

Authority Brand Soybean Herbicide Programs Brooklyn, WI 2023

Trial Information

Trial Sponsor(s): FMC

Objective: Evaluate the efficacy and crop safety of Authority brand herbicides with and without metribuzin and similar competitor PRE herbicides

Crop: Enlist Soybean

Variety: P10A66E

Weed species (pressure): glyphosate-R waterhemp (moderate)
velvetleaf (low-moderate)
woolly cupgrass (high)

Herbicide Application(s): PRE – 5/17
POST – 6/22 (V4/V5 soybean)

For the full report see trial #23-BRO-SB13 in the [2023 Wisconsin Weed Science Research Report](#)



Cropping Systems Weed Science
UNIVERSITY OF WISCONSIN-MADISON

The logo for FMC, consisting of the letters 'FMC' in a bold, red, sans-serif font.

Authority Brand Soybean Herbicide Programs

Brooklyn, WI 2023

Trt #	Herbicide (rate acre ⁻¹)	Injury (%)		Waterhemp (%)				Velvetleaf (%)				Woolly Cupgrass (%)				Yield ^b bu acre ⁻¹
		6/8	7/5	6/8	6/22	7/5	10/3	6/8	6/22	7/5	10/3	6/8	6/22	7/5	10/3	
1	Untreated Check	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23 b
Two-Pass – PRE (5/17) fb POST^c (6/22)				POST				POST				POST				
2	Authority Supreme (8 fl oz)	1.0	3.3	97	87	98	96	99	98	100	100	89	77	95	93	63 a
3	Authority Supreme (8 fl oz) + Metricor DF (6 oz)	2.3	3.5	96	92	100	98	99	98	100	100	87	77	93	86	63 a
4	Authority Edge (8 fl oz)	1.0	4.0	98	90	98	95	98	96	100	100	82	64	93	90	61 a
5	Authority Edge (8 fl oz) + Metricor DF (6 oz)	1.3	3.3	99	90	100	95	99	99	100	100	82	67	94	87	61 a
6	Authority First (6.4 oz)	0.3	4.0	91	76	94	89	99	100	100	100	86	67	98	93	63 a
7	Authority First (6.4 oz) + Metricor DF (6 oz)	0.5	3.3	96	85	98	94	100	100	100	100	85	67	99	96	65 a
8	Kyber (1 pt)	6.0	5.5	98	88	96	97	99	97	100	100	91	70	89	89	63 a
9	Zidua PRO (6 fl oz)	0.5	5.3	93	81	95	93	100	100	100	100	89	71	98	92	63 a
10	Boundary (29 fl oz)	2.8	3.3	98	85	100	94	76	67	100	99	77	56	88	81	61 a
11	Anthem Maxx (4 fl oz)	1.3	5.0	89	77	93	90	90	89	100	100	86	69	88	86	64 a
12	Anthem Maxx (4 fl oz) + Metricor DF (6 oz)	1.5	3.5	100	91	100	98	92	90	100	100	90	77	94	90	63 a
LSD ($\alpha=0.10$)		1.0	ns	6	9	ns	4	4	4	ns	ns	6	8	ns	7	4
p value		<.001	0.641	0.037	0.063	0.133	0.015	<.001	<.001	1.0	0.537	0.009	0.003	0.121	0.071	<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.

