Waterhemp Control in Enlist Soybean
Brooklyn, WI 2025

Trial Information

Trial Sponsor(s):	BASF, Corteva, FMC, Syngenta, Valent
Objective:	Evaluate multiple two-pass herbicide programs for season long waterhemp control in Enlist soybean
Crop:	Soybean
Variety:	O'SOY 2253EL-3
Weed species (pressure):	waterhemp (high) velvetleaf (moderate)
Herbicide Application(s):	PRE – 5/27 EPOST – 6/10 (VE/VC soybean) POST – 6/30 (V4 soybean) LPOST – 7/2 (V4 soybean)

For the full report see trial #25-BRO-SB13 in the 2025 Wisconsin Weed Science Research Report

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UNIVERSITY OF WISCONSIN–MADISON

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Waterhemp Control in Enlist Soybean

Trt #	Herbicide (rate acre^{-1})	Injury[c] 7/14	Waterhemp (%) 6/19	6/30	7/14	9/30	Yield[b] bu acre^{-1}
1	Untreated Check	0	0	0	0	0	46 c
Two-Pass – EPOST (6/10) *fb* LPOST (7/2)				**LPOST**			
2	**Zidua Plus*** (6 oz) + Roundup PM3 (30 oz) + COC (1%) + AMS (8.5 lb/100 gal) ***fb*** Liberty ULTRA (24 oz) + Roundup PM3 (30 oz) + Outlook (14 oz) + AMS (3 lb)	3.3	99	80	88	86	64 ab
Two-Pass – PRE (5/27) *fb* POST (6/30)				**POST**			
3	Tendovo (1.75 qt) + Spartan 4F (6 oz) ***fb*** Liberty ULTRA (29 oz) + Flexstar (1 pt) + Roundup PM3 (28 oz) + AMS (3 lb)	14.5	99	85	99	96	63 ab
4	Prefix (2 pt) + Dual II Magnum (0.9 pt) + Pursuit (3 oz) ***fb*** Enlist One (2 pt) + Liberty ULTRA (29 oz) + Roundup PM3 (28 oz) + Dual II Magnum (1.25 pt) + Superb HC (0.5%) + AMS (3 lb)	4.8	95	59	97	99	62 ab
5	Fierce EZ (6 oz) ***fb*** Liberty ULTRA (24 oz) + Perpetuo (6 oz) + COC (1%) + AMS (3 lb)	8.8	97	83	97	95	62 ab
6	Fierce MTZ (1 pt) ***fb*** Liberty ULTRA (24 oz) + Perpetuo (6 oz) + COC (1%) + AMS (3 lb)	9.3	99	85	98	95	61 b
7	Fierce XLT (3.75 oz) ***fb*** Liberty ULTRA (24 oz) + Perpetuo (6 oz) + COC (1%) + AMS (3 lb)	8.5	99	87	98	97	62 ab
8	Authority Supreme (8 oz) ***fb*** Enlist One (2 pt) + Liberty ULTRA (24 oz) + Superb HC (0.5%) + AMS (3 lb)	1.3	96	74	98	99	62 ab
9	Authority Edge (8 oz) ***fb*** Enlist One (2 pt) + Liberty ULTRA (24 oz) + Superb HC (0.5%) + AMS (3 lb)	1.8	95	64	98	99	64 ab
10	Kyber PRO (1 pt) ***fb*** Enlist One (2 pt) + Roundup PM3 (30 oz) + COC (1%) + AMS (3 lb)	1.8	99	86	96	99	66 ab
11	Kyber PRO (1 pt) ***fb*** Enlist One (2 pt) + Roundup PM3 (30 oz) + Enversa (3 pt) + COC (1%) + AMS (3 lb)	1.3	99	86	93	98	65 ab
12	Kyber PRO (1 pt) ***fb*** Enlist One (2 pt) + Liberty ULTRA (24 oz) + Superb HC (0.5%) + AMS (3 lb)	2.0	99	86	99	100	65 ab
13	Kyber PRO (1 pt) ***fb*** Enlist One (2 pt) +Liberty ULTRA (24 oz) + Enversa (3 pt) + Superb HC (0.5%) + AMS (3 lb)	1.8	98	84	100	99	64 ab
14	**Sonic Boom**** (20 oz) ***fb*** Enlist One (2 pt) +Liberty ULTRA (24 oz) + Superb HC (0.5%) + AMS (3 lb)	0.0	99	74	97	98	70 a
15	**Sonic Boom**** (20 oz) ***fb*** Enlist One (2 pt) +Liberty ULTRA (24 oz) + Enversa (3 pt) + Superb HC (0.5%) + AMS (3 lb)	0.3	99	78	99	100	70 a
16	Zidua PRO (6 oz) ***fb*** Enlist One (2 pt) +Liberty ULTRA (24 oz) +RU PM3 (20 oz) +Superb HC (0.5%) +AMS (3 lb)	1.3	98	73	98	100	67 ab
17	**Zidua Plus*** (6 oz) ***fb*** Liberty ULTRA (24 oz) + Roundup PM3 (30 oz) + Oulook (14 oz) + AMS (3 lb)	0.5	97	73	91	87	65 ab
18	Fierce EZ (6 oz) ***fb*** Liberty ULTRA (24 oz) + Roundup PM3 (30 oz) + **Zidua Plus*** (6 ox) + AMS (3 lb)	5.0	99	84	96	94	64 ab
	LSD (α=0.10)	**1.3**	**1**	**6**	**2**	**3**	**4**
	p value	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**	**<.001**

