



ISSUE 52 - June 2021
Emma Burt - Editor

Ultra Blazer in Sugarbeet

Ultra Blazer

Ultra Blazer (manufactured by UPL) is a postemergence contact herbicide classified as a PPO inhibitor (Group 14). Once the herbicide is activated by sunlight, oxygen compounds are formed that target and destroy plant tissue, thus killing weeds. Ultra Blazer is effective on weeds such as waterhemp and red root pigweed; it will be an extremely beneficial tool to manage glyphosate-resistant waterhemp escapes in this year's sugarbeet crop. Given its mode of action, Ultra Blazer **will cause leaf burn on the sugarbeet** (especially at warm temperatures), and applications to smaller sugarbeet (<6-leaf) will result in more severe crop injury.

Sugarbeet leaf burn from Ultra Blazer @ 16 fl oz/acre + NIS, applied at the 12-leaf stage (image taken 4 days after application)



Section 18 for 2021

The Environmental Protection Agency approved a Section 18 Emergency Use label for Ultra Blazer herbicide on sugarbeet for the 2021 growing season. This label offers Minn-Dak growers an excellent postemergence weed control option for waterhemp and pigweed escapes.



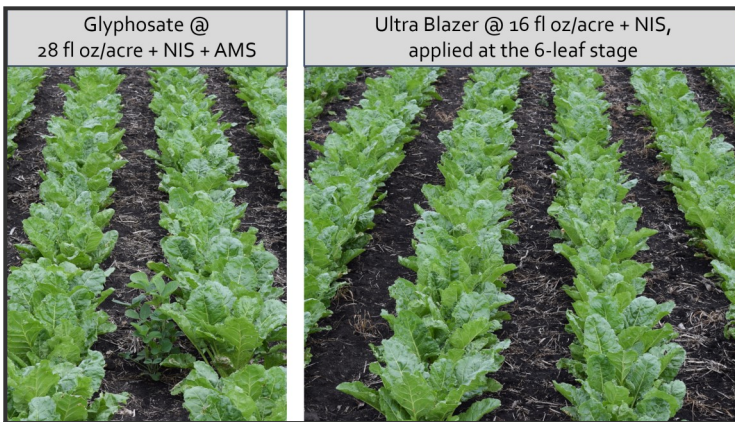
Waterhemp Escapes

How to Apply

- 16 fl oz/acre + NIS @ 0.125% v/v
- Apply @ 6-12 leaf stage
- 20 GPA / 40 psi / flat fan nozzles
- Target weeds less than 4 inches tall
- REI = 48 hours
- PHI = 45 days
- **ONE** application per season
- May be tank-mixed with glyphosate
- **NO** aerial application

How Can I Reduce the Risk of Injury?

- **Do not** apply to sugarbeet smaller than 6-leaf
- **Do not** use oil-based adjuvants
- **Do not** tank-mix with any pesticides other than glyphosate
- Separate Ultra Blazer applications from any pesticide application containing oil-based products by 3-5 days (on either side)
- Do not apply when air temps exceed 80°F
- Make applications late in the day as temperatures begin to cool
- Sugarbeet and weeds may be more susceptible to Ultra Blazer in fields previously treated with a soil-applied herbicide
- Crop injury may increase with sudden weather changes (i.e. cool and cloudy conditions turn to hot and sunny conditions)
- High humidity may increase crop injury



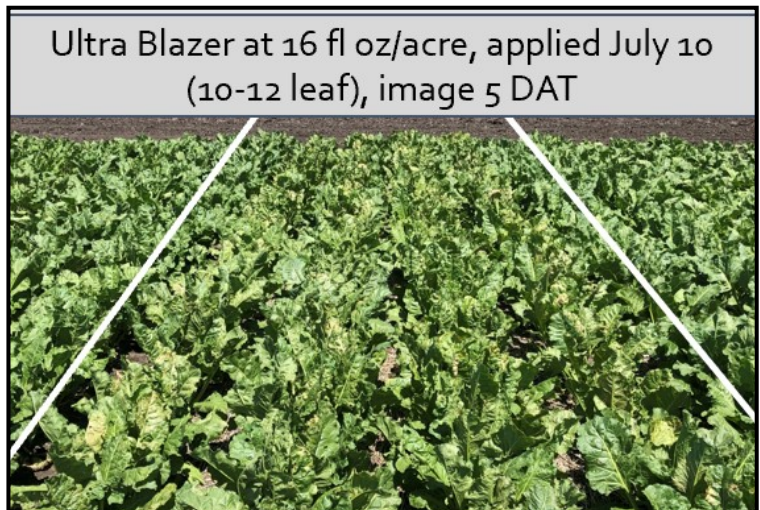
Glyphosate was applied at the 2-leaf and 6-leaf sugarbeet stages, while Ultra Blazer was applied at the 6-leaf sugarbeet stage. Some leaf burn is still visible on the sugarbeet treated with Ultra Blazer, otherwise the plots are very similar.



