

VOLUNTEER ROUNDUP READY CANOLA CONTROL WITH ULTRA BLAZER

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Summary

1. Ultra Blazer applied at 16 fl oz/A with non-ionic surfactant at 0.125% v/v controlled 2- to 3-inch and 4- to 6-inch canola.
2. Although sugarbeet safety was not an objective of this experiment, we remind producers that sugarbeet must be greater than 6-lf stage for application of Ultra Blazer.

Introduction

Volunteer Roundup Ready® Canola is one of the most difficult weeds to control in sugarbeet. Our previous research established UpBeet (triflurosulfuron-methyl, group 2) as the most effective herbicide for volunteer canola control. Volunteer canola germinates and emerges across time in sugarbeet so repeat UpBeet applications are the only effective approach for control. Sugarbeet Extension recommends two or three repeat UpBeet applications at 0.5 to 0.75 lb/A once volunteer canola has reached the 2-lf stage.

Adam Bernhardson from North Star Ag Services wrote and mentioned that Flexstar, (fomesafen, group 14) at low rates has proven to be an excellent way to control volunteer canola in soybean. Adam inquired if Ultra Blazer might be equally as effective in sugarbeet since the herbicides share the same mode of action. The objective of this experiment was to determine control of 2- to 3-inch and 4- to 6-inch volunteer canola from Ultra Blazer.

Materials and Methods

A single greenhouse experiment was conducted in 2022. Pots were filled with PROMIX general purpose greenhouse media (Premier Horticulture, Inc., Quakertown, PA) and four equally spaced canola seeds were planted to a depth of 1-inch in 4 × 4-inch pots. Canola were grown to 2- to 3-inch and 4- to 6-inch at 75F to 81F under natural light supplemented with a 16 h photoperiod of artificial light. Herbicide treatments (Table 1) were applied using a spray booth (Generation III, DeVries Manufacturing, Hollandale, MN) equipped with a TeeJet® 8001 XR nozzle calibrated to deliver 10.5 gpa spray solution at 40 psi and 3 mph. Visible canola control (0% to 100%, 100% indicating complete control) was evaluated 3, 7, and 14 days after treatment (DAT). Experimental design was randomized complete block with four replications. Data were analyzed with the ANOVA procedure of ARM, version 2021.2 software package.

Table 1. Herbicide treatment, rate, and volunteer RR canola growth stage, NDSU greenhouse complex, 2022.

Herbicide Treatment	Herbicide rate -----fl oz /A-----	Sugarbeet stage --leaves--
Untreated Control	-	-
Ultra Blazer	16	2-3
Ultra Blazer + NIS ^a	16 + 0.25%	2-3
Ultra Blazer + PowerMax + AMS ^b + NIS	16 + 28 + 2.5% v/v + 0.25% v/v	2-3
Ultra Blazer	16	4-6
Ultra Blazer + NIS	16 + 0.25%	4-6
Ultra Blazer + PowerMax + AMS + NIS	16 + 28 + 2.5% v/v + 0.25% v/v	4-6

^aNIS=non-ionic surfactant

^bAMS=liquid ammonium sulfate

Results and Discussion

Ultra Blazer alone, Ultra Blazer with non-ionic surfactant (NIS) or Ultra Blazer with Roundup PowerMax and NIS and ammonium sulfate (AMS) controlled 2- to 3-inch canola, 8 DAT. Control from Ultra Blazer with NIS or Ultra Blazer with Roundup PowerMax with NIS and AMS provided similar control, 8 DAT, on 4- to 6-inch canola.

However, Ultra Blazer alone provided less 4- to 6-inch canola control than Ultra Blazer with NIS, 8 DAT. However, sugarbeet must be greater than the 6-lf stage to achieve acceptable sugarbeet safety.

Table 2. Visual growth reduction in response to herbicide treatment and growth stage, greenhouse, 2022.^a

Herbicide Treatment	Herbicide rate	Growth Stage	Canola growth reduction				
			3 DAT ^b	3 DAT	8 DAT	8 DAT	13 DAT
	-----fl oz /A-----	--lvs--	-----%-----				
Untreated Control			0 d	0 c	0 b	0 c	0 b
Ultra Blazer	16	2-3	50 c	-	97 a	-	98 a
Ultra Blazer + NIS ^c	16 + 0.25%	2-3	78 a	-	98 a	-	99 a
Ultra Blazer + PowerMax + AMS ^d + NIS	16 + 28 + 2.5% v/v + 0.25% v/v	2-3	60 b	-	99 a	-	99a
Ultra Blazer	16	4-6	-	65 b	-	81 b	-
Ultra Blazer + NIS	16 + 0.25%	4-6	-	73 ab	-	94 a	-
Ultra Blazer + PowerMax + AMS + NIS	16 + 28 + 2.5% v/v + 0.25% v/v	4-6	-	76 a	-	96 a	-
LSD (0.10)			9	10	2	6	1
P-Value			0.0001	0.0001	0.0001	0.0001	0.0001

^a Means within a rating that do not share any letter are significantly different by the LSD at the 10% level of significance.

^bDAT=Days after treatment

^cNIS=Non-ionic surfactant

^dAMS=liquid ammonium sulfate

Conclusions

Ultra Blazer controls volunteer RR canola. NIS is usually recommended with Ultra Blazer. NIS with Ultra Blazer improved control of 4- to 6-inch canola as compared with Ultra Blazer alone. We did not attempt to control canola greater than 6-inches. It would surmise that Ultra Blazer would provide control of canola greater than 6-inches, provided there was good coverage.