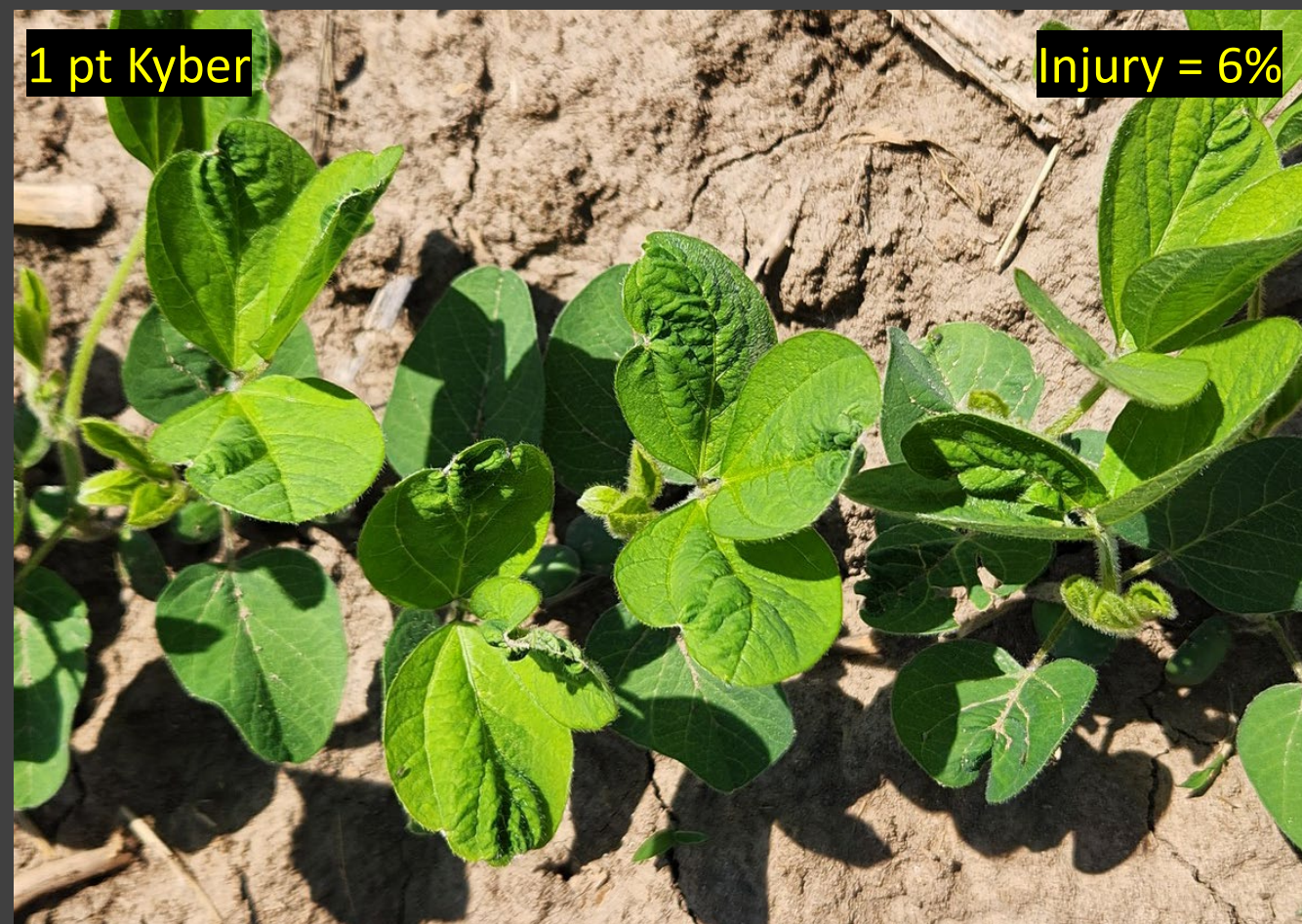
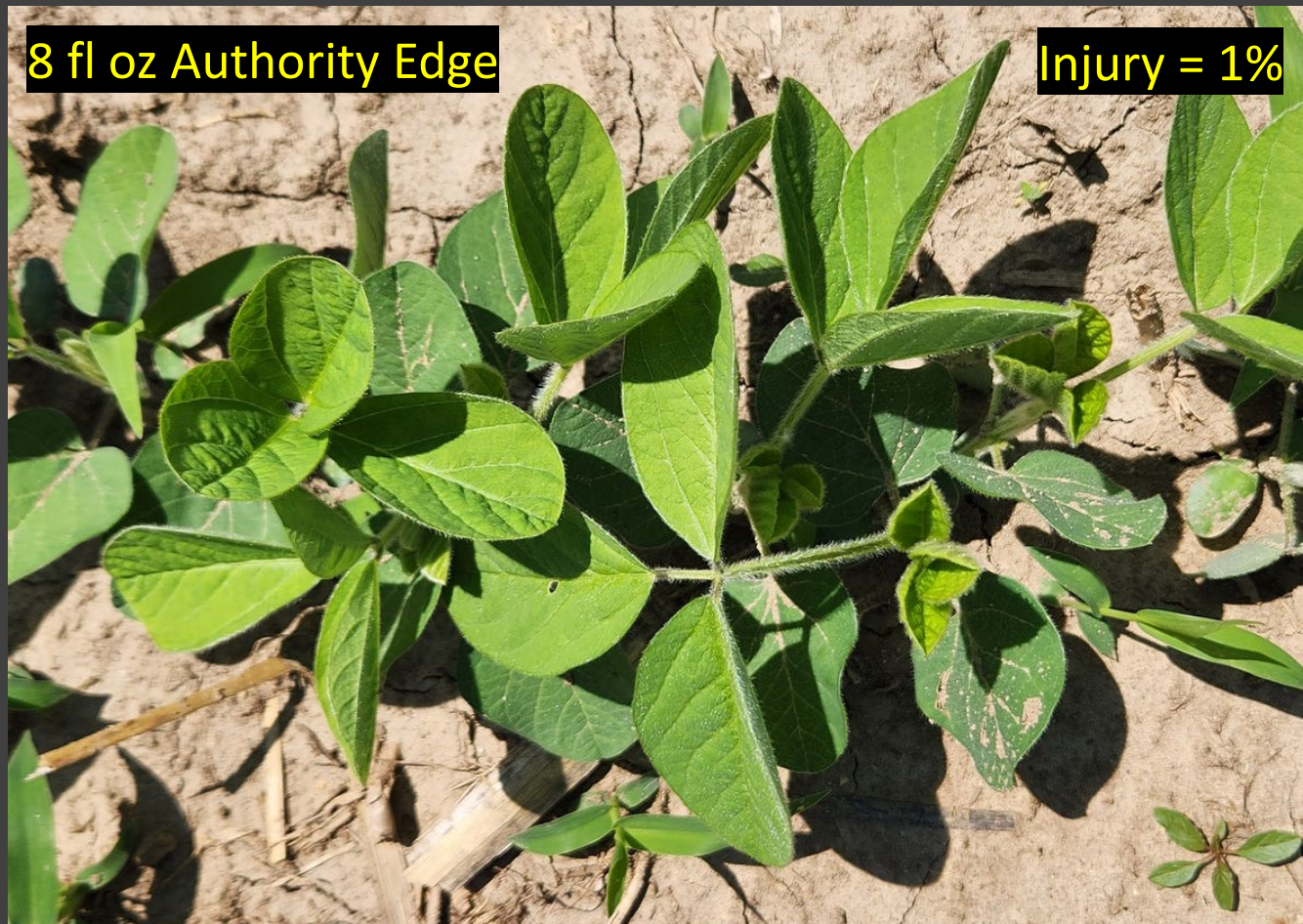
^cPOST application - Enlist One (32 fl oz) + Liberty (32 fl oz) + AMS (2 lb/a) applied to all treatments except the untreated check.

