

# Evaluation of Layered Residual Herbicide Programs in Enlist Soybean (Brooklyn, WI 2024)

## Trial Information

Trial Sponsor(s): AMVAC, BASF, FMC, Syngenta, UPL, Valent

Objective: Evaluate multiple two-pass herbicide programs with layered residuals for season-long waterhemp control in Enlist soybean

Crop: Enlist Soybean

Variety: O'SOY 2024EL-3

Weed species (pressure): glyphosate-R waterhemp (high-very high)

Herbicide Application(s): PRE – 5/23  
EPOST – 6/20 (V2 soybean)  
POST – 6/22 (V3/V4 soybean)

For the full report see trial #24-BRO-SB13 in the [2024 Wisconsin Weed Science Research Report](#)



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Trt #	Herbicide (rate acre <sup>-1</sup> )	Injury (%)		Waterhemp (%)				Yield <sup>b</sup> bu acre <sup>-1</sup>
		6/26	7/11	6/13	6/26	7/11	9/18	
1	Untreated Check	0	0	0	0	0	0	46 c
<b>Two-Pass – EPOST (6/20) fb POST (6/27)</b>								
6	Prefix (2 pt) + Pursuit (3 oz) + Enlist One (2 pt) + RU PM3 (22 oz) + AMS <sup>c</sup> fb Enlist One (2 pt) + Roundup PM3 (28 oz) + Dual II Magnum (1.5 pt) + AMS <sup>d</sup>	18.7	18.0	0	99	100	98	54 b
<b>Two-Pass – PRE (5/23) fb POST (6/27)</b>								
2	Tendovo (2.1 qt) fb Enlist One (2 pt) + Roundup PowerMAX3 (28 oz) + AMC <sup>d</sup>	0	0.5	99	82	94	97	65 a
3	Tendovo (2.1 qt) fb Enlist One (2 pt) + Roundup PM3 (28 oz) + Dual II Magnum (1.5 pt) + AMS <sup>d</sup>	0	3.5	99	82	95	96	60 ab
4	Prefix (2 pt) + Tricor DF (7 oz) + Pursuit (3 oz) fb Enlist One (2 pt) + Roundup PM3 (28 oz) + Dual II Magnum (1.5 pt) + AMS <sup>d</sup>	0	2.8	100	91	97	100	63 a
5	Prefix (2 pt) + Dual II Magnum (0.75 pt) + Pursuit (3 oz) fb Enlist One (2 pt) + Roundup PM3 (28 oz) + Dual II Magnum (1.5 pt) + AMS <sup>d</sup>	0	3.5	99	89	97	99	61 ab
7	Tricor DF (7 oz) fb Enlist One (2 pt) + Roundup PM3 (28 oz) + Dual II Magnum (1.5 pt) + AMS <sup>d</sup>	0	1.8	78	40	81	97	67 a
8	Fierce EZ (6 oz) fb Liberty (32 oz) + Perpetuo (6 oz) + Agri-Dex (1% v/v) + AMS <sup>d</sup>	0	10.5	100	96	100	99	69 a
9	Fierce MTZ (1 pt) fb Liberty (32 oz) + Perpetuo (6 oz) + Agri-Dex (1% v/v) + AMS <sup>d</sup>	0	10.8	100	97	99	98	64 a
10	Fierce XLT (3.75 oz) fb Liberty (32 oz) + Perpetuo (6 oz) + Agri-Dex (1% v/v) + AMS <sup>d</sup>	0	13.0	100	95	99	99	65 a
11	Preview 2.1SC (21 oz) fb InterMoc (64 oz) + Velexi (12.8 oz) + AMS <sup>d</sup>	0	2.0	96	80	88	89	66 a
12	Preview 2.1SC (21 oz) + Moccasin (1.1 pt) fb InterMoc (64 oz) + Velexi (12.8 oz) + AMS <sup>d</sup>	0	2.3	99	86	91	91	66 a
13	Preview 2.1SC (21 oz) + Satellite HydroCap (2 pt) fb InterMoc (64 oz) + Velexi (12.8 oz) + AMS <sup>d</sup>	0	1.3	98	84	90	91	66 a
14	Boundary (1.75 pt) fb Zalo (43 oz) + Zidua SC (2.5 oz) + COC (1% v/v) + AMS <sup>d</sup>	0	4.5	93	72	83	88	67 a
15	Fierce EZ (6 oz) + FirstRate (0.6 oz) fb Zalo (32 oz) + Dual II Magnum (1 pt) + COC (1% v/v) + AMS <sup>d</sup>	0	3.3	100	95	98	96	65 a
16	Authority Supreme (7 oz) fb Enlist One (2 pt) + Liberty (32 oz) + Anthem Maxx (2 oz) + AMS <sup>c</sup>	0	9.5	100	93	100	100	65 a
17	Authority Edge (7 oz) fb Enlist One (2 pt) + Liberty (32 oz) + Anthem Maxx (3 oz) + AMS <sup>c</sup>	0	8.0	100	90	96	99	66 a
18	Zidua PRO (6 oz) fb Liberty Ultra (24 oz) + Enlist One (2 pt) + RU PM3 (20 oz) + Zidua SC (2.5 oz) + AMS <sup>c</sup>	0	3.3	100	88	97	98	67 a
19	Zidua PRO (6 oz) fb Liberty Ultra (24 oz) + Enlist One (2 pt) + RU PM3 (20 oz) + Outlook (12 oz) + Intact (0.5% v/v) + AMS <sup>c</sup>	0	2.3	100	89	97	97	64 a
<b>LSD (<math>\alpha=0.10</math>)</b>		<b>0.3</b>	<b>1.9</b>	<b>2</b>	<b>7</b>	<b>3</b>	<b>4</b>	<b>6</b>
<b>p value</b>		<b>&lt;.001</b>	<b>&lt;.001</b>	<b>&lt;.001</b>	<b>&lt;.001</b>	<b>&lt;.001</b>	<b>&lt;.001</b>	<b>&lt;.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 applications included AMSOL/Dry applied at 2 lb/a

