

# Utility of Layering Residual Herbicides in Soybean

## Brooklyn, WI 2020

### Trial Information

Trial Sponsor: Wisconsin Soybean Marketing Board

Objective: Determine the utility of layering residual herbicides for waterhemp control in soybean

Crop: Enlist soybean

Variety: S20-J5E

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

Herbicide Application(s): PRE – 5/22

POST – 6/17 (V2 soybean)

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For the full report see trial #20-BRO-SB12 in the [2020 Wisconsin Weed Science Research Report](#)



Cropping Systems Weed Science  
UNIVERSITY OF WISCONSIN-MADISON



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Herbicide Treatment*	APP Timing	Gly-R Waterhemp Control %			Yield bu/acre
		7/1	7/14	9/24	
12 oz Authority MTZ	PRE	57	43	43	36
12 oz Authority MTZ <b>fb</b> 32 fl oz Liberty	PRE POST	97	78	86	49
12 oz Authority MTZ <b>fb</b> 32 fl oz Liberty + 4 fl oz Pursuit	PRE POST	99	85	89	49
12 oz Authority MTZ <b>fb</b> 32 fl oz Liberty + 1 pt Flexstar	PRE POST	100	98	96	44
12 oz Authority MTZ <b>fb</b> 32 fl oz Liberty + 48 fl oz Warrant	PRE POST	99	97	95	51
12 oz Authority MTZ <b>fb</b> 32 fl oz Liberty + 1.25 pt Dual II Magnum	PRE POST	99	89	88	51
12 oz Authority MTZ <b>fb</b> 32 fl oz Liberty + 10 fl oz Outlook	PRE POST	99	85	89	50
12 oz Authority MTZ <b>fb</b> 32 fl oz Liberty + 1.5 oz Zidua	PRE POST	100	93	94	52
12 oz Authority MTZ <b>fb</b> 32 fl oz Liberty + 2 pt Prefix	PRE POST	99	97	93	48
12 oz Authority MTZ <b>fb</b> 32 fl oz Liberty + 50 fl oz Warrant Ultra	PRE POST	99	96	93	49
		LSD (0.10)	2	6	5
		p-value	0.08	<0.01	0.04
					0.01

