



Photo: A. Storie

Target 100% Weed Control: Effective management of Sowthistle (Milkthistle)

INFO SHEET

Target 100% Weed Control

Why product choice matters

A key focus of Sinochem is to assist growers in improving weed control so they can achieve better outcomes in the short and long-term. Sinochem is investing in on-farm and laboratory research to determine the best products and techniques to target 100% weed control.



Resistant Sowthistle Sprayed at 10-11 leaf Growth Stages



Left to Right: Roundup UltraMAX, 690g/L glyphosate, 540g/L glyphosate, 470 g/L glyphosate

Effective management of Sowthistle (Milkthistle) with Roundup ULTRAMAX

Common Sowthistle (also known as Milkthistle), is widespread across northern grain-growing regions of Australia. Common Sowthistle is one of the most difficult to control weeds in winter crops with a significant proportion of populations resistant to Group B herbicides. The weed was once considered to be winter-dominant; however, it is now found all year round. Sowthistle seed has virtually no dormancy. Germination can therefore commence as soon as seeds settle on moist soil and thereby reinfesting.

Independent Research

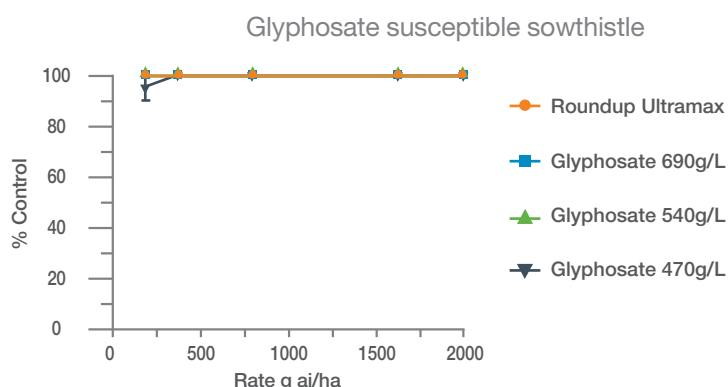
Dr Peter Boutsalis, Plant Science Consulting, Adelaide, SA, investigated the bioefficiency of four glyphosate formulations including Roundup ULTRAMAX in controlling susceptible and glyphosate-resistant Sowthistle Biotypes.

Methodology

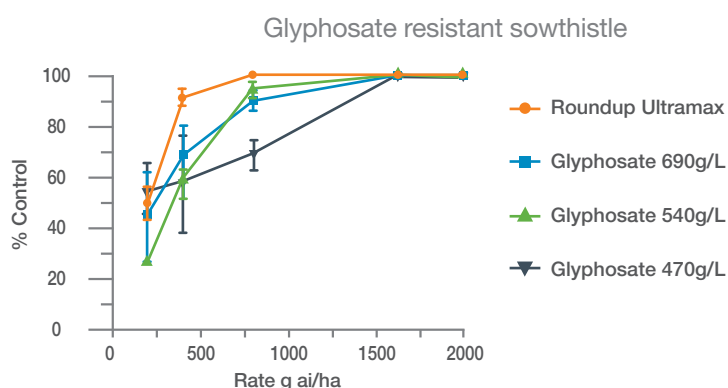
The trial compared four formulations of Glyphosate - Roundup ULTRAMAX 570g/L; 690g/L glyphosate; 540g/L glyphosate; and a 470g/L glyphosate which were all applied at 10-11 leaf growth stages. Five application rates ranging from 200g ai/ha to 1995 g ai /ha were tested.

Results

Glyphosate Susceptible Sowthistle (Milkthistle) sprayed at 10-11 leaf growth stage



Glyphosate Resistant Sowthistle (Milkthistle) sprayed at 10-11 leaf growth stage





Conclusion

- In this trial on glyphosate Resistant Sowthistle, Roundup UltraMAX exhibited up to 30% better control at 800g ai/ha over other formulations at the same g ai/ha.
- Percent control of Susceptible Sowthistle did not differ above 500g ai/ha across the four glyphosate formulations.
- The report suggests differences in surfactant technology influences glyphosate performance on Resistant Sowthistle.

Key Points to Consider when Targeting Resistant Sowthistle

- Target small actively growing plants
- Ensure good application with special attention to speed, boom height, nozzle & pressure
- Even one Resistant Sowthistle plant not controlled can result in thousands of seeds entering the seedbank and make future control costly
- Do not tank mix antagonistic Group I products with glyphosate when targeting Sowthistle
- Target 100% - Less survivors, means a reduced seed bank and better ROI
- Product choice really does matter – demonstrating a benefit to growers & the glyphosate molecule sustainability
- Superior control leads to increased reduction in seed set.



Image: Flowering growth stages of Sowthistle (Milkthistle)

Surfactants used in Glyphosate Formulations

The surfactant system of a glyphosate formulation is designed to deliver the active ingredient into the plant. The quality of surfactant is pivotal in maximizing the performance of a glyphosate product and ultimately the control of weeds such as Sowthistle.

Using a product such as Roundup ULTRAMAX with patented Transorb II surfactant technology can result in greater control and therefore delay the onset of resistance.