<sup>d</sup>POST applications included AMSOL/Dry applied at 3 lb/a

# Evaluation of Layered Residual Herbicide Programs in Enlist Soybean (Brooklyn, WI 2024)

Plot pictures taken on 6/13  
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 (6/13)  
Untreated Check

0%





21 days after PRE (6/13)  
Untreated Check

0%





21 days after PRE (6/13)  
PRE: 2.1 qt Tendovo

99%





21 days after PRE (6/13)

PRE: 2 pt Prefix + 7 oz Tricor DF + 3 oz Pursuit

100%





21 days after PRE (6/13)

PRE: 2 pt Prefix + 0.75 pt Dual II Magnum + 3 oz Pursuit

99%





21 days after PRE (6/13)  
PRE: 7 oz Tricor DF

78%





21 days after PRE (6/13)  
PRE: 6 oz Fierce EZ

100%





21 days after PRE (6/13)  
PRE: 1 pt Fierce MTZ

100%





21 days after PRE (6/13)  
PRE: 3.75 oz Fierce XLT

100%





21 days after PRE (6/13)  
PRE: 21 oz Preview 2.1SC

96%





21 days after PRE (6/13)

PRE: 21 oz Preview 2.1SC + 1.1 pt Moccasin

99%





21 days after PRE (6/13)

98%

PRE: 21 oz Preview 2.1SC + 2 pt Satellite HydroCap





21 days after PRE (6/13)  
PRE: 1.75 pt Boundary

93%





21 days after PRE (6/13)  
PRE: 6 oz Fierce EZ + 0.6 oz FirstRate

100%





21 days after PRE (6/13)  
PRE: 7 oz Authority Supreme

100%





21 days after PRE (6/13)  
PRE: 7 oz Authority Edge

100%





21 days after PRE (6/13)  
PRE: 6 oz Zidua PRO

100%





# Evaluation of Layered Residual Herbicide Programs in Enlist Soybean (Brooklyn, WI 2024)

Plot pictures taken on 6/26

34 days after the PRE application

6 days after the EPOST application

The day before the POST application

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



34 days after PRE (6/26)

0%

Untreated Check





6 days after EPOST (6/26)

EPOST: 2 pt Prefix + 3 oz Pursuit + 2 pt Enlist One + 22 oz RU PM3 + AMS

99%





34 days after PRE (6/26)  
PRE: 2.1 qt Tendovo

82%





34 days after PRE (6/26)

PRE: 2 pt Prefix + 7 oz Tricor DF + 3 oz Pursuit

91%





34 days after PRE (6/26)

PRE: 2 pt Prefix + 0.75 pt Dual II Magnum + 3 oz Pursuit

89%





34 days after PRE (6/26)

PRE: 7 oz Tricor DF

40%





34 days after PRE (6/26)  
PRE: 6 oz Fierce EZ

96%





34 days after PRE (6/26)  
PRE: 1 pt Fierce MTZ

97%





34 days after PRE (6/26)  
PRE: 3.75 oz Fierce XLT

95%





34 days after PRE (6/26)  
PRE: 21 oz Preview 2.1SC

80%





34 days after PRE (6/26)