[a]Visual control from 70-100% is illustrated on a color scale with green representing greater weed control values.
[b]Yield values with the same letter are not significantly different.
[c]Soybean injury (%) = necrosis (burn) and/or leaf deformation
***Zidua PLUS** is a new liquid herbicide premix of pyroxasulfone (Zidua SC) and imazethapyr (Pursuit) from BASF. It is still pending EPA registration and is not available for sale at the time of publication of this report.
****Sonic Boom** is a new liquid herbicide premix of sulfentrazone (Spartan) and metribuzin from Corteva and is registered by the EPA and available for sale.

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Waterhemp Control in Enlist Soybean
Brooklyn, WI 2025

Plot pictures taken on 6/30

34 days after the PRE application

20 days after the EPOST application

The day of the POST application

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

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34 days after PRE (6/30)
Untreated Check

0%

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20 days after EPOST (6/30)
EPOST: 6 oz Zidua Plus + 30 oz Roundup PM3 + COC + AMS

80%

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34 days after PRE (6/30)
PRE: 1.75 qt Tendovo + 6 oz Spartan

85%

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34 days after PRE (6/30)
PRE: 2 pt Prefix + 0.9 pt Dual II Magnum + 3 oz Pursuit

59%

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34 days after PRE (6/30)
PRE: 6 oz Fierce EZ

83%

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34 days after PRE (6/30)
PRE: 1 pt Fierce MTZ

85%

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34 days after PRE (6/30)
PRE: 3.75 oz Fierce XLT

87%

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34 days after PRE (6/30)
PRE: 8 oz Authority Supreme

74%

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34 days after PRE (6/30)
PRE: 8 oz Authority Edge

64%

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34 days after PRE (6/30)
PRE: 1 pt Kyber PRO

86%

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34 days after PRE (6/30)
PRE: 20 oz Sonic Boom

76%

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34 days after PRE (6/30)
PRE: 6 oz Zidua PRO

73%

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34 days after PRE (6/30)
PRE: 6 oz Zidua Plus

73%

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Waterhemp Control in Enlist Soybean
Brooklyn, WI 2025

Plot pictures taken on 7/14

48 days after the PRE application

34 days after the EPOST application

14 days after the POST application

12 days after the LPOST application

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

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48 days after PRE (7/14)
Untreated Check

0%

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12 days after LPOST (7/14)

EPOST: 6 oz Zidua Plus + 30 oz Roundup PM3 + COC + AMS *fb* **88%**

LPOST: 24 oz Liberty ULTRA + 30 oz Roundup PM3 + 14 oz Outlook + AMS

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14 days after POST (7/14)

PRE: 1.75 qt Tendovo + 6 oz Spartan *fb* **99%**

POST: 29 oz Liberty ULTRA + 1 pt Flexstar + 28 oz Roundup PM3 + AMS

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14 days after POST (7/14)

97%

PRE: 2 pt Prefix + 0.9 pt Dual II Magnum + 3 oz Pursuit *fb*

POST: 2 pt Enlist + 29 oz Liberty U. + 28 Roundup + Dual II + Superb HC + AMS

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14 days after POST (7/14)
PRE: 6 oz Fierce EZ *fb* **97%**
POST: 24 oz Liberty ULTRA + 6 oz Perpetuo + COC + AMS

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14 days after POST (7/14)
PRE: 1 pt Fierce MTZ *fb* **98%**
POST: 24 oz Liberty ULTRA + 6 oz Perpetuo + COC + AMS

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14 days after POST (7/14)
PRE: 3.75 oz Fierce XLT *fb* **98%**
POST: 24 oz Liberty ULTRA + 6 oz Perpetuo + COC + AMS

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14 days after POST (7/14)

PRE: 8 oz Authority Supreme *fb* **98%**

POST: 2 pt Enlist One + 24 oz Liberty ULTRA + Superb HC + AMS

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14 days after POST (7/14)
PRE: 8 oz Authority Edge *fb* **98%**
POST: 2 pt Enlist One + 24 oz Liberty ULTRA + Superb HC + AMS

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14 days after POST (7/14)
PRE: 1 pt Kyber PRO *fb* **96%**
POST: 2 pt Enlist One + 30 oz Roundup PM3 + COC + AMS

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14 days after POST (7/14)

PRE: 1 pt Kyber PRO *fb* **93%**

POST: 2 pt Enlist One + 30 oz Roundup PM3 + 3 pt Enversa + COC + AMS

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14 days after POST (7/14)
PRE: 1 pt Kyber PRO *fb* **99%**
POST: 2 pt Enlist One + 24 oz Liberty ULTRA + Superb HC + AMS

