

9.2 CANOLA GROWTH REGULATOR TRIAL - LAKE BOLAC

Location: SFS site Lake Bolac

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Background:

The lodging of canola continues to be a significant windrowing, harvesting, and yield loss issue. Growth regulators are registered for use in some cereal crops (not in canola), and have a demonstrated ability to prevent lodging by reducing crop height and increasing stem strength. In trials conducted in 2001 and 2002, growth regulators demonstrated their ability to reduce the height of canola with no significant effect on yield or oil content.

Aim:

- To assess the effect of two different growth regulators over a range of rates on crop height and lodging in canola.
- To assess the effect of growth regulators on grain yield and oil content.

Trial design:

Fully randomised and replicated (3 reps) trial

Crop: Canola var. Charlton

Sowing Date: 19th May 2003

Sowing Rate: 5 kg/ha

Fertiliser: 110 kg/ha Pivot 13.16.0.7

Growth Regulator application:

1st application on 1/9/03 at early stem elongation (crop height approx 30 cm). 2nd application on 26/9/03 at 10% flowering (later than ideal due to poor weather).

Table 70 : Treatment List

Control	
Ethrel ®	@ 750 ml/ha @ Early stem elongation
Ethrel ®	@ 1200 ml/ha @ Early stem elongation
Cycocel ®	@ 1000 ml/ha @ Early stem elongation
Cycocel ®	@ 2000 ml/ha @ Early Stem elongation
Ethrel ®	@ 750 ml/ha @ Early flowering
Ethrel ®	@ 1200 ml/ha @ Early flowering
Cycocel ®	@ 2000 ml/ha @ Early flowering

Ethrels' active constituent is 480 g/L Ethephon (an anticholinesterase compound). Cycocels' active constituent is 582 g/L Chlormequat present as Chlormequat Chloride.

Currently the growth regulators used in the trial are commercially available, however there is no registration for use on canola.

Results:

Treatment	Yield t/ha	Oil %
Control ⁴	2.43	42.9
Ethrel @ 750 ml/ha @ Early stem elongation	2.43	43.3
Ethrel @ 1200 ml/ha @ Early stem elongation	2.43	42.8
Cycocel @ 1000 ml/ha @ Early stem elongation	2.16	42.5
Cycocel @ 2000 ml/ha @ Early Stem elongation	2.36	43.4
Ethrel @ 750 ml/ha @ Early flowering	2.56	43.2
Ethrel @ 1200 ml/ha @ Early flowering	2.25	43.3
Cycocel @ 2000 ml/ha @ Early flowering	2.28	43.3
LSD 5%	0.354	1.43

⁴ Note only two plots recorded for yield not three.

Discussion:

The physical height difference between the treatments was very small and unable to be measured. None of the plots in the trial lodged.

None of the growth regulator treatments in the trial significantly increased or decreased the yield or oil content of the canola compared to the control treatment.