

# 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



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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)**  
**Untreated Check**

**0%**



**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)**

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

**93%**



**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%**

