

# Authority Brand Programs Efficacy in Soybean Brooklyn, WI 2019

## Trial Information

Trial Sponsor: FMC

Objective: Evaluate the weed control and crop safety of PRE herbicide programs in soybean

Crop: Soybean

Variety: O'Brien Hybrids OS-2519 LLGT27

Weed species (pressure): Glyphosate-resistant waterhemp (very high)

Herbicide Application(s): PRE – 6/3

POST – 7/3 (V4 soybean)

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For the full report see the [2019 Wisconsin Weed Science Research Report](#)



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

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

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Herbicide Treatment**	Application Timing	Waterhemp Control %			
		6/25	7/3	7/18	10/16
6.4 oz Authority First 22 fl oz Liberty	PRE POST	96	91	88	86
10 fl oz Authority Assist 22 fl oz Liberty	PRE POST	95	89	86	85
7 fl oz Authority Supreme 22 fl oz Liberty	PRE POST	98	94	91	89
8 fl oz Authority Edge* 22 fl oz Liberty	PRE POST	98	97	92	93
11 fl oz Authority Edge* 22 fl oz Liberty	PRE POST	100	99	96	97
8 fl oz Authority Edge* 22 fl oz Liberty + 2.5 fl oz Anthem Maxx	PRE POST	99	96	94	95
6 fl oz Zidua PRO 22 fl oz Liberty	PRE POST	96	87	83	83
4 oz Fierce XLT 22 fl oz Liberty	PRE POST	96	93	85	81
1.8 pt Boundary 22 fl oz Liberty	PRE POST	96	87	80	84
4 oz Valor XLT 22 fl oz Liberty	PRE POST	87	79	74	63
6 oz Tricor DF 22 fl oz Liberty	PRE POST	82	66	71	71

\*Authority Edge is a new premix formulation of sulfentrazone and pyroxasulfone

\*\*All POST treatments included dry AMS at 8.5 lb/100 gal

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The POST application of Liberty was not very effective at controlling the emerged waterhemp. The 22 fl oz rate was likely too low given the density and height of the waterhemp. A higher rate of 32 fl oz would have been more appropriate. It was also very cloudy with showers in the area the day of POST application. Liberty efficacy is generally improved under sunny, warm conditions.

**POST Liberty Control Failure**  
Picture taken on 7/11 – 8 days after application



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Plot pictures taken on 6/25  
22 days after the PRE application

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

22 days after PRE (6/25)

0%

Untreated Check



22 days after PRE (6/25)  
PRE: 6.4 oz Authority First

96%



22 days after PRE (6/25)  
PRE: 10 fl oz Authority Assist

95%



22 days after PRE (6/25)  
PRE: 7 fl oz Authority Supreme

98%



22 days after PRE (6/25)  
PRE: 8 fl oz Authority Edge

99%



22 days after PRE (6/25)  
PRE: 11 fl oz Authority Edge

100%



22 days after PRE (6/25)

PRE: 6 fl oz Zidua PRO

96%



22 days after PRE (6/25)

PRE: 4 oz Fierce XLT

96%



22 days after PRE (6/25)

PRE: 1.8 pt Boundary

96%



22 days after PRE (6/25)

PRE: 4 oz Valor XLT

87%



22 days after PRE (6/25)

PRE: 6 oz Tricor DF

82%



# Authority Brand Programs Efficacy in Soybean Brooklyn, WI 2019

Plot pictures taken on 10/16  
The day of soybean harvest

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

End-of-Season (10/16)

Untreated Check

0%



End-of-Season (10/16)

PRE: 6.4 oz Authority First *fb* 22 fl oz Liberty

86%



End-of-Season (10/16)

PRE: 10 fl oz Authority Assist *fb* 22 fl oz Liberty

85%



End-of-Season (10/16)

PRE: 7 fl oz Authority Supreme *fb* 22 fl oz Liberty

89%



End-of-Season (10/16)

93%

PRE: 8 fl oz Authority Edge *fb* 22 fl oz Liberty



End-of-Season (10/16)

PRE: 11 fl oz Authority Edge *fb* 22 fl oz Liberty

97%



End-of-Season (10/16)

PRE: 8 fl oz Authority Edge fb 22 fl oz Liberty + 2.5 fl oz Anthem Maxx

95%



End-of-Season (10/16)

PRE: 6 fl oz Zidua PRO *fb* 22 fl oz Liberty

83%



End-of-Season (10/16)

PRE: 4 oz Fierce XLT *fb* 22 fl oz Liberty

81%



End-of-Season (10/16)

PRE: 1.8 pt Boundary *fb* 22 fl oz Liberty

84%



End-of-Season (10/16)

PRE: 4 oz Valor XLT *fb* 22 fl oz Liberty

63%



End-of-Season (10/16)

PRE: 6 oz Tricor DF *fb* 22 fl oz Liberty

71%

