

Evaluation of PRE Soybean Herbicides for Waterhemp Control (Brooklyn, WI 2019)

Trial Information

Trial Sponsors: BASF, Bayer, FMC, Syngenta, Valent, Wisconsin Soybean Marketing Board

Objective: Evaluate and demonstrate the effectiveness of multiple PRE-emergence soybean herbicides

Crop: Soybean

Variety: O'Brien Hybrids OS-2519 LLGT27

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

Herbicide Application(s): PRE – 6/3

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



Cropping Systems Weed Science
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Key Take Home Points from 2019 Data:

- Several PRE-emergence soybean herbicides provided good levels of waterhemp 24-45 days after application.
- Group 2 herbicides (e.g., Pursuit, Classic, First Rate) applied alone were NOT effective on waterhemp.
- Half rates were included in addition to full rates of Group 15 herbicides as some may look to reduce rates to save on overall herbicide costs. The results from these experiments indicate the importance of using full rates as the full rates often improved the overall residual control compared to half rates.
- Soil properties including soil texture, percent organic matter, pH, and geographic restrictions should be considered when selecting products and determining rates as these can have an impact on the efficacy of herbicides with residual activity and potential carryover into subsequent crops
- PRE-emergence herbicide programs containing multiple effective sites of action are recommended to broaden weed control spectrum and to lower selection for additional herbicide resistance.



Waterhemp Control %		
Herbicide	Rate	24 DAT
Pursuit	4 fl oz	46
Classic	3 oz	56
FirstRate	0.6 oz	41
Tricor DF	0.67 lb	91
Spartan	8 fl oz	92
Valor SX	3 oz	73
Sharpen	1 fl oz	54
Warrant (half)	24 fl oz	20
Warrant (full)	48 fl oz	55
Dual II Magnum (half)	0.84 pt	68
Dual II Magnum (full)	1.67 pt	81
Outlook (half)	9 fl oz	80
Outlook (full)	18 fl oz	88
Zidua (half)	1.5 oz	84
Zidua (full)	3 oz	95
Authority Assist	10 fl oz	94
Sonic	6.45 oz	96
Surveil	3.5 oz	90
Valor XLT	3 oz	89
BroadAxe XC	25 fl oz	94
Authority MTZ	16 oz	96
Authority Supreme	8 fl oz	98
Verdict	5 fl oz	83
Prefix	2 pt	94
Fierce	3 oz	94
Boundary	1.8 pt	95
Canopy DF	2.25 oz	63
Enlite	2.8 oz	85
Afforia	2.5 oz	76
Trivence	6 oz	82
Zidua PRO	6 fl oz	92
Fierce XLT	3.75 oz	96
Fierce MTZ	1 pt	97

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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)
Pursuit – 4 fl oz**

46%



22 days after PRE (6/25)
Classic – 3 oz

56%



**22 days after PRE (6/25)
FirstRate – 0.6 oz**

41%



**22 days after PRE (6/25)
Tricor DF – 0.67 lb**

91%



**22 days after PRE (6/25)
Spartan – 8 fl oz**

92%



**22 days after PRE (6/25)
Valor SX – 3 oz**

73%



22 days after PRE (6/25)

Sharpen – 1 fl oz

54%



**22 days after PRE (6/25)
Warrant – 24 fl oz**

20%



**22 days after PRE (6/25)
Warrant – 48 fl oz**

55%



**22 days after PRE (6/25)
Dual II Magnum – 0.84 pt**

68%



**22 days after PRE (6/25)
Dual II Magnum – 1.67 pt**

81%



**22 days after PRE (6/25)
Outlook – 9 fl oz**

80%



**22 days after PRE (6/25)
Outlook – 18 fl oz**

88%



**22 days after PRE (6/25)
Zidua – 1.5 oz**

84%



**22 days after PRE (6/25)
Zidua – 3 oz**

95%



**22 days after PRE (6/25)
Authority Assist – 10 fl oz**

94%



**22 days after PRE (6/25)
Sonic – 6.45 oz**

96%



**22 days after PRE (6/25)
Surveil – 3.5 oz**

90%



**22 days after PRE (6/25)
Valor XLT – 3 oz**

89%



**22 days after PRE (6/25)
BroadAxe XC – 25 fl oz**

94%



22 days after PRE (6/25)
Authority MTZ – 16 oz

96%



22 days after PRE (6/25)
Authority Supreme – 8 fl oz

98%



**22 days after PRE (6/25)
Verdict – 5 fl oz**

83%



**22 days after PRE (6/25)
Prefix – 2 pt**

94%



**22 days after PRE (6/25)
Fierce – 3 oz**

94%



**22 days after PRE (6/25)
Boundary – 1.8 pt**

95%



**22 days after PRE (6/25)
Canopy DF – 2.25 oz**

63%



**22 days after PRE (6/25)
Enlite – 2.8 oz**

85%



**22 days after PRE (6/25)
Afforia – 2.5 oz**

76%



22 days after PRE (6/25)
Trivence – 6 oz

82%



**22 days after PRE (6/25)
Zidua PRO – 6 fl oz**

92%



**22 days after PRE (6/25)
Fierce XLT – 3.75 oz**

96%



**22 days after PRE (6/25)
Fierce MTZ – 1 pt**

97%

