

Canola Time of Sowing, Cowra

Delayed sowing significantly reduced yield of canola.

Sowing Time 2–14 November

Sowing Time 3–22 November

The trial

The aim was to investigate how recently released canola varieties respond to sowing time.

Site details

Location: Cowra

Soil type: red chromosol

Soil test: 0–10 cm, late February:

pH _{CaCl2}	4.6
Aluminium	3.5%
Colwell phosphorus	29 mg/kg
Organic carbon	0.89%
Cation Exchange Capacity (CEC)	5.3 Meq/100 g

Rainfall: 497 mm annual total 2007.

Sowing time	Growing season rainfall*
1	216
2	216
3	185

*30% fallow rainfall from April onwards+in-crop rainfall to harvest date

Management

Previous crop: triticale.

Lime: 6 May–2 t/ha

Sowing rate: 3 kg/ha

Row spacing: 25 cm

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

Herbicides: 2 May–1.5 L/ha TriflurX®
 29 May–1 L/ha Roundup PowerMAX™ (Sowing Time 2 only)
 12 June–1 L/ha Roundup PowerMAX™ (Sowing Time 3 only)
 26 June–500 ml/ha Select®

Harvest dates: Sowing Time 1–14 November, except Tanami harvested 6 Nov., Summit and Skipton Rep 2 and Rep 3 harvested on 22 Nov)

Treatments

Sowing times:

Sowing time		Emergence	
Number	Date	Date	Days from sowing
1	8 May	25 May	17
2	29 May	12 June	14
3	12 June	2 July	20

Varieties included:

- conventional canola–AG Muster[Ⓛ], AG Spectrum[Ⓛ], AV Garnet[Ⓛ], AV Jade[Ⓛ], AV Opal[Ⓛ], Hyola®50, Hyola®75, Skipton[Ⓛ] and Tarcoola[Ⓛ]
- Clearf eld® varieties–44C73[Ⓛ], 45Y77, 46C76[Ⓛ], Warrior_CL[Ⓛ]
- triazine tolerant varieties–ATR Banjo[Ⓛ], ATR Summitt[Ⓛ], Bravo TT[Ⓛ], CB™ Tanami[Ⓛ], Thunder TT[Ⓛ], Tornado TT[Ⓛ]
- mustard–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.

Results

The first replicate of the trial was damaged by birds. Only the two undamaged replicates were included in the analysis.

Yield

There were statistically significant effects of variety, sowing time and variety by sowing time interaction. Grain yield declined rapidly with later sowing time with sowing time 1 yielding more than twice that of Sowing Time 3 (Figure 1). The

2007



Table 1 Mean day of flowering of canola varieties sown at three times at Cowra

Variety	Mean flowering day (year day)		
	Sowing Time 1	Sowing Time 2	Sowing Time 3
44C73	239	244	250
45Y77	242	247	251
46C76	246	251	257
AG_Muster	239	246	253
AG_Spectrum	239	246	253
ATR_Banjo	239	246	250
ATR_Summitt	242	248	254
AV_Garnet	239	245	255
AV_Jade	238	244	250
AV_Opal	236	243	250
Bravo_TT	240	247	254
CBWA_Tanami	227	240	248
Hyola_50	240	247	253
Hyola_75	242	249	255
Selection_2	236	245	255
Skipton	241	248	253
Tarcoola	234	243	250
Thunder_TT	240	249	256
Tornado_TT	236	246	251
Warrior_CL	241	248	255

varieties Hyola 50 and Hyola 75 were high yielding at all sowing times.

Flowering time

The average number of days between the start and end of flowering was 31. CB Tanamai was the quickest variety to flower at all sowing times. The range of time to flower was greatest at Sowing Time 1. 46C76 was the slowest variety to reach flowering at all Sowing Times (Table 1) as expected.

Discussion

Sowing progressively later in a very dry year reduced average yield from 1721 kg/ha when sown on 8 May to 617 kg/ha when sown on 12 June.

Sowing Time 1 (8th May) is at the end of the normal sowing window for canola at Cowra while Sowing Time 2 (29th May) and 3 (12th June) are very late. The very dry winter and spring resulted in much lower yield from the later sowing times.

