

# Authority Brand Soybean Herbicide Programs (Brooklyn, WI 2022)

## 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 in Enlist soybeans

Crop: Enlist Soybean

Variety: H2123E

Weed species (pressure): glyphosate-R waterhemp (high-very high)  
velvetleaf (low-moderate)  
fall panicum (moderate)

Herbicide Application(s): PRE – 5/24  
POST – 6/29 (V4 soybean)

For the full report see trial #22-BRO-SB13 in [the 2022 Wisconsin Weed Science Research Report](#)



**Cropping Systems Weed Science**  
UNIVERSITY OF WISCONSIN-MADISON

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Trt #	Herbicide (rate acre <sup>-1</sup> )	Injury (%)		Waterhemp (%)					Fall Panicum (%)			Yield <sup>b</sup> bu acre <sup>-1</sup>
		6/14	6/29	6/14	6/29	7/13	7/26	9/29	6/29	7/26	9/29	
1	Untreated Check	0	0	0	0	0	0	0	0	0	0	31 b
<b>Two-Pass – PRE (5/24) fb POST<sup>c</sup> (6/29)</b>				<b>POST</b>					<b>POST</b>			
2	Authority Supreme (8 fl oz)	0.3	3.5	100	88	96	90	97	97	95	99	70 a
3	Authority Supreme (8 fl oz) + Metricor DF (6 oz)	0.0	2.5	100	91	95	91	97	95	97	100	70 a
4	Authority Elite (25 fl oz)	0.0	2.3	99	83	92	89	92	95	91	97	67 a
5	Authority Elite (25 fl oz) + Metricor DF (6 oz)	0.0	2.5	99	82	93	91	98	96	96	99	70 a
6	Authority First (6.4 oz)	0.0	2.8	97	83	92	95	98	100	98	100	67 a
7	Authority First (6.4 oz) + Metricor DF (6 oz)	0.0	2.5	98	80	93	92	97	93	95	98	67 a
8	Kyber (1 pt)	2.5	3.0	100	93	99	98	100	96	99	100	66 a
9	Zidua PRO (6 fl oz)	0.0	4.0	100	84	94	90	98	97	96	98	69 a
10	Boundary (29 fl oz)	0.0	2.8	99	69	88	88	96	90	98	100	68 a
11	Anthem Maxx (4 fl oz)	0.0	3.3	99	83	93	91	96	92	98	99	65 a
12	Anthem Maxx (4 fl oz) + Metricor DF (6 oz)	0.0	3.0	100	90	96	92	96	90	98	99	68 a
<b>LSD (<math>\alpha=0.10</math>)</b>		<b>0.3</b>	<b>ns</b>	<b>ns</b>	<b>8</b>	<b>3</b>	<b>ns</b>	<b>ns</b>	<b>ns</b>	<b>ns</b>	<b>ns</b>	<b>5</b>
<b>p value</b>		<b>&lt;.001</b>	<b>.282</b>	<b>.165</b>	<b>.001</b>	<b>&lt;.001</b>	<b>.112</b>	<b>.430</b>	<b>.748</b>	<b>.611</b>	<b>.580</b>	<b>&lt;0.001</b>

<sup>a</sup>Visual control from 70-100% is illustrated on a color scale with green representing greater weed control values.

<sup>b</sup>Yield values with the same letter are not significantly different.

<sup>c</sup>POST application - Enlist One (32 fl oz) + Roundup PowerMAX3 (32 fl oz) + AMS (8.5 lb/100 gal) applied to all treatments except the untreated check.

# Authority Brand Soybean Herbicide Programs (Brooklyn, WI 2022)

Plot pictures taken on 6/14  
21 days after the PRE application

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

21 days after PRE (6/14)  
Untreated Check

0%



21 days after PRE (6/14)  
PRE: 8 fl oz Authority Supreme

100%



21 days after PRE (6/14)

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

100%



21 days after PRE (6/14)  
PRE: 25 fl oz Authority Elite

99%



21 days after PRE (6/14)

PRE: 25 fl oz Authority Elite + 6 oz Metricor DF

99%





21 days after PRE (6/14)  
PRE: 6.4 oz Authority First

97%



21 days after PRE (6/14)

PRE: 6.4 oz Authority First + 6 oz Metricor DF

98%



21 days after PRE (6/14)  
PRE: 1 pt Kyber

100%



21 days after PRE (6/14)  
PRE: 6 fl oz Zidua PRO

100%



21 days after PRE (6/14)  
PRE: 29 fl oz Boundary

99%



21 days after PRE (6/14)  
PRE: 4 fl oz Anthem Maxx

99%



21 days after PRE (6/14)

