments. Establishment plant population and yield were not correlated.

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Further information: available from the project team agronomists at NSW DPI Wagga Wagga, Condobolin, Parkes, Hillston, Temora, Cowra and Moulamein.

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GRDC

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