PRE: 21 oz Preview 2.1SC + 1.1 pt Moccasin

86%





34 days after PRE (6/26)

PRE: 21 oz Preview 2.1SC + 2 pt Satellite HydroCap

84%





34 days after PRE (6/26)  
PRE: 1.75 pt Boundary

72%





34 days after PRE (6/26)

PRE: 6 oz Fierce EZ + 0.6 oz FirstRate

95%





34 days after PRE (6/26)  
PRE: 7 oz Authority Supreme

93%





34 days after PRE (6/26)  
PRE: 7 oz Authority Edge

90%





34 days after PRE (6/26)

PRE: 6 oz Zidua PRO

89%





# Evaluation of Layered Residual Herbicide Programs in Enlist Soybean (Brooklyn, WI 2024)

Plot pictures taken on 7/10

48 days after the PRE application

20 days after the EPOST application

13 days after the POST application

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



48 days after PRE (7/10)  
Untreated Check

0%





**13 days after POST (7/10)**

**EPOST: 2 pt Prefix + 3 oz Pursuit + 2 pt Enlist One + 22 oz RU PM3 + AMS fb 100%**

**POST: 2 pt Enlist One + 28 oz Roundup PM3 + 1.5 pt Dual II Magnum+AMS**





13 days after POST (7/10)

PRE: 2.1 qt Tendovo *fb*

94%

POST: 2 pt Enlist One + 28 oz Roundup PowerMAX3 + AMS





13 days after POST (7/10)

PRE: 2.1 qt Tendovo *fb*

95%

POST: 2 pt Enlist One + 28 oz Roundup PM3 + 1.5 pt Dual II Magnum + AMS





13 days after POST (7/10)

PRE: 2 pt Prefix + 7 oz Tricor DF + 3 oz Pursuit *fb*

97%

POST: 2 pt Enlist One + 28 oz Roundup PM3 + 1.5 pt Dual II Magnum + AMS





13 days after POST (7/10)

PRE: 2 pt Prefix + 0.75 pt Dual II Magnum + 3 oz Pursuit *fb*

97%

POST: 2 pt Enlist One + 28 oz Roundup PM3 + 1.5 pt Dual II Magnum + AMS





13 days after POST (7/10)

PRE: 7 oz Tricor DF *fb*

81%

POST: 2 pt Enlist One + 28 oz Roundup PM3 + 1.5 pt Dual II Magnum + AMS





13 days after POST (7/10)

PRE: 6 oz Fierce EZ *fb*

POST: 32 oz Liberty + 6 oz Perpetuo + COC + AMS

100%





13 days after POST (7/10)

PRE: 1 pt Fierce MTZ *fb*

POST: 32 oz Liberty + 6 oz Perpetuo + COC + AMS

99%





13 days after POST (7/10)

PRE: 3.75 oz Fierce XLT *fb*

POST: 32 oz Liberty + 6 oz Perpetuo + COC + AMS

99%





13 days after POST (7/10)

PRE: 21 oz Preview 2.1SC fb

88%

POST: 64 oz InterMoc + 12.8 oz Velexi + AMS





13 days after POST (7/10)

PRE: 21 oz Preview 2.1SC + 1.1 pt Moccasin *fb*

91%

POST: 64 oz InterMoc + 12.8 oz Velexi + AMS





**13 days after POST (7/10)**

**PRE: 21 oz Preview 2.1SC + 2 pt Satellite HydroCap *fb***

**90%**

**POST: 64 oz InterMoc + 12.8 oz Velexi + AMS**





13 days after POST (7/10)

PRE: 1.75 pt Boundary *fb*

POST: 43 oz Zalo + 2.5 oz Zidua SC + COC + AMS

83%





13 days after POST (7/10)

PRE: 6 oz Fierce EZ + 0.6 oz FirstRate *fb*

98%

POST: 32 oz Zalo + 1 pt Dual II Magnum + COC + AMS





13 days after POST (7/10)

PRE: 7 oz Authority Supreme *fb*

100%

POST: 2 pt Enlist One + 32 oz Liberty + 2 oz Anthem Maxx + AMS





13 days after POST (7/10)

PRE: 7 oz Authority Edge fb

96%

POST: 2 pt Enlist One + 32 oz Liberty + 3 oz Anthem Maxx + AMS





13 days after POST (7/10)

97%

PRE: 6 oz Zidua PRO fb

POST: 24 oz Liberty ULTRA + 2 pt Enlist One + 20 oz RU PM3 + 2.5 Zidua SC + AMS





13 days after POST (7/10)