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

100%



# Authority Brand Soybean Herbicide Programs (Brooklyn, WI 2022)

Plot pictures taken on 6/28  
35 days after the PRE application  
1 day before the POST application

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



35 days after PRE (6/28)  
Untreated Check

0%



35 days after PRE (6/28)  
PRE: 8 fl oz Authority Supreme

88%



35 days after PRE (6/28)

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

91%



35 days after PRE (6/28)  
PRE: 25 fl oz Authority Elite

83%



35 days after PRE (6/28)

PRE: 25 fl oz Authority Elite + 6 oz Metricor DF

82%



35 days after PRE (6/28)  
PRE: 6.4 oz Authority First

83%



35 days after PRE (6/28)

PRE: 6.4 oz Authority First + 6 oz Metricor DF

80%



35 days after PRE (6/28)  
PRE: 1 pt Kyber

93%





35 days after PRE (6/28)  
PRE: 6 fl oz Zidua PRO

84%



35 days after PRE (6/28)  
PRE: 29 fl oz Boundary

69%



35 days after PRE (6/28)  
PRE: 4 fl oz Anthem Maxx

83%



35 days after PRE (6/28)

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

90%



# Authority Brand Soybean Herbicide Programs (Brooklyn, WI 2022)

Plot pictures taken on 7/13

50 days after the PRE application  
14 days after the POST application

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

50 days after PRE (7/13)  
Untreated Check

0%



14 days after POST (7/13)

PRE: 8 fl oz Authority Supreme *fb*

96%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



14 days after POST (7/13)

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

95%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS





14 days after POST (7/13)

PRE: 25 fl oz Authority Elite *fb*

92%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



14 days after POST (7/13)

PRE: 25 fl oz Authority Elite + 6 oz Metricor DF *fb*

93%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



14 days after POST (7/13)

PRE: 6.4 oz Authority First fb

92%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



14 days after POST (7/13)

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

93%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



14 days after POST (7/13)

PRE: 1 pt Kyber *fb*

99%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



14 days after POST (7/13)

PRE: 6 fl oz Zidua PRO fb

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS

94%



14 days after POST (7/13)

PRE: 29 fl oz Boundary *fb*

88%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



14 days after POST (7/13)

PRE: 4 fl oz Anthem Maxx *fb*

93%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS





14 days after POST (7/13)

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

96%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



# Authority Brand Soybean Herbicide Programs (Brooklyn, WI 2022)

Plot pictures taken on 7/26

63 days after the PRE application

27 days after the POST application

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

63 days after PRE (7/26)  
Untreated Check

0%



27 days after POST (7/26)

PRE: 8 fl oz Authority Supreme *fb*

90%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



27 days after POST (7/26)

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

91%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



27 days after POST (7/26)

PRE: 25 fl oz Authority Elite *fb*

89%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



27 days after POST (7/26)

PRE: 25 fl oz Authority Elite + 6 oz Metricor DF *fb*

91%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



27 days after POST (7/26)

PRE: 6.4 oz Authority First fb

95%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS





27 days after POST (7/26)

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

92%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



27 days after POST (7/26)

PRE: 1 pt Kyber *fb*

98%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



27 days after POST (7/26)

PRE: 6 fl oz Zidua PRO fb

90%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



27 days after POST (7/26)

PRE: 29 fl oz Boundary *fb*

88%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



27 days after POST (7/26)

PRE: 4 fl oz Anthem Maxx *fb*

91%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



27 days after POST (7/26)

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

92%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



# Authority Brand Soybean Herbicide Programs (Brooklyn, WI 2022)

Plot pictures taken on 9/29

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

End of Season (9/29)  
Untreated Check

0%





End of Season (9/29)

PRE: 8 fl oz Authority Supreme *fb*

90%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



**End of Season (9/29)**

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

**91%**

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**



End of Season (9/29)

PRE: 25 fl oz Authority Elite *fb*

89%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



End of Season (9/29)

PRE: 25 fl oz Authority Elite + 6 oz Metricor DF *fb*

91%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



End of Season (9/29)

PRE: 6.4 oz Authority First *fb*

95%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



End of Season (9/29)

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

92%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



End of Season (9/29)

PRE: 1 pt Kyber *fb*

98%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



End of Season (9/29)

PRE: 6 fl oz Zidua PRO *fb*

90%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS





End of Season (9/29)

PRE: 29 fl oz Boundary *fb*

88%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



End of Season (9/29)

PRE: 4 fl oz Anthem Maxx *fb*

91%

POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS



**End of Season (9/29)**

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

**92%**

**POST: 32 fl oz Enlist One + 32 fl oz Roundup PowerMAX3 + AMS**