This image was taken 7 days after 16 fl oz/acre of Ultra Blazer was applied to sugarbeet at the 6-leaf stage. The white lines indicate the center rows that were treated. Leaf burn and stature reduction are visible.



Visible leaf burn on sugarbeet treated with Ultra Blazer at the 10-12 leaf stage.



This image was taken 5 days after 16 fl oz/acre of Ultra Blazer was applied to sugarbeet at the 10-12 leaf stage. The white lines indicate the center rows that were treated. Note that both leaf burn and stature reduction are less severe.

2019 & 2020 Research Data

Experiments were conducted in 2019 and 2020 to evaluate sugarbeet tolerance to Ultra Blazer. Various rates, application timings, adjuvants, and tank mixtures were evaluated. Four locations were used each year. The results are summarized below.

Crop injury and growth reduction in response to Ultra Blazer

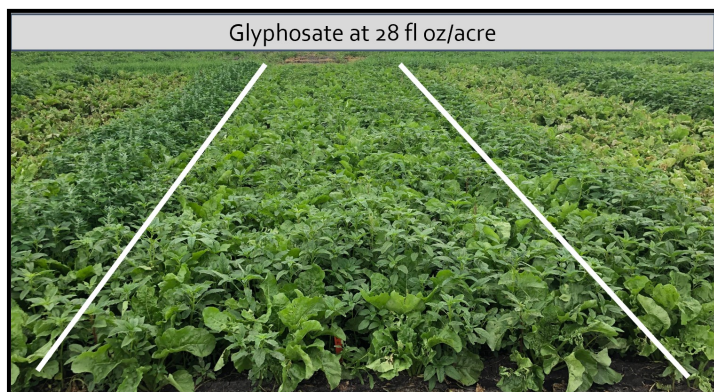
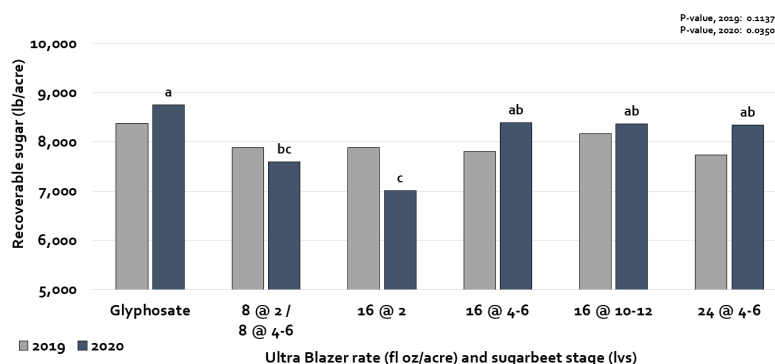
Treatment ^a	Rate	Timing	Necrosis (7 DAT)		Growth Reduction (14 DAT)	
			2019	2020	2019	2020
	--fl oz/acre--	--lf-stage--	-----% injury-----			
Glyphosate / glyphosate ^a	28 / 28	2 / 4-6	0 a	1 a	0 a	3 a
Ultra Blazer / Ultra Blazer ^b	8 / 8	2 / 4-6	25 b	67 c	44 b	60 b
Ultra Blazer	16	2	34 b	79 c	36 b	69 b
Ultra Blazer	16	4-6	39 b	31 b	9 a	11 a
Ultra Blazer	16	10-12	23 b	19 ab	8 a	11 a
Ultra Blazer	24	4-6	41 b	37 b	11 a	15 a
P-Value			0.0062	<0.0001	0.0017	<0.0001

^aGlyphosate with non-ionic surfactant at 0.25%v/v; Ultra Blazer with non-ionic surfactant at 0.125%

In 2019, there were no statistical differences among the treatments at harvest. In 2020, 16 fl oz/acre of Ultra Blazer applied at either the 4-6 leaf or the 10-12 leaf stage was not statistically different from glyphosate applications. **Even though sugarbeet was injured following application of Ultra Blazer, that injury did not translate to yield or quality loss in either trial year.** Also, keep in mind that these trials were kept weed-free, so yield and quality loss from competing weeds was not a factor here.

Evaluations were made by comparing the treated rows to the untreated rows. Necrosis was leaf burn; growth reduction was a reduction in stature. A 0 - 100% scale was used, with 100% meaning that the plot was completely injured—simply put, the higher the number, the greater the crop injury. Take note that injury was generally greatest at the earliest application timing (2-leaf) and decreased as application timing was delayed (applied to bigger beets). As Ultra Blazer rate increased from 16 fl oz/acre to 24 fl oz/acre, injury increased as well.

Recoverable sugar/acre in response to Ultra Blazer rate and growth stage



These images are from the weed control trials—very severe weed pressure. Images were taken 8 days after application. The treated rows between the white lines can be compared to the untreated rows outside the white lines. Weed escapes are visible in the glyphosate plot. Injury is visible in the Ultra Blazer plot, however, weed control is **excellent**.

The information provided in this issue is meant to assist your operation in making an effective Ultra Blazer application in 2021. Please consult your agriculturist and/or the product label for additional information.