



# Roundup Ready® Xtend Crop System Benefits and Weed Management Recommendations





»» It's the System that Makes the Difference



# Key Reasons Demand for Roundup Ready® Xtend Crop System Expected to More than Double in 2018

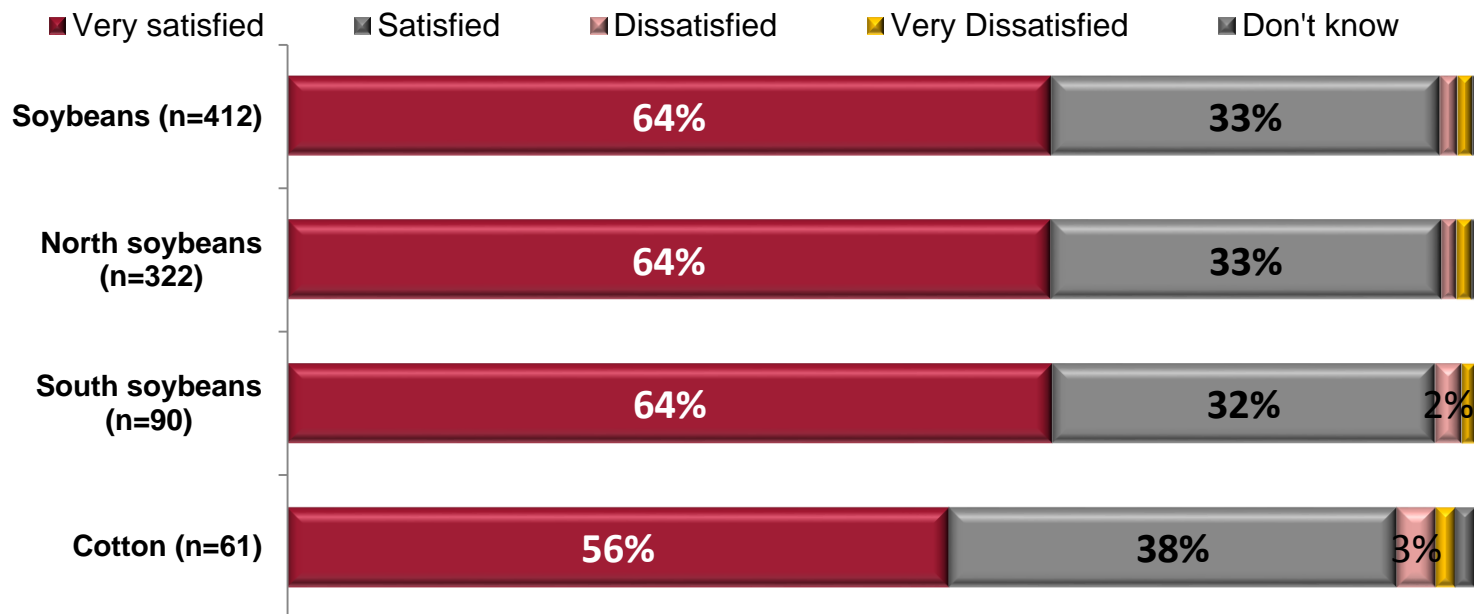
- **Industry leading genetics** in Roundup Ready 2 Xtend® soybeans and cotton with XtendFlex® Technology
- **Provides more weed control** and added value than any other weed control system on the market
- **Spray with confidence** utilizing XtendiMax® herbicide with VaporGrip® Technology
  - Proprietary VaporGrip® Technology designed to significantly reduce volatility
  - Enhanced application requirements and label to support successful use of XtendiMax® with VaporGrip® Technology, a restricted use pesticide
  - Expert recommendations and incentives through Roundup Ready PLUS® Crop Management Solutions

Performance may vary from location to location and from year to year, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the grower's fields.