\*All POST treatments included AMS at 2 lb/a

# Day of POST application (6/17)



# Utility of Layering Residual Herbicides in Soybean Brooklyn, WI 2020

Plot pictures taken on 7/1

40 days after the PRE application  
14 days after the POST application

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

**40 days after PRE (7/1)  
PRE: 12 oz Authority MTZ**

**57%**



**14 days after POST (7/1)**  
**PRE: 12 oz Authority MTZ *fb***  
**POST: 32 fl oz Liberty**

**97%**



**14 days after POST (7/1)**

**PRE: 12 oz Authority MTZ *fb***

**POST: 32 fl oz Liberty + 4 fl oz Pursuit**

**99%**



**14 days after POST (7/1)**

**PRE: 12 oz Authority MTZ *fb***

**POST: 32 fl oz Liberty + 1 pt Flexstar**

**100%**



**14 days after POST (7/1)**

**PRE: 12 oz Authority MTZ *fb***

**POST: 32 fl oz Liberty + 48 fl oz Warrant**

**99%**



**14 days after POST (7/1)**

**PRE: 12 oz Authority MTZ *fb***

**POST: 32 fl oz Liberty + 1.25 pt Dual II Magnum**

**99%**



**14 days after POST (7/1)**

**PRE: 12 oz Authority MTZ *fb***

**POST: 32 fl oz Liberty + 10 fl oz Outlook**

**99%**



**14 days after POST (7/1)**

**PRE: 12 oz Authority MTZ *fb***

**POST: 32 fl oz Liberty + 1.5 oz Zidua**

**100%**



**14 days after POST (7/1)**

**PRE: 12 oz Authority MTZ *fb***

**POST: 32 fl oz Liberty + 2 pt Prefix**

**99%**



**14 days after POST (7/1)**

**PRE: 12 oz Authority MTZ *fb***

**POST: 32 fl oz Liberty + 50 fl oz Warrant Ultra**

**99%**



# Utility of Layering Residual Herbicides in Soybean Brooklyn, WI 2020

Plot pictures taken on 7/14

53 days after the PRE application  
27 days after the POST application

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

**53 days after PRE (7/14)  
PRE: 12 oz Authority MTZ**

**43%**



**27 days after POST (7/14)**  
**PRE: 12 oz Authority MTZ *fb***  
**POST: 32 fl oz Liberty**

**78%**



**27 days after POST (7/14)**

**PRE: 12 oz Authority MTZ *fb***

**POST: 32 fl oz Liberty + 4 fl oz Pursuit**

**85%**



**27 days after POST (7/14)**

**PRE: 12 oz Authority MTZ fb**

**POST: 32 fl oz Liberty + 1 pt Flexstar**

