8.3 CANOLA - STREATHAM

Location: Willaura, Pat Millears' Property

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Background:
The lodging of canola in the past has been 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 improving standability. At the Gnarwarre SFS site in 2000, growth regulators demonstrated their ability to prevent lodging in canola supplied with excess nitrogen.

Aim:
The aim of this trial was to confirm the ability of growth regulators to reduce crop height, and therefore reduce the problem of lodging in conventionally grown canola. Together with assessing the potential yield and or oil reduction following a single application of growth regulators.

Trial Method:
Dunkeld canola was sown on the 24th of May 2001, at 5 kg/ha, with 100 kg/ha DAP at sowing (Gypsum @ 300kg/ha & Lime had been applied to the paddock).

The growth regulators where applied on the 13th of September (Canola was 5 % Flowering).

The following treatments were applied to three replicated plots: Control, Ethrel @ 500ml/ha, Ethrel @ 1.0 Lt/ha, Cycocel @ 650 ml/ha, Cycocel @ 1.3 Lt/ha. Ethrel is produced by Aventis. Active constituent is 480 g/L Ethephon (an anticholinesterase compound). Cycocel is produced by BASF. Active constituent is 582 g/L Chlormequat present as Chlormequat Chloride.

At the rates used in this trial both chemicals have an approximate cost of $10.00/ha at the lower rate and $20.00/ha at the higher rate.

The trial was windrowed on the 7th of December and harvested on the 5th of January 2002 using the DNRE trial plot equipment.

Results:

Lodging did not occur in the treated or control plots, however the treated plots where reduced in height by the growth regulators. The table below demonstrates that the yield and oil of the trial plots were not significantly affected.

Treatment	Average Yield	Average Oil	Price#/ha	Average Height at Harvest
Control	2.75*	45.10	$1123	140 cm
Ethrel @ 500ml/ha	2.64	44.83	$1063	125 cm
Ethrel @ 1.0 L/ha	2.70	45.23	$1103	110 cm
Cycocel @ 650 ml/ha	2.69	45.10	$1099	140 cm
Cycocel @ 1.3 L/ha	2.39	45.16	$976	125 cm

* =The variety trial result for Dunkeld was used due to poor germination in the control plots.
# Canola price = $380/t + 1.5 % of silo price per 1 % above 40 % oil.

Conclusion:
The results suggest that there was no significant impact on yield or oil content of the canola following the application of growth regulators. This was again demonstrated in the economics, with only a $ 24/ha difference in the price of canola received from the plots. The only exception to this was the Cycocel @ 1.3 L/ha, which produced slightly less yield.

The Ethrel @ 1 L/ha did produce the shortest crop, and therefore in broad acre situations this product may be the most effective in preventing lodging.

More work needs to be conducted to determine the most effective rates and application timing of the growth regulator chemicals currently available. The registration of these chemicals for use on canola crops also needs to be conducted.