

Restraint Weed Control and Crop Safety

Janesville, WI 2021

Trial Information

Trial Sponsor(s): Summit Agro

Objective: Compare single and split applications of Restraint to industry standards for weed control and crop safety.

Crop: Corn

Hybrid: Dekalb DKC 54-38 RIB

Weed species (pressure): Giant ragweed (moderate-high)
Velvetleaf (moderate)

Herbicide Application(s): PRE – 5/24

POST – 6/15 (V4 corn)

For the full report see trial #21-ROK-CN04 in the [2021 Wisconsin Weed Science Research Report](#)



Cropping Systems Weed Science
UNIVERSITY OF WISCONSIN-MADISON



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Trt #	Herbicide (rate acre ⁻¹)	Crop Injury (%) ^c		Giant Ragweed (%)				Velvetleaf (%)			Yield ^b bu acre ⁻¹
		6/23	6/29	6/8	6/29	7/15	11/3	6/8	6/29	7/15	
1	Untreated Check	0	0	0	0	0	0	0	0	0	79 b
Two-Pass – PRE (5/24) <i>fb</i> POST (6/15)											
2	Restraint (36 oz) + AAtrex (2 pt) <i>fb</i> Shieldex (1 oz) + AAtrex (1 pt) + COC 1% v/v	5	5	49	88	87	96	37	88	84	250 a
3	Restraint (18 oz) + AAtrex (2 pt) <i>fb</i> Restraint (18 oz) + AAtrex (1 pt) + COC 1% v/v	11	11	39	86	86	96	55	95	89	247 a
4	Resicore (40 oz) + AAtrex (2 pt) <i>fb</i> Restraint (30 oz) + AAtrex (1 pt) + COC 1% v/v	13	11	65	92	91	98	75	99	99	246 a
5	Resicore (40 oz) + AAtrex (2 pt) <i>fb</i> Resicore (40 oz) + AAtrex (1 pt) + COC 1% v/v	10	8	66	96	96	99	72	100	100	250 a
LSD ($\alpha=0.10$)		2	4	10	7	4	2	17	ns	5	29
p value		<0.001	0.063	0.002	0.084	0.005	0.052	0.014	0.304	0.003	<0.001

^aVisual control from 70-100% is illustrated on a color scale with green representing greater weed control values.

^bYield values with the same letter are not significantly different.

^cCrop injury symptoms included leaf necrosis and chlorosis.

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Plot pictures taken on 6/15

22 days after the PRE application
The day of the POST application

The number in the upper right-hand corner is the average % giant ragweed control of 4 replications

**22 days after PRE (6/15)
Untreated Check**

0%



22 days after PRE (6/15)

PRE: 36 fl oz Restraint + 2 pt AAtrex

30%



22 days after PRE (6/15)

PRE: 18 fl oz Restraint + 2 pt AAtrex

29%



22 days after PRE (6/15)

PRE: 40 fl oz Resicore + 2 pt AAtrex

51%



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Plot pictures taken on 6/23

30 days after the PRE application
8 days after the POST application

The number in the upper right-hand corner is the average % corn leaf chlorosis/necrosis of 4 replications

30 days after PRE (6/23)

Untreated Check

0%



8 days after POST (6/23)

PRE: 36 fl oz Restraint + 2 pt AAtrex *fb*

POST: 1 fl oz Shieldex + 1 pt AAtrex + COC

5%



8 days after POST (6/23)

PRE: 18 fl oz Restraint + 2 pt AAtrex *fb*

POST: 18 fl oz Restraint + 1 pt AAtrex + COC

11%



8 days after POST (6/23)

PRE: 40 fl oz Resicore + 2 pt AAtrex *fb*

POST: 30 fl oz Restraint + 1 pt AAtrex + COC

13%



8 days after POST (6/23)

PRE: 40 fl oz Resicore + 2 pt AAtrex *fb*

POST: 40 fl oz Resicore + 1 pt AAtrex + COC

10%



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Plot pictures taken on 6/29

36 days after the PRE application
14 days after the POST application

The number in the upper right-hand corner is the average % giant ragweed control of 4 replications

36 days after PRE (6/29)

Untreated Check

0%



14 days after POST (6/29)

PRE: 36 fl oz Restraint + 2 pt AAtrex *fb*

POST: 1 fl oz Shieldex + 1 pt AAtrex + COC

88%



14 days after POST (6/29)

PRE: 18 fl oz Restraint + 2 pt AAtrex *fb*

POST: 18 fl oz Restraint + 1 pt AAtrex + COC

86%



14 days after POST (6/29)

PRE: 40 fl oz Resicore + 2 pt AAtrex *fb*

POST: 30 fl oz Restraint + 1 pt AAtrex + COC

91%



14 days after POST (6/29)

PRE: 40 fl oz Resicore + 2 pt AAtrex *fb*

POST: 40 fl oz Resicore + 1 pt AAtrex + COC

96%



Restraint Weed Control and Crop Safety

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Plot pictures taken on 7/15

52 days after the PRE application
30 days after the POST application

The number in the upper right-hand corner is the average % giant ragweed control of 4 replications

52 days after PRE (7/15)

Untreated Check

0%



30 days after POST (7/15)

PRE: 36 fl oz Restraint + 2 pt AAtrex *fb*

POST: 1 fl oz Shieldex + 1 pt AAtrex + COC

87%



30 days after POST (7/15)

PRE: 18 fl oz Restraint + 2 pt AAtrex *fb*

POST: 18 fl oz Restraint + 1 pt AAtrex + COC

86%



30 days after POST (7/15)

PRE: 40 fl oz Resicore + 2 pt AAtrex *fb*

POST: 30 fl oz Restraint + 1 pt AAtrex + COC

91%



30 days after POST (7/15)

PRE: 40 fl oz Resicore + 2 pt AAtrex *fb*

POST: 40 fl oz Resicore + 1 pt AAtrex + COC

96%

