

Adjuvant choice for atrazine for best control of radish in TT canola

SUMMARY

Adjuvants to Atrazine are essential for the early post emergent control of radish in TT canola. The products of choice are the mineral-based oils. Doubling the oil rate increased their effectiveness. Most consistent control was achieved with Ad-here at 1 or 2%, and straight Cropping oil (DC-Tron) at 2%.

Atrazine is commonly used as an early post emergent herbicide to control radish in TT canola. Atrazine alone, without an adjuvant, is not effective in controlling radish. The product needs an adjuvant of some type. There is a wide range of adjuvants on the market and it is not clear which product or at which rate most effective control is achieved.

METHOD

At the Radish site a trial was established investigating the effectiveness of oils and wetters as adjuvants to Atrazine for the control of radish. 1.5L of Atrazine with 12 adjuvant treatments was applied early post emergent to Pinnacle canola in a replicated nearest neighbour plot design. In this design, each treatment plot was located adjacent to an unsprayed control plot. The effectiveness of the adjuvant was calculated as the level of control achieved between the treatment and unsprayed control. The plots were not harvested due to unacceptable levels of radish in the unsprayed control plots.

RESULTS

Table 2.7 The effect of certain adjuvants with atrazine on radish control

	Cost \$/ha*	% radish control
Ad-here 1%	1.35	92.7
Ad-here 2%	2.70	95.7
DC-Tron 1%	1.00	92.3
DC-Tron 2%	2.00	96.7
DC Trate 1%	1.70	85.7
DC Trate 2%	3.40	84.0
Uptake 0.5%	1.75	85.7
Uptake 1%	3.50	90.0
Hasten 0.5%	1.50	67.7
Hasten 1%	3.00	68.7
LI-700 0.3%	1.70	58.7
BS 1000 0.2%	0.85	51.3
Significant difference:		P<0.001 LSD=12.2

* cost calculated at a spray water volume of 60L/ha

INTERPRETATION

Effective control was achieved with all mineral oil based products (Ad-here, DC-Tron, DC Trate, and Uptake). Hasten (esterified canola oil) and the wetters LI700 and BS1000 were not as effective and only achieved between 51 and 69% control of radish. In all cases doubling the rate of mineral oil based product increased the

effectiveness of atrazine radish control. The products of choice (those with the most consistent level of control) were Ad-here at 1 and 2%, and DC-Tron at 2%.

COMMERCIAL PRACTICE

The type of adjuvant used with Atrazine has a large influence on the level of radish control. The mineral oils all provided a reasonable outcome with the best results achieved at double the normal rate of oil. Most consistent results were achieved with Ad-here at 1 and 2%, and DC-Tron at 2%.

NOTES ON ADJUVANTS

Product	Manufacturer	Notes
Ad-here	Victorian Chemical Company	Blend of mineral oil (970ml/L) plus non-ionic surfactant
DC-Tron	Ampol	Petroleum oil (833g/L) (no surfactant)
DC-Trate	Ampol	Blend of petroleum oil (763g/L) plus wetting agent
Uptake	DowAgroSciences	Blend of paraffinic oil (647 g/L) plus non-ionic surfactant (228 g/L)
Hasten	Victorian Chemical Company	100% Esterified seed oil plus surfactant
LI-700	NuFarm	Surfactant and pH adjuster
BS 1000	Crop Care	Surfactant