Authority Brand Soybean Herbicide Programs Brooklyn, WI 2023

Plot pictures taken on 6/8
22 days after the PRE application

The numbers in the upper right-hand corner are the average
% waterhemp and woolly cupgrass control of 4 replications

Authority Brand Soybean Herbicide Programs Brooklyn, WI 2023



22 days after PRE (6/8)
Untreated Check

0%



22 days after PRE (6/8)
PRE: 8 fl oz Authority Supreme

Waterhemp = 97%
Woolly Cupgrass = 89%



22 days after PRE (6/8)

PRE: 8 fl oz Authority Supreme + 6 oz Metricor DF

Waterhemp = 96%

Woolly Cupgrass = 87%



22 days after PRE (6/8)
PRE: 8 fl oz Authority Edge

Waterhemp = 98%
Woolly Cupgrass = 82%



22 days after PRE (6/8)

PRE: 8 fl oz Authority Edge + 6 oz Metricor DF

Waterhemp = 99%

Woolly Cupgrass = 82%



22 days after PRE (6/8)
PRE: 6.4 oz Authority First

Waterhemp = 91%
Woolly Cupgrass = 86%



22 days after PRE (6/8)

PRE: 6.4 oz Authority First + 6 oz Metricor DF

Waterhemp = 96%

Woolly Cupgrass = 85%



22 days after PRE (6/8)
PRE: 1 pt Kyber

Waterhemp = 98%
Woolly Cupgrass = 91%



22 days after PRE (6/8)
PRE: 6 fl oz Zidua PRO

Waterhemp = 93%
Woolly Cupgrass = 89%



22 days after PRE (6/8)
PRE: 29 fl oz Boundary

Waterhemp = 98%
Woolly Cupgrass = 77%



22 days after PRE (6/8)
PRE: 4 fl oz Anthem Maxx

Waterhemp = 89%
Woolly Cupgrass = 86%



22 days after PRE (6/8)

PRE: 4 fl oz Anthem Maxx + 6 oz Metricor DF

Waterhemp = 100%

Woolly Cupgrass = 90%



Authority Brand Soybean Herbicide Programs Brooklyn, WI 2023

Plot pictures taken on 6/22
36 days after the PRE application
The day of the POST application

The numbers in the upper right-hand corner are the average
% waterhemp and woolly cupgrass control of 4 replications

36 days after PRE (6/22)
Untreated Check

0%



36 days after PRE (6/22)
PRE: 8 fl oz Authority Supreme

Waterhemp = 87%
Woolly Cupgrass = 77%



36 days after PRE (6/22)

PRE: 8 fl oz Authority Supreme + 6 oz Metricor DF

Waterhemp = 92%

Woolly Cupgrass = 77%



36 days after PRE (6/22)
PRE: 8 fl oz Authority Edge

Waterhemp = 90%
Woolly Cupgrass = 64%



36 days after PRE (6/22)

PRE: 8 fl oz Authority Edge + 6 oz Metricor DF

Waterhemp = 90%

Woolly Cupgrass = 67%



36 days after PRE (6/22)
PRE: 6.4 oz Authority First

Waterhemp = 76%
Woolly Cupgrass = 67%



36 days after PRE (6/22)