XtendiMax<sup>®</sup> herbicide with VaporGrip<sup>®</sup> Technology, a restricted use pesticide

# 97% of soybean growers surveyed who applied XtendiMax<sup>®</sup> with VaporGrip<sup>®</sup> Technology in 2017 were satisfied with weed control

## Satisfaction With Weed Control

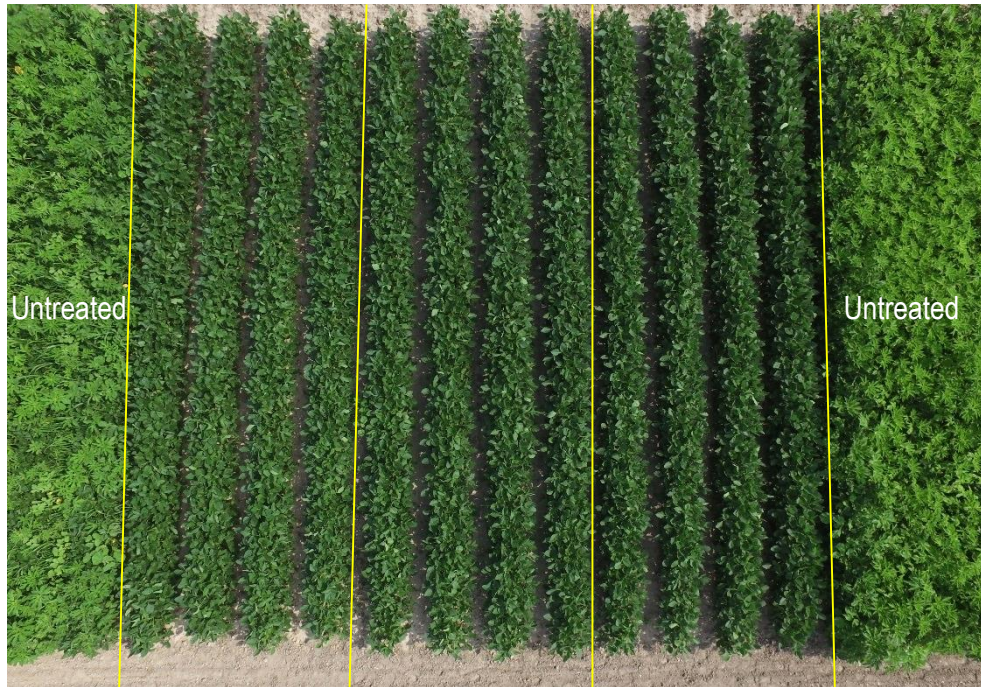


XtendiMax<sup>®</sup> with VaporGrip<sup>®</sup> Technology Grower Survey – August 2017

All growers surveyed were required to have 50+ acres of Roundup Ready 2 Xtend<sup>®</sup> soybeans or cotton with XtendFlex<sup>®</sup> Technology and treat at least some acres with XtendiMax<sup>®</sup> with VaporGrip<sup>®</sup> Technology to qualify

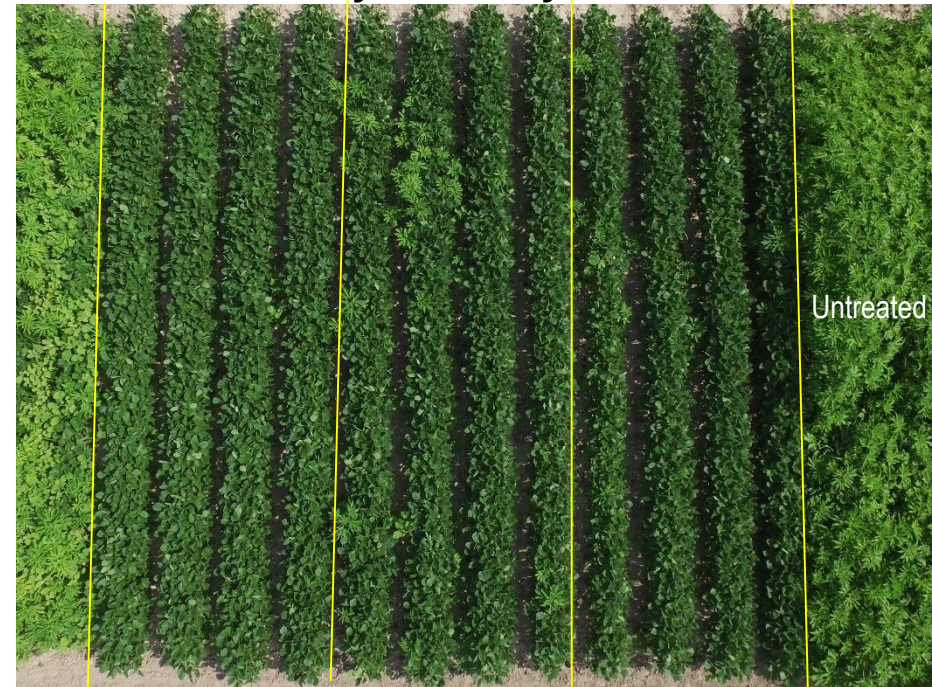
# System comparisons: Weed Control at Canopy (7-13-17)

