

XII ROUNDUP RATE / TIMING TRIAL

- Objective:** To demonstrate the effect of split applications or higher rates of the new formulation of Roundup called Roundup Ultra Max for control of Canada thistle.
- Background:** Roundup is a non-selective herbicide that is used to control weeds in Roundup Ready canola. Previous research has indicated that the standard rate of Roundup Ultra (16 oz/ac) frequently does not provide effective control of Canada thistle. Split applications or higher rates of Roundup Ultra Max may provide more effective control of the Canada thistle.
- Methodology:** Roundup Ultra Max was used in this trial. The standard rate for Roundup Ultra Max (13 oz/ac) is equivalent to the 16 oz/ac rate of Roundup Ultra. The Roundup Rate/Timing Trial was conducted using the variety RideR and was integrated into the Systems Comparison Trial. The trial consisted of the following treatments:
- A) Roundup standard rate - Roundup Ultra Max (13 oz/ac) + ammonium sulfate (1 lb/ac) applied at the 3 leaf stage
 - B) Roundup high rate - Roundup Ultra Max (20 oz/ac) + ammonium sulfate (1 lb/ac) applied at the 3-leaf stage
 - C) Roundup split application - Roundup Ultra Max (13 oz/ac) + ammonium sulfate (1 lb/ac) applied at the 2 and 6-leaf stages
- Observation:** The site for this trial had a history of Canada thistle problems. However, an application of Curtail in 2000 resulted in good control and few Canada thistles in 2001. Where there were some Canada thistles in the plots, all three treatments gave similar control. The different rates and timings of Roundup Ultra Max had no effect on canopy closure, lodging, or maturity. The split application was noticeably easier to swath than the standard rate of 13 oz/ac.

Results:

ROUNDUP RATE / TIMING TRIAL Thief River Falls, MN					
Treatment	Yield (lb/ac)	Yield (bu/ac)	Contribution Margin (\$/ac)	Oil (%)	Swathability Rating (1-5)
Roundup - high	1685	33.7	17.71	41.3	2.3
Roundup - standard	1632	32.6	15.55	41.3	3.0
Roundup - split	1580	31.6	5.34	41.5	2.0
LSD	78.6	1.57		0.76	0.4
CV%	3.5	3.5		1.3	11.9

Discussion: Yield from the high rate of Roundup was significantly higher than the split application. There was no difference in yield between the standard and high rates of Roundup. The contribution margin of the split application was lower than the other two treatments due to the added chemical cost and lower yields.