PRE: 6.4 oz Authority First + 6 oz Metricor DF

Waterhemp = 85%

Woolly Cupgrass = 67%



36 days after PRE (6/22)
PRE: 1 pt Kyber

Waterhemp = 88%
Woolly Cupgrass = 70%



36 days after PRE (6/22)
PRE: 6 fl oz Zidua PRO

Waterhemp = 81%
Woolly Cupgrass = 71%



36 days after PRE (6/22)
PRE: 29 fl oz Boundary

Waterhemp = 85%
Woolly Cupgrass = 56%



36 days after PRE (6/22)
PRE: 4 fl oz Anthem Maxx

Waterhemp = 77%
Woolly Cupgrass = 69%



36 days after PRE (6/22)

PRE: 4 fl oz Anthem Maxx + 6 oz Metricor DF

Waterhemp = 91%

Woolly Cupgrass = 77%



Authority Brand Soybean Herbicide Programs Brooklyn, WI 2023

Plot pictures taken on 7/5
49 days after the PRE application
13 days after POST application

The numbers in the upper right-hand corner are the average
% waterhemp and woolly cupgrass control of 4 replications

49 days after PRE (7/5)
Untreated Check

0%



13 days after POST (7/5)

PRE: 8 fl oz Authority Supreme *fb*

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 98%

Woolly Cupgrass = 95%



13 days after POST (7/5)

PRE: 8 fl oz Authority Supreme + 6 oz Metricor DF *fb*

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 100%

Woolly Cupgrass = 93%



13 days after POST (7/5)

PRE: 8 fl oz Authority Edge *fb*

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 98%

Woolly Cupgrass = 93%



13 days after POST (7/5)

PRE: 8 fl oz Authority Edge + 6 oz Metricor DF fb

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 100%

Woolly Cupgrass = 94%



13 days after POST (7/5)

PRE: 6.4 oz Authority First fb

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 94%

Woolly Cupgrass = 98%



13 days after POST (7/5)

PRE: 6.4 oz Authority First + 6 oz Metricor DF *fb*

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 98%

Woolly Cupgrass = 99%



13 days after POST (7/5)

PRE: 1 pt Kyber *fb*

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 96%

Woolly Cupgrass = 89%



13 days after POST (7/5)
PRE: 6 fl oz Zidua PRO fb
POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 95%
Woolly Cupgrass = 98%



13 days after POST (7/5)
PRE: 29 fl oz Boundary *fb*
POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 100%
Woolly Cupgrass = 88%



13 days after POST (7/5)

PRE: 4 fl oz Anthem Maxx *fb*

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 93%

Woolly Cupgrass = 88%



13 days after POST (7/5)

PRE: 4 fl oz Anthem Maxx + 6 oz Metricor DF fb

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 100%

Woolly Cupgrass = 94%



Authority Brand Soybean Herbicide Programs Brooklyn, WI 2023

Plot pictures taken on 10/3
2 days before soybean harvest

The numbers in the upper right-hand corner are the average
% waterhemp and woolly cupgrass control of 4 replications



Soybean Harvest (10/3)
PRE: 8 fl oz Authority Supreme *fb*
POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 96%
Woolly Cupgrass = 93%



Soybean Harvest (10/3)

PRE: 8 fl oz Authority Supreme + 6 oz Metricor DF *fb*

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 98%

Woolly Cupgrass = 86%



Soybean Harvest (10/3)

PRE: 8 fl oz Authority Edge *fb*

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 95%

Woolly Cupgrass = 90%



Soybean Harvest (10/3)

PRE: 8 fl oz Authority Edge + 6 oz Metricor DF *fb*

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 95%
Woolly Cupgrass = 87%



Soybean Harvest (10/3)

PRE: 6.4 oz Authority First *fb*

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 89%

Woolly Cupgrass = 93%



Soybean Harvest (10/3)

PRE: 6.4 oz Authority First + 6 oz Metricor DF *fb*

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 94%
Woolly Cupgrass = 96%



Soybean Harvest (10/3)

PRE: 1 pt Kyber *fb*

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 97%

Woolly Cupgrass = 89%



Soybean Harvest (10/3)

PRE: 6 fl oz Zidua PRO *fb*

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 93%

Woolly Cupgrass = 92%



Soybean Harvest (10/3)
PRE: 29 fl oz Boundary *fb*
POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 94%
Woolly Cupgrass = 81%



Soybean Harvest (10/3)

PRE: 4 fl oz Anthem Maxx *fb*

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 90%

Woolly Cupgrass = 86%



Soybean Harvest (10/3)

PRE: 4 fl oz Anthem Maxx + 6 oz Metricor DF *fb*

POST: 2 pt Enlist One + 32 oz Liberty + AMS

Waterhemp = 98%

Woolly Cupgrass = 90%