## Roundup Ready 2 Xtend® soybeans



- |   |   |   |
|---|---|---|
| <p><b>PRE- Rowel®<br/>Herbicide 2oz<br/>Fb POST<br/>XtendiMax® with<br/>VaporGrip®<br/>Technology 22oz +<br/>Roundup<br/>PowerMAX®<br/>herbicide 32oz</b></p> | <p><b>PRE – Rowel®<br/>Herbicide 2oz +<br/>XtendiMax® with<br/>VaporGrip® Technology<br/>22oz<br/>Fb POST<br/>XtendiMax® with<br/>VaporGrip® Technology<br/>22oz + Roundup<br/>PowerMAX® herbicide<br/>32oz</b></p> | <p><b>PRE – Rowel® Herbicide<br/>2oz + XtendiMax® with<br/>VaporGrip® Technology<br/>22oz<br/>Fb POST<br/>XtendiMax® with<br/>VaporGrip® Technology<br/>22oz + Roundup<br/>PowerMAX® Herbicide<br/>32oz + Warrant®<br/>Herbicide 48oz</b></p> |
|---|---|---|

## LibertyLink® soybeans

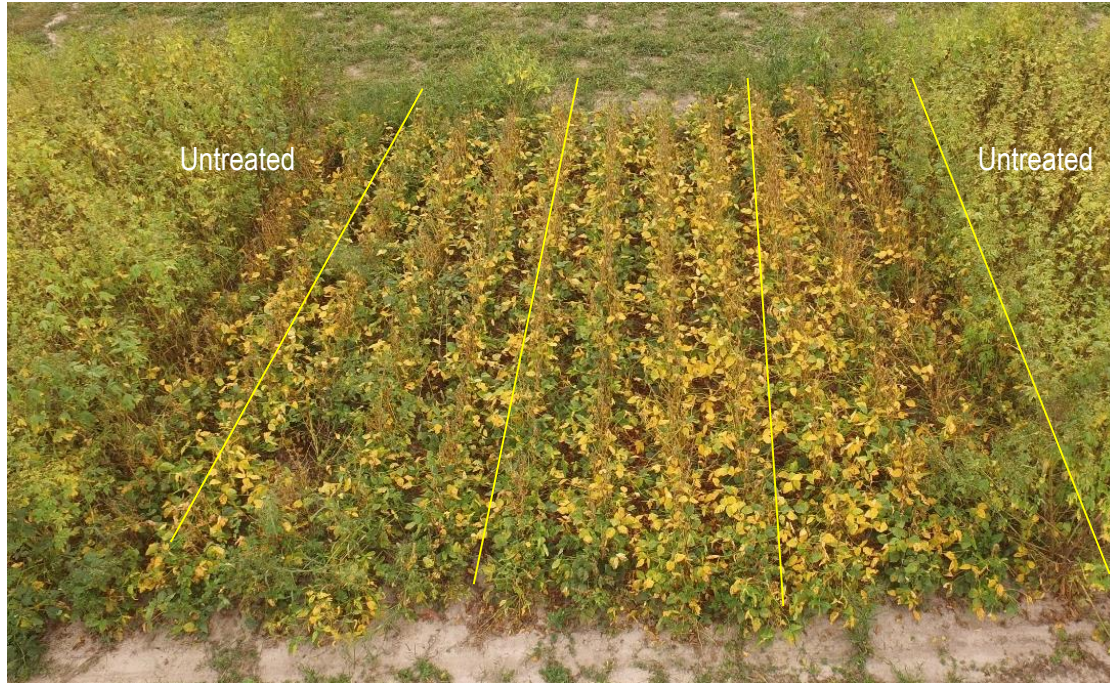


- |   |   |  |
|---|---|--|
| <p><b>PRE – Valor® SX<br/>herbicide 2oz<br/>Fb POST<br/>Liberty® herbicide<br/>29oz</b></p> | <p><b>PRE – Authority®<br/>MAXX herbicide<br/>6.4oz<br/>fb POST<br/>Liberty® herbicide<br/>29oz</b></p> | <p><b>PRE - Authority®<br/>MAXX herbicide 6.4oz<br/>fb POST<br/>Liberty® herbicide<br/>29oz<br/>+ Zidua® herbicide<br/>2oz</b></p> |
|---|---|--|

