



WATERHEMP CONTROL

TRIAL OVERVIEW

- Herbicide-resistant waterhemp is becoming more prevalent in many growing areas and causing management challenges for growers. Properly timed postemergence herbicides can play an important role in the control of glyphosate-resistant waterhemp.

RESEARCH OBJECTIVE

- The objective of this study is to evaluate the control of glyphosate-resistant waterhemp in low, medium, and high input herbicide systems for three different soybean herbicide trait systems: Roundup Ready 2 Xtend® soybean (RR2X), Genuity® Roundup Ready 2 Yield® soybean (RR2Y), and LibertyLink® soybean (LL).

Location	Soil	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield/Acre	Planting Rate/Acre
Elwood, IN	Clay Loam	Soybean	Conventional	05/19/2016	10/08/2016	N/A	140,000

SITE NOTES:

- Soybean products included AG30X6 Brand (RR2X); AG2933 Brand (RR2); BK 298L4 Brand (LL).
- The trial was a split plot design with four replications. Soybeans were planted in 30-inch rows.
- Preemergence (PRE) herbicide treatments were applied on May 19, 2016. Postemergence (POST) treatments were applied on June 16, 2016 at the V2 soybean growth stage and when waterhemp was 4 inches in height.
- Treatments included an untreated, low, medium, and high input herbicide program for each trait block.
- Very little activating rainfall occurred within the 10 days following PRE applications.
- Glyphosate-resistant waterhemp was the predominate weed species present at the site and was the only weed species rated for control in this study.
- Weed control ratings were taken periodically throughout the season. This summary reports the findings from the preharvest weed control rating taken 18 days before harvest for each treatment.

UNDERSTANDING THE RESULTS

Treatment #	Herbicide (rate/acre)	Timing
1	Untreated Roundup Ready 2 Xtend® soybeans	-
2	Rowel® Herbicide (2 oz)	PRE
3	Roundup Xtend™ herbicide with VaporGrip™ Technology* (64 oz) Rowel Herbicide (2 oz) + XtendiMax™ herbicide with VaporGrip Technology** (22 oz)	POST PRE
4	Roundup Xtend herbicide with VaporGrip Technology* (64 oz) Rowel Herbicide (2 oz) + XtendiMax herbicide with VaporGrip Technology** (22 oz)	POST PRE
5	Untreated Genuity® Roundup Ready 2 Yield® soybeans	-
6	Rowel® Herbicide (2 oz)	PRE
7	Roundup PowerMAX® (32 oz)	POST
8	Warrant Herbicide (48 oz) + Tricor® DF (5oz)	PRE
9	Roundup PowerMAX (32 oz)	POST
10	Warrant Herbicide (48 oz) + Tricor DF (5 oz)	PRE
11	Roundup PowerMAX (32 oz) + Warrant® Ultra Herbicide (50 oz)	POST
12	Untreated LibertyLink® soybeans	-
13	Valor® (2 oz)	PRE
14	Liberty® herbicide (29 oz)	POST
15	Authority® Maxx (6.4 oz)	PRE
16	Liberty herbicide (29 oz)	POST
17	Authority Maxx (6.4 oz)	PRE
18	Liberty herbicide (29 oz) + Zidua® Herbicide (2 oz)	POST

*pending regulatory approvals. **EPA approved for in-crop use, pending state approval.

- The inclusion of Roundup Xtend™ herbicide with VaporGrip™ Technology (pending regulatory approvals) brings value and works well with other herbicides in the system as seen with treatments 2, 3, and 4 (Figure 1).
- A combination of PRE residual herbicides and timely POST applications of Xtendimax Herbicide with VaporGrip technology paired with a residual herbicide are necessary to achieve optimum control of heavy glyphosate-resistant waterhemp pressure.

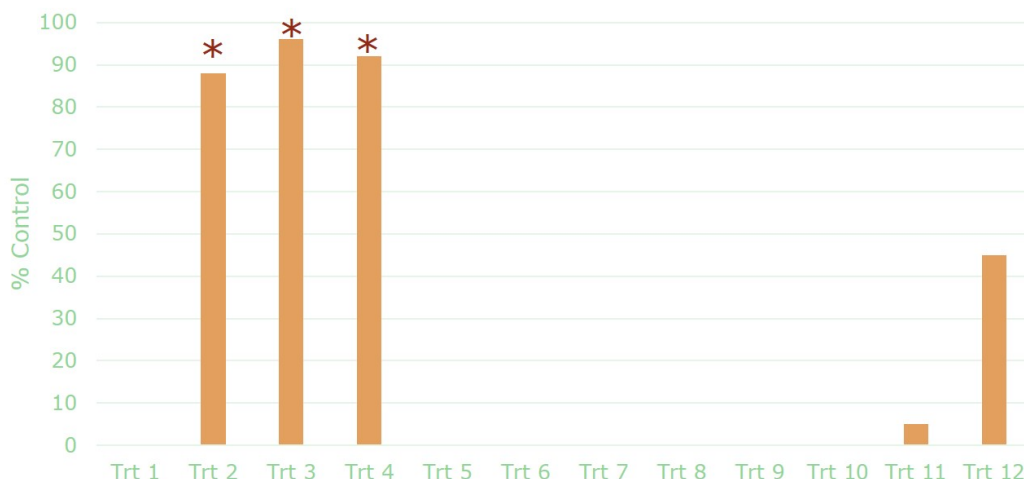


Figure 1. Preharvest waterhemp control rating 96 days after treatment.

*These treatments were statistically different than the others (0.05) Figure 1. Preharvest waterhemp control rating 96 days after treatment.

WHAT DOES THIS MEAN FOR YOUR FARM?

- This trial demonstrates that the inclusion of dicamba with the Roundup Ready® Xtend Crop System brings another effective mode-of-action to help control glyphosate-resistant waterhemp difficult weeds like glyphosate-resistant waterhemp.

LEGAL STATEMENT

For additional agronomic information, please contact your local brand representative.

Developed in partnership with Technology, Development & Agronomy by Monsanto.

The information discussed in this report is from a single site demonstration with four replications. This information piece is designed to report the results of this demonstration and is not intended to infer any confirmed trends. Please use this information accordingly.

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