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14 days after POST (7/14)

PRE: 1 pt Kyber PRO *fb*

POST: 2 pt Enlist One + 24 oz Liberty ULTRA + 3 pt Enversa + Superb HC + AMS

100%

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14 days after POST (7/14)

PRE: 20 oz Sonic Boom *fb* **97%**

POST: 2 pt Enlist One + 24 oz Liberty ULTRA + Superb HC + AMS

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14 days after POST (7/14)

99%

PRE: 20 oz Sonic Boom *fb*

POST: 2 pt Enlist One + 24 oz Liberty ULTRA + 3 pt Enversa + Superb HC + AMS

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14 days after POST (7/14)
PRE: 6 oz Zidua PRO *fb*
POST: 2 pt Enlist + 24 oz Liberty ULTRA + 20 oz Roundup + Superb HC + AMS

98%

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14 days after POST (7/14)

PRE: 6 oz Zidua Plus *fb* **91%**

POST: 24 oz Liberty ULTRA + 30 oz Roundup + 14 oz Outlook + AMS

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14 days after POST (7/14)

PRE: 6 oz Fierce EZ *fb* **96%**

POST: 24 oz Liberty ULTRA + 30 oz Roundup + 6 oz Zidua Plus + AMS

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Waterhemp Control in Enlist Soybean
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Plot pictures taken on 9/30

3 days before soybean harvest

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

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Soybean Harvest (9/30)
Untreated Check

0%

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Soybean Harvest (9/30)

EPOST: 6 oz Zidua Plus + 30 oz Roundup PM3 + COC + AMS *fb* **86%**

LPOST: 24 oz Liberty ULTRA + 30 oz Roundup PM3 + 14 oz Outlook + AMS

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Soybean Harvest (9/30)

PRE: 1.75 qt Tendovo + 6 oz Spartan *fb* **96%**

POST: 29 oz Liberty ULTRA + 1 pt Flexstar + 28 oz Roundup PM3 + AMS

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Soybean Harvest (9/30)

99%

PRE: 2 pt Prefix + 0.9 pt Dual II Magnum + 3 oz Pursuit *fb*

POST: 2 pt Enlist + 29 oz Liberty U. + 28 Roundup + Dual II + Superb HC + AMS

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Soybean Harvest (9/30)

PRE: 6 oz Fierce EZ *fb* **95%**

POST: 24 oz Liberty ULTRA + 6 oz Perpetuo + COC + AMS

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Soybean Harvest (9/30)

PRE: 1 pt Fierce MTZ *fb* **95%**

POST: 24 oz Liberty ULTRA + 6 oz Perpetuo + COC + AMS

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Soybean Harvest (9/30)

PRE: 3.75 oz Fierce XLT *fb* **97%**

POST: 24 oz Liberty ULTRA + 6 oz Perpetuo + COC + AMS

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Soybean Harvest (9/30)

PRE: 8 oz Authority Supreme *fb* **99%**

POST: 2 pt Enlist One + 24 oz Liberty ULTRA + Superb HC + AMS

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Soybean Harvest (9/30)

PRE: 8 oz Authority Edge *fb* **99%**

POST: 2 pt Enlist One + 24 oz Liberty ULTRA + Superb HC + AMS

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Soybean Harvest (9/30)

PRE: 1 pt Kyber PRO *fb* **99%**

POST: 2 pt Enlist One + 30 oz Roundup PM3 + COC + AMS

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Soybean Harvest (9/30)

PRE: 1 pt Kyber PRO *fb* **98%**

POST: 2 pt Enlist One + 30 oz Roundup PM3 + 3 pt Enversa + COC + AMS

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Soybean Harvest (9/30)

PRE: 1 pt Kyber PRO *fb* **100%**

POST: 2 pt Enlist One + 24 oz Liberty ULTRA + Superb HC + AMS

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Soybean Harvest (9/30)

99%

PRE: 1 pt Kyber PRO *fb*

POST: 2 pt Enlist One + 24 oz Liberty ULTRA + 3 pt Enversa + Superb HC + AMS

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Soybean Harvest (9/30)

PRE: 20 oz Sonic Boom *fb* **98%**

POST: 2 pt Enlist One + 24 oz Liberty ULTRA + Superb HC + AMS

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Soybean Harvest (9/30)

PRE: 20 oz Sonic Boom *fb*

POST: 2 pt Enlist One + 24 oz Liberty ULTRA + 3 pt Enversa + Superb HC + AMS

100%

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Soybean Harvest (9/30)

PRE: 6 oz Zidua PRO *fb*

POST: 2 pt Enlist + 24 oz Liberty ULTRA + 20 oz Roundup + Superb HC + AMS

100%

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Soybean Harvest (9/30)

PRE: 6 oz Zidua Plus *fb* **87%**

POST: 24 oz Liberty ULTRA + 30 oz Roundup + 14 oz Outlook + AMS

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Soybean Harvest (9/30)

PRE: 6 oz Fierce EZ *fb* **94%**

POST: 24 oz Liberty ULTRA + 30 oz Roundup + 6 oz Zidua Plus + AMS

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