



# LEARNING CENTER 2011

at Monmouth, Illinois

## DEMONSTRATION REPORT

### USE OF RESIDUAL HERBICIDES IN A GENUITY® ROUNDUP READY 2 YIELD® SOYBEAN SYSTEM

Residual herbicides in the Genuity® Roundup Ready 2 Yield® soybean system can offer multiple benefits including reducing the risk for herbicide resistance, managing resistant weeds, and protecting yield potential. This demonstration was designed to evaluate the effect of residual herbicides, applied preemergence (PRE) and/or postemergence (POST), on soybean yield.

#### STUDY GUIDELINES

A demonstration trial was conducted at the Monmouth Learning Center to assess soybean yield response to the use of residual herbicides in the Genuity® Roundup Ready 2 Yield® Soybean system. The plot was chisel plowed in the fall of 2010 and a soil finisher was used in the spring of 2011 to prepare the seed bed for planting, thus removing the need for burndown herbicide treatments. A 3.1 relative maturity Genuity® Roundup Ready 2 Yield® soybean was planted on May 10, 2011. Two replications of these treatments were established.

#### Treatments were:

- 1) A single postemergence (POST) application of Roundup WeatherMAX® herbicide (22 oz/acre) on 4 to 6 inch weeds
- 2) A preemergence (PRE) application of Valor® XLT (3 oz./acre) followed by (fb) a POST application of Roundup WeatherMAX®
- 3) A preemergence (PRE) application of Valor® XLT (3 oz./acre) followed by (fb) a POST application of Roundup WeatherMAX® (22 oz/acre) + Warrant® Herbicide (1.5 qt/acre).

#### RESULTS

A residual herbicide PRE controlled many weeds, but due to extremely heavy weed pressure, there was still considerable weed pressure at the POST application timing (Figure 1). A POST application of Roundup WeatherMAX® and Warrant® Herbicide following a PRE application of Valor® XLT resulted in excellent weed control (Figure 2).

A residual herbicide PRE resulted in a 4.7 bu/acre yield advantage over the treatment with no residual PRE (Figure 3). The use of a residual POST resulted in an additional 8 bu/acre (Figure 3). The use of residual herbicides both PRE and POST resulted in an additional 12.7 bu/acre over the PRE only treatment (Figure 3).

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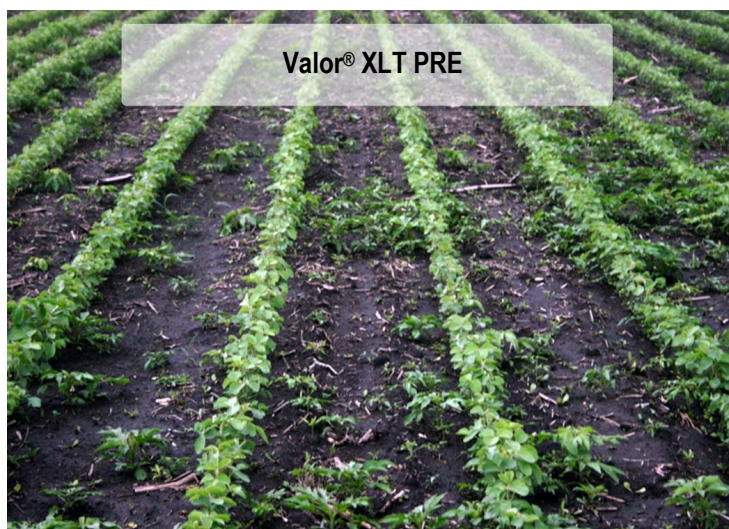


Figure 1. Weed control in a plot that received Valor® XLT (3 oz/acre) PRE.



Figure 2. Weed control in a plot that received Valor® XLT (3 oz/acre) PRE followed by Roundup WeatherMAX® (22 oz/acre) + Warrant® Herbicide (1.5 qt/acre).

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### SUMMARY

The addition of residual herbicides in the Genuity® Roundup Ready 2 Yield® soybean system improved yield in this demonstration. Additionally, residual herbicides can help reduce the selection pressure for glyphosate-resistance.

Using residual herbicides and multiple modes of action are two tools to help minimize the risk for weed resistance and help protect the sustainability of the Roundup Ready® system.

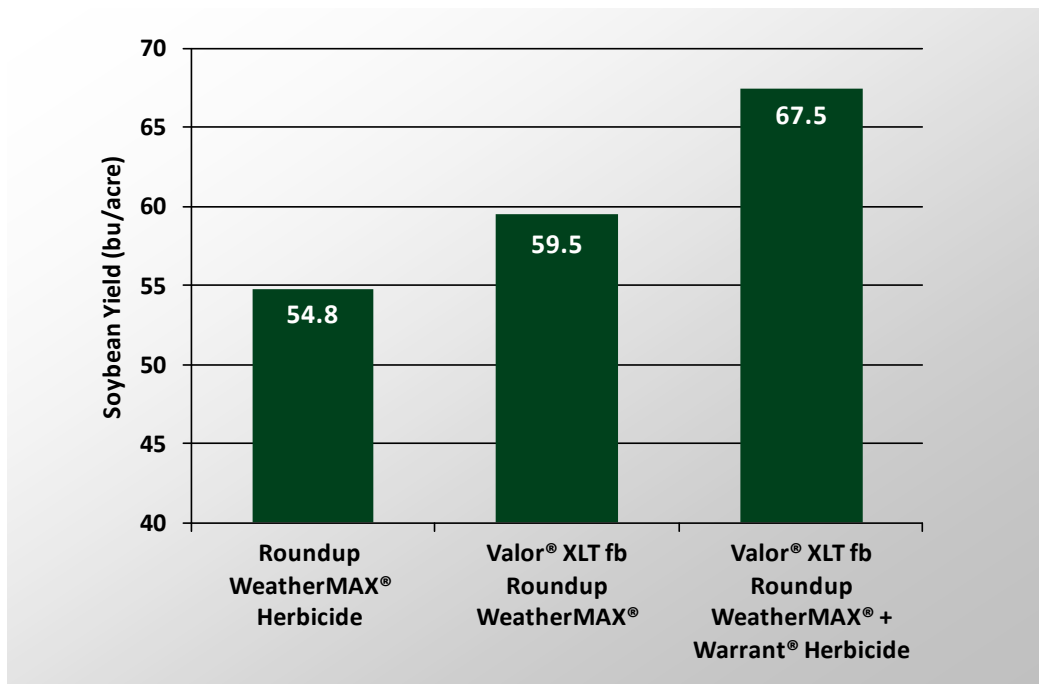


Figure 3. Effect of residual herbicides applied PRE and/or POST on soybean yields.

*The information discussed in this report is from a single site, two-replication, one-year demonstration. This informational 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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