97%

PRE: 6 oz Zidua PRO fb

POST: 24 oz Liberty ULTRA + 2 pt Enlist + 20 oz RU PM3 + 12 oz Outlook + AMS





# Evaluation of Layered Residual Herbicide Programs in Enlist Soybean (Brooklyn, WI 2024)

Plot pictures taken on 10/1  
The day of soybean harvest

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







# Soybean Harvest (10/1)

EPOST: 2 pt Prefix + 3 oz Pursuit + 2 pt Enlist One + 22 oz RU PM3 + AMS *fb* 98%

POST: 2 pt Enlist One + 28 oz Roundup PM3 + 1.5 pt Dual II Magnum+AMS





**Soybean Harvest (10/1)**

**PRE: 2.1 qt Tendovo *fb***

**97%**

**POST: 2 pt Enlist One + 28 oz Roundup PowerMAX3 + AMS**





**Soybean Harvest (10/1)**

**PRE: 2.1 qt Tendovo *fb***

**96%**

**POST: 2 pt Enlist One + 28 oz Roundup PM3 + 1.5 pt Dual II Magnum + AMS**





**Soybean Harvest (10/1)**

**PRE: 2 pt Prefix + 7 oz Tricor DF + 3 oz Pursuit *fb***

**100%**

**POST: 2 pt Enlist One + 28 oz Roundup PM3 + 1.5 pt Dual II Magnum + AMS**





**Soybean Harvest (10/1)**

**PRE: 2 pt Prefix + 0.75 pt Dual II Magnum + 3 oz Pursuit *fb***

**99%**

**POST: 2 pt Enlist One + 28 oz Roundup PM3 + 1.5 pt Dual II Magnum + AMS**





**Soybean Harvest (10/1)**

**PRE: 7 oz Tricor DF *fb***

**97%**

**POST: 2 pt Enlist One + 28 oz Roundup PM3 + 1.5 pt Dual II Magnum + AMS**





**Soybean Harvest (10/1)**

**PRE: 6 oz Fierce EZ *fb***

**99%**

**POST: 32 oz Liberty + 6 oz Perpetuo + COC + AMS**





**Soybean Harvest (10/1)**

**PRE: 1 pt Fierce MTZ *fb***

**POST: 32 oz Liberty + 6 oz Perpetuo + COC + AMS**

**98%**





**Soybean Harvest (10/1)**

**PRE: 3.75 oz Fierce XLT *fb***

**99%**

**POST: 32 oz Liberty + 6 oz Perpetuo + COC + AMS**





**Soybean Harvest (10/1)**

**PRE: 21 oz Preview 2.1SC *fb***

**89%**

**POST: 64 oz InterMoc + 12.8 oz Velexi + AMS**





**Soybean Harvest (10/1)**

**PRE: 21 oz Preview 2.1SC + 1.1 pt Moccasin *fb***

**91%**

**POST: 64 oz InterMoc + 12.8 oz Velexi + AMS**





**Soybean Harvest (10/1)**

**PRE: 21 oz Preview 2.1SC + 2 pt Satellite HydroCap *fb***

**91%**

**POST: 64 oz InterMoc + 12.8 oz Velexi + AMS**





**Soybean Harvest (10/1)**

**PRE: 1.75 pt Boundary *fb***

**88%**

**POST: 43 oz Zalo + 2.5 oz Zidua SC + COC + AMS**





**Soybean Harvest (10/1)**

**PRE: 6 oz Fierce EZ + 0.6 oz FirstRate *fb***

**96%**

**POST: 32 oz Zalo + 1 pt Dual II Magnum + COC + AMS**





**Soybean Harvest (10/1)**

**PRE: 7 oz Authority Supreme *fb***

**100%**

**POST: 2 pt Enlist One + 32 oz Liberty + 2 oz Anthem Maxx + AMS**





**Soybean Harvest (10/1)**

**PRE: 7 oz Authority Edge *fb***

**99%**

**POST: 2 pt Enlist One + 32 oz Liberty + 3 oz Anthem Maxx + AMS**





**Soybean Harvest (10/1)**

**98%**

**PRE: 6 oz Zidua PRO *fb***

**POST: 24 oz Liberty ULTRA + 2 pt Enlist One + 20 oz RU PM3 + 2.5 Zidua SC + AMS**





**Soybean Harvest (10/1)**

**97%**

**PRE: 6 oz Zidua PRO fb**

**POST: 24 oz Liberty ULTRA + 2 pt Enlist + 20 oz RU PM3 + 12 oz Outlook + AMS**

