

# Comparison of Postemergence Group 15 Injury on LLGT27 and RR2Xtend Soybean

By: Kayla Shelton and Travis Legleiter

## Introduction:

- Approximately 35,000 to 45,000 acres of soybean damaged due to dicamba exposure in Kentucky in 2017
- Dicamba exposure, especially during reproduction stages, can potentially cause yield loss in soybean
- Dicamba causes soybean leaf cupping, distortion, and stem epinasty
- Group 15 herbicides applied postemergence can cause similar injury symptoms on soybean as dicamba

## Objectives:

- Does spraying group 15 herbicides with a tank mix of glufosinate cause more damage/injury than that of a tank mix of a group 15 herbicide and dicamba and or glyphosate?
- Can we tell the differences in these injuries?

## Materials and Methods:

- RR2Xtend (AG42X6) and LLGT27 (Becks 4268FP) Soybean.
- Treatments with Xtendimax, Liberty, Roundup, Warrant and Zidua applied alone and in tank mixes.
- One treatment of Xtendimax with a low application rate applied to replicate drift exposure.
- Percentage Crop Injury evaluated at 7, 21, and 28 days post-application
- Number of trifoliates injured evaluated at 28 days after treatment

Soybean Variety	Treatment	Rate	% Crop Injury Rating 7 Days	% Crop Injury Rating 21 Days
Roundup Ready 2 Xtend	Xtendimax+ Roundup Powermax	22 fl oz/a + 32 fl oz/a	0.3 b	1.2 c
	Zidua	3.25 fl oz/a	0.3 b	1.5 bc
	Warrant	1.5 qt/a	0.5 b	3.0 bc
	Xtendimax + Roundup Powermax + Zidua	22 fl oz/a + 32 fl oz/a + 3.25 fl oz/a	0.5 b	1.5 bc
	Xtendimax + Roundup Powermax + Warrant	22 fl oz/a + 32 fl oz/a + 1.5 qt/a	0.5 b	2.5 bc
LLGT27	Liberty	29 fl oz/a	2.2 b	3.0 bc
	Zidua	3.25 fl oz/a	2.0 b	3.5 bc
	Warrant	1.5 qt/a	2.0 b	3.5 bc
	Liberty + Zidua	29 fl oz/a + 3.25 qt/a	1.8 b	3.8 bc
	Liberty + Warrant	29 fl oz/a + 1.5 qt/a	2.8 b	4.0 bc
	Roundup Powermax	32 fl oz/a	2.5 b	3.5 bc
	Roundup Powermax + Zidua	32 fl oz/a + 3.25 fl oz/a	2.5 b	2.8 bc
	Roundup Powermax + Warrant	32 fl oz/a + 1.5 qt/a	2.8 b	4.5 b
Xtendimax	.022 fl oz/a	6.3 a	8.3 a	

## Results:

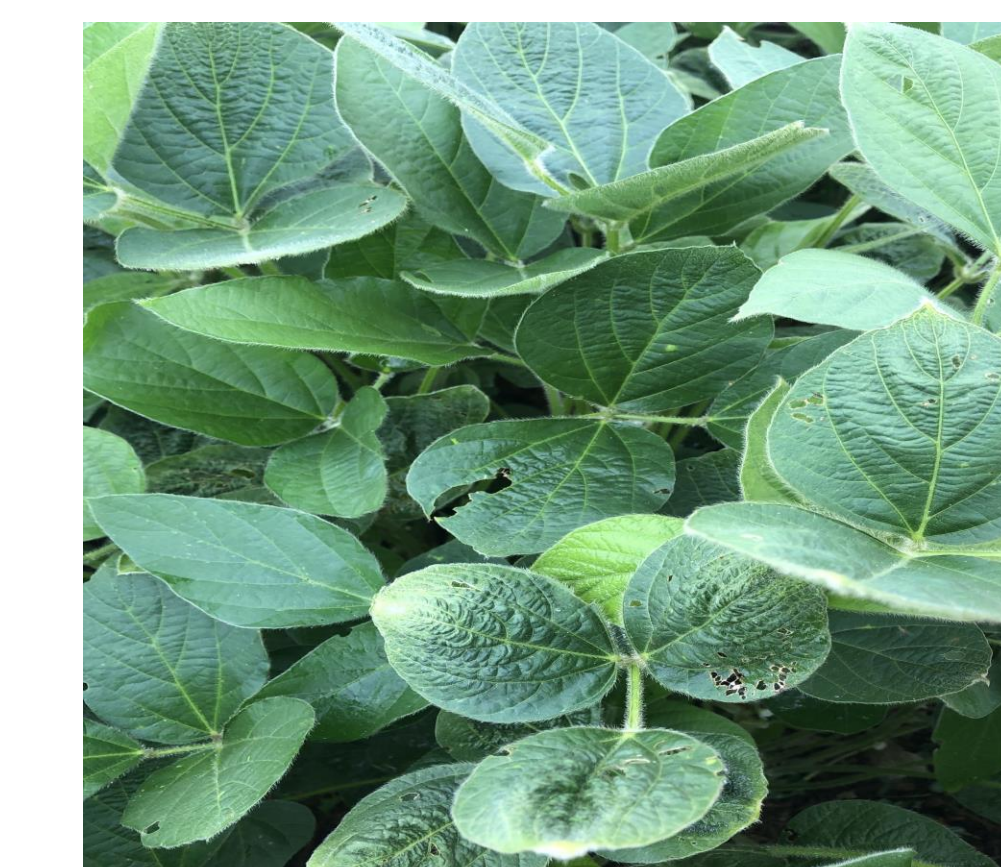
- At 21 days after application, there were no statistical differences in the injury shown in RR2Xtend and LLGT27 soybeans