**98%**



**27 days after POST (7/14)**

**PRE: 12 oz Authority MTZ *fb***

**POST: 32 fl oz Liberty + 48 fl oz Warrant**

**97%**



**27 days after POST (7/14)**

**PRE: 12 oz Authority MTZ *fb***

**POST: 32 fl oz Liberty + 1.25 pt Dual II Magnum**

**89%**



**27 days after POST (7/14)**

**PRE: 12 oz Authority MTZ *fb***

**POST: 32 fl oz Liberty + 10 fl oz Outlook**

**85%**



**27 days after POST (7/14)**

**PRE: 12 oz Authority MTZ *fb***

**POST: 32 fl oz Liberty + 1.5 oz Zidua**

**93%**



**27 days after POST (7/14)**

**PRE: 12 oz Authority MTZ *fb***

**POST: 32 fl oz Liberty + 2 pt Prefix**

**97%**



**27 days after POST (7/14)**

**PRE: 12 oz Authority MTZ *fb***

**POST: 32 fl oz Liberty + 50 fl oz Warrant Ultra**

**96%**



# Utility of Layering Residual Herbicides in Soybean Brooklyn, WI 2020

Plot pictures taken on 10/9  
Day of soybean harvest

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

# Soybean Harvest (10/9) PRE: 12 oz Authority MTZ

43%



**Soybean Harvest (10/9)**  
**PRE: 12 oz Authority MTZ *fb***  
**POST: 32 fl oz Liberty**

**86%**



**Soybean Harvest (10/9)**

**PRE: 12 oz Authority MTZ fb**

**POST: 32 fl oz Liberty + 4 fl oz Pursuit**

**89%**



**Soybean Harvest (10/9)**

**PRE: 12 oz Authority MTZ *fb***

**POST: 32 fl oz Liberty + 1 pt Flexstar**

**96%**



**Soybean Harvest (10/9)**

**PRE: 12 oz Authority MTZ *fb***

**POST: 32 fl oz Liberty + 48 fl oz Warrant**

**95%**



**Soybean Harvest (10/9)**  
**PRE: 12 oz Authority MTZ *fb***  
**POST: 32 fl oz Liberty + 1.25 pt Dual II Magnum**

**88%**

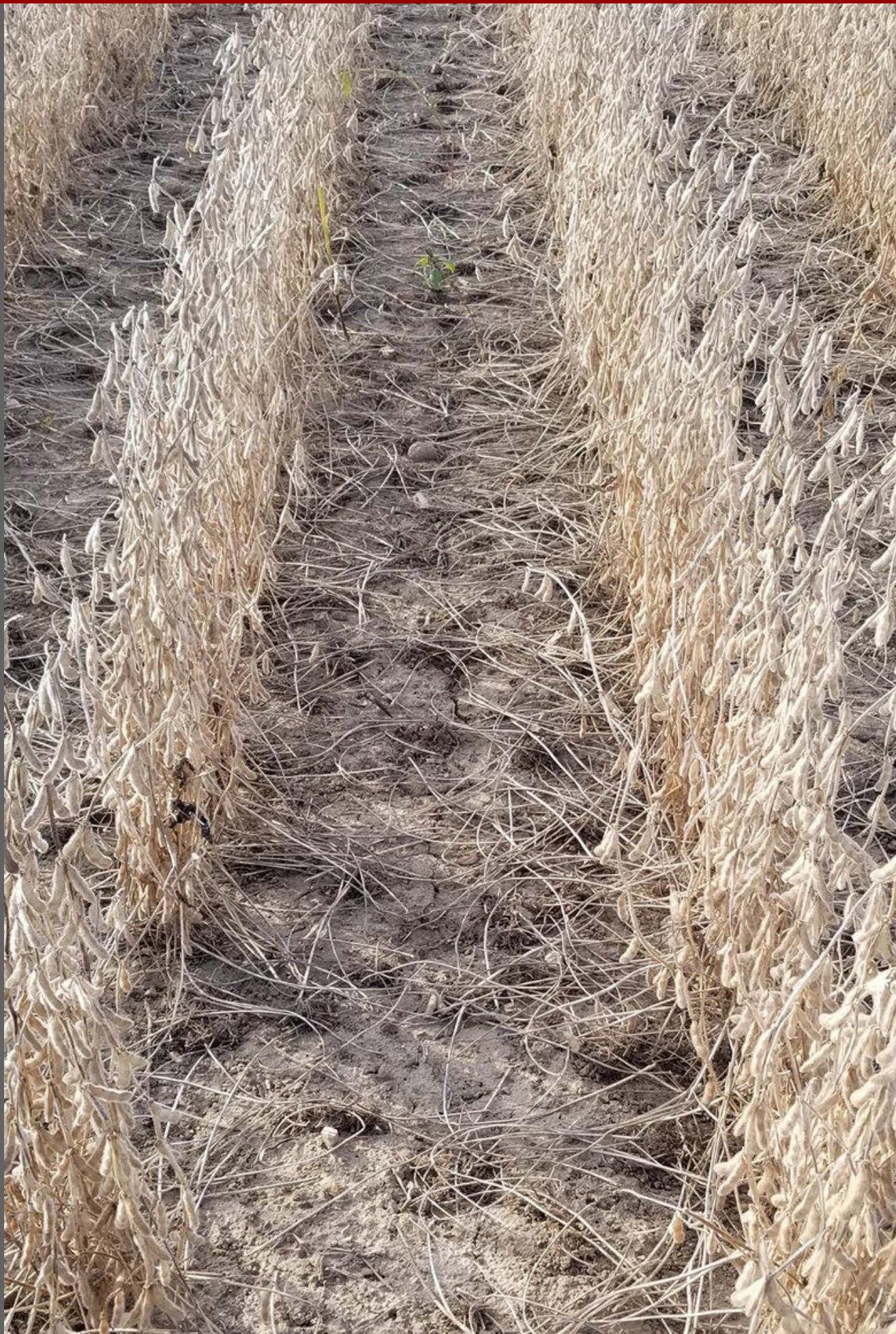


**Soybean Harvest (10/9)**

**PRE: 12 oz Authority MTZ *fb***

**POST: 32 fl oz Liberty + 10 fl oz Outlook**

**89%**



**Soybean Harvest (10/9)**

**PRE: 12 oz Authority MTZ fb**

**POST: 32 fl oz Liberty + 1.5 oz Zidua**

**94%**



**Soybean Harvest (10/9)**

**PRE: 12 oz Authority MTZ *fb***

**POST: 32 fl oz Liberty + 2 pt Prefix**

**93%**



**Soybean Harvest (10/9)**

**PRE: 12 oz Authority MTZ *fb***

**POST: 32 fl oz Liberty + 50 fl oz Warrant Ultra**

**93%**