SIU Research Farm – Belleville, IL. Planting date 6/1/17

# System comparisons: Pre-Harvest Weed Control (9-21-17)

**Roundup Ready 2 Xtend<sup>®</sup> soybeans**



PRE- Rowel<sup>®</sup>  
 Herbicide 2oz  
 Fb POST  
 XtendiMax<sup>®</sup> with  
 VaporGrip<sup>®</sup>  
 Technology 22oz +  
 Roundup  
 PowerMAX<sup>®</sup>  
 herbicide 32oz

PRE – Rowel<sup>®</sup>  
 Herbicide 2oz +  
 XtendiMax<sup>®</sup> with  
 VaporGrip<sup>®</sup> Technology  
 22oz  
 Fb POST  
 XtendiMax<sup>®</sup> with  
 VaporGrip<sup>®</sup> Technology  
 22oz + Roundup  
 PowerMAX<sup>®</sup> herbicide  
 32oz

PRE – Rowel<sup>®</sup> Herbicide  
 2oz + XtendiMax<sup>®</sup> with  
 VaporGrip<sup>®</sup> Technology  
 22oz  
 Fb POST  
 XtendiMax<sup>®</sup> with  
 VaporGrip<sup>®</sup> Technology  
 22oz + Roundup  
 PowerMAX<sup>®</sup> Herbicide  
 32oz + Warrant<sup>®</sup>  
 Herbicide 48oz

**LibertyLink<sup>®</sup> soybeans**



PRE – Valor<sup>®</sup> SX  
 herbicide 2oz  
 Fb POST  
 Liberty<sup>®</sup> herbicide  
 29oz

PRE – Authority<sup>®</sup>  
 MAXX herbicide  
 6.4oz  
 fb POST  
 Liberty<sup>®</sup> herbicide  
 29oz

PRE - Authority<sup>®</sup>  
 MAXX herbicide 6.4oz  
 fb POST  
 Liberty<sup>®</sup> herbicide  
 29oz  
 + Zidua<sup>®</sup> herbicide  
 2oz

**SIU Research Farm – Belleville, IL. Planting date 6/1/17**

# Plant for Yield. Plan for Profit.

## Roundup Ready® Xtend Crop System vs LibertyLink® System

| <u>2017 Trial Results</u> |   |
|---------------------------|---|
| <i>Step 1:</i>            |   |
| <b>5.7 Bu/A</b>           | <b>Yield Advantage<sup>1</sup></b> <i>(Genetics + Weed Control)</i> |
| <b>x \$9.75 /Bu</b>       | <b>Commodity Price</b>  |
| <hr/>                     | <hr/>   |
| <b>~\$55.00 /A</b>        | <b>Revenue</b>  |
| <i>Step 2:</i>            |   |
| <b>- \$13.00 /A</b>       | <b>System Cost Difference<sup>2</sup></b> <i>(Seed + Herbicide)</i> |
| <hr/>                     | <hr/>   |
| <b>~\$42.00 /A</b>        | <b>Average Profit Advantage</b>                                     |

**5.7 Bu/A average advantage vs. LibertyLink® in 2017 herbicide system trials**

- ✓ 13 locations
  - Monsanto Systems Trials
  - 3<sup>rd</sup> Party Trials
  - University Trials

**Historical Performance**  
**5.4 Bu/A average advantage vs. LibertyLink® in 2015 & 2016 herbicide system trials**

- ✓ 2015 & 2016 Monsanto System Trials
  - 14 locations in 2015
  - 19 locations in 2016

1 Source: 2017 Monsanto Systems Trials (27 locations in 2017 reporting yield data). Significant at P ≤ 0.05 LSD of 1.6 Bu. Data as of November 13, 2017. Roundup Ready® Xtend Crop System data = Roundup Ready 2 Xtend® soybeans treated with dicamba, glyphosate and various residual herbicides. LibertyLink® system data = LibertyLink® soybeans treated with Liberty® herbicide and various residual herbicides. Performance may vary from location to location and from year to year, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the grower's fields.

