

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)

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



Cropping Systems Weed Science
UNIVERSITY OF WISCONSIN-MADISON



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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)

98%

PRE: 7 fl oz Authority Supreme



22 days after PRE (6/25)

99%

PRE: 8 fl oz Authority Edge



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

100%



22 days after PRE (6/25)

96%

PRE: 6 fl oz Zidua PRO



22 days after PRE (6/25)

96%

PRE: 4 oz Fierce XLT



22 days after PRE (6/25)

96%

PRE: 1.8 pt Boundary



22 days after PRE (6/25)

87%

PRE: 4 oz Valor XLT



22 days after PRE (6/25)

82%

PRE: 6 oz Tricor DF



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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)

86%

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



End-of-Season (10/16)

85%

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



End-of-Season (10/16)

89%

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



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)

83%

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



End-of-Season (10/16)

81%

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



End-of-Season (10/16)

84%

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



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%

