

The effects of simulated Brodal carry over on some canola varieties

The aim of this demonstration was to determine the potential carry over effects of Brodal on different canola varieties.

Summary: Brodal carry over from the 2000 season had an affect on some commercially grown canola crops in 2001. The BCG trials showed that the Pacific Seed varieties Surpass600 and Surpass402CL and the Pioneer variety 44C73 were sensitive to simulated carry over of Brodal (diflufenican). If you are planning to sow any of these varieties this year, or a variety which was not in our trial, it is important to check whether you used Brodal in 2001 and discuss this with your supplier.

Background

Early in the 2001 season it became clear that Brodal carry over was resulting in some canola crops emerging poorly. The canola plants in these paddocks were emerging bleached and had low vigour. The BCG instigated a trial in which the Brodal carry over effect was simulated and observed the visual effect on a range of canola varieties.

Methods

16 canola varieties (7 regular, 5 TT and 4 IT varieties) were sown on July 4, 2001 at the Birchip site. The crops were sown at their recommended seeding rates with MAP at 80kg/ha. Brodal Options was applied to bare soil immediately post sowing at 10 and 50ml/ha. Treatments were not replicated, nor harvested. The crop phyto-toxicity effect of the Brodal was observed 60 days post emergence.

Results

There were large differences between the varieties in their responses to simulated Brodal carry over. At the high rate of simulated Brodal carry over (Brodal 50ml) severe damage was caused to Surpass600 and Surpass402CL; 44C73 had less visual effect but significant damage was observed (Table 1).

Table 1. Effects of two rates of Brodal applied pre-emergent on different canola varieties (I have being putting 'Table 1:' in bold and the text title in regular font – we should be consistent. Which method would you like to go with?)

Variety	Damage Score#		Variety	Damage Score#	
	Brodal 10ml	Brodal 50ml		Brodal 10ml	Brodal 50ml
Surpass400	1	1	Grace	1	1
Surpass600	3	7	Surpass600TT	3	4
Hyola 60	1	2	Hyden	2	3
Mystic	1	2	Pinnacle	2	4
Outback	1	2	Surpass402CL	4	7
Dunkeld	1	2	Surpass603CL	2	3
Trooper	2	3	44C73 (Pioneer)	3	5
Surpass501TT	1	2	45C75 (Pioneer)	1	3

Damage score: 1 = no effect,
3 = slight visual effect not expected to cause long term damage
5 = severe visual effect with some long term damage
7 = severe visual effect with an expected significant yield penalty
9 = dead

Interpretation

This trial was only a simulated Brodal effect trial. It is difficult to estimate how much active ingredient in the Brodal (diflufenican) remains in the soil the following season but we know that some commercial canola crops (especially Surpass402CL) had noticeable crop phytotoxic effects with bleaching of the emerging seedlings. The main varieties to watch are Surpass600, Surpass600TT, Surpass402CL, Pioneer 44C73 and Pinnacle.

Commercial Practice

Growers should be aware of potential problems with Brodal carry over on canola crops in 2002. Growers that used more than 100ml/ha of Brodal on a crop in 2001 and are planning to sow canola in 2002 should check the results in Table 1 and if in doubt contact their local supplier.

The BCG has instigated a trial at the 2002 site where Brodal was applied at different rates in 2001. More information will be available next year.