2 Based on estimated Suggested Retail Price herbicide and seed costs minus calculated incentives from Roundup Ready PLUS® Crop Management Solutions Cash Incentives and LibertyLink incentives. Visit [www.roundupreadyplus.com/soybean-profitability-calculator](http://www.roundupreadyplus.com/soybean-profitability-calculator)



# »» Regional Weed Management Recommendations For the Roundup Ready® Xtend Crop System





# Plains\* (KS, NE) Weed Management Recommendations for Roundup Ready 2 Xtend® Soybeans



| Herbicide Practice   | Herbicide Recommendation   |
|--|--|
| <b>Before Planting</b>   |  |
| <b>Burndown</b>  | Roundup PowerMAX® Herbicide (32 oz) + 2,4-D (0.75 lb) <b>or</b> XtendiMax® herbicide with VaporGrip® Technology (22 oz)  |
| <b>At Planting</b>   |  |
| <b>PRE<br/>At planting</b>   | Roundup PowerMAX® Herbicide (32 oz) + XtendiMax® herbicide with VaporGrip® Technology (22-44 oz) + <ul style="list-style-type: none"> <li>• Valor® SX Herbicide (2 oz) <b>or</b></li> <li>• Valor® XLT (3 oz)</li> </ul> |
| <b>POST 1 (over-the-top)</b>   |  |
| <b>POST 1</b><br>(< 4" weeds and within 18 to 24 days after PRE application) | Roundup PowerMAX® Herbicide (32 oz) + XtendiMax® herbicide with VaporGrip® Technology (22 oz) + Warrant® Herbicide (3 pt) + labeled Drift Reducing Adjuvant (DRA)  |
| <b>POST 2 (over-the-top)</b>   |  |
| <b>POST 2</b><br>(Up to R2 growth Stage)                                     | Roundup PowerMAX® Herbicide (32 oz) + Warrant® Ultra Herbicide (50 oz) to control any broadleaf or grass weed escapes  |

\*Check with your local Monsanto dealer or representative or U.S. EPA and your state pesticide regulatory agency for the product registration status and additional restrictions in your state.

# Important Notices



- **XtendiMax<sup>®</sup> herbicide with VaporGrip<sup>®</sup> Technology is a restricted use pesticide for retail sale to and use only by Certified Applicators or persons under their direct supervision.**
- ALWAYS READ AND FOLLOW DIRECTIONS FOR USE ON PESTICIDE LABELING. It is a violation of federal and state law to use any pesticide product other than in accordance with its labeling. XtendiMax<sup>®</sup> herbicide with VaporGrip<sup>®</sup> Technology, Roundup Ready 2 Xtend<sup>®</sup> soybeans, and cotton with XtendFlex<sup>®</sup> Technology may not be approved in all states and may be subject to use restrictions in some states. Check with your local Monsanto dealer or representative or U.S. EPA and your state pesticide regulatory agency for the product registration status and additional restrictions in your state. For approved tank-mix products and nozzles visit [XtendiMaxApplicationRequirements.com](http://XtendiMaxApplicationRequirements.com)
- NOT ALL formulations of dicamba or glyphosate are approved for in-crop use with Roundup Ready 2 Xtend<sup>®</sup> soybeans and cotton with XtendFlex<sup>®</sup> Technology. ONLY USE FORMULATIONS THAT ARE SPECIFICALLY LABELED FOR SUCH USES AND APPROVED FOR SUCH USE IN THE STATE OF APPLICATION.
- **Roundup Ready 2 Xtend<sup>®</sup> soybeans contain genes that confer tolerance to glyphosate and dicamba. Cotton with XtendFlex<sup>®</sup> Technology contains genes that confer tolerance to glyphosate, dicamba, and glufosinate.** Glyphosate will kill crops that are not tolerant to glyphosate. Dicamba will kill crops that are not tolerant to dicamba. Glufosinate will kill crops that are not tolerant to glufosinate. Contact your Monsanto dealer or refer to Monsanto's Technology Use Guide for recommended weed control programs.
- **Individual results may vary**, and performance may vary from location to location and from year to year. This result may not be an indicator of results you may obtain as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible.
- **Always read and follow IRM, where applicable, grain marketing and all other stewardship practices and pesticide label directions.** Bollgard<sup>®</sup>, Bollgard II<sup>®</sup>, Roundup Ready 2 Xtend<sup>®</sup>, Roundup Ready<sup>®</sup>, Roundup Ready PLUS<sup>®</sup>, Roundup Ready PLUS and Design<sup>®</sup>, VaporGrip<sup>®</sup>, XtendFlex<sup>®</sup> and XtendiMax<sup>®</sup> are registered trademarks of Monsanto Technology LLC. LibertyLink<sup>®</sup> and the Water Droplet Design<sup>®</sup> are registered trademarks of Bayer. All other trademarks are the property of their respective owners. ©2018 Monsanto Company. All Rights Reserved.