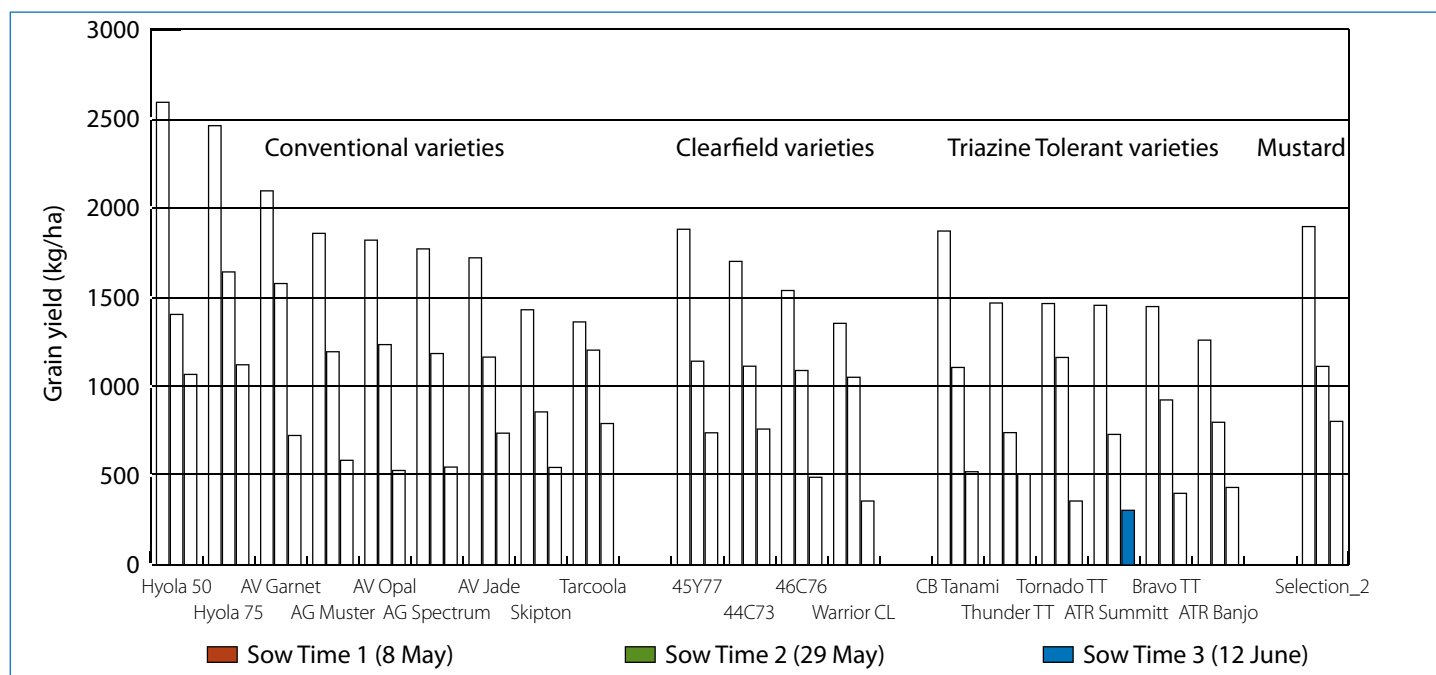


Figure 1 Grain yield of conventional, Clearfield® and triazine tolerant canola varieties sown at three times at Cowra.

Authors: Jan Edwards, District Agronomist Cowra and Dr Peter Martin, Project Leader, Wagga Wagga.

Acknowledgements: The contributions of Matt Newell, Rod Fisher, Vince van der Rijt, Graeme Heath, Guy McMullen and the staff at Cowra Agricultural Research Station in conducting this trial is gratefully acknowledged.

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

This publication is produced as part of GRDC project DAN00098 'Development of agronomy packages for new varieties for southern NSW (VSAP)'.

© State of New South Wales through NSW Department of Primary Industries 2008

Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (March 2008). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of New South Wales Department of Primary Industries or the user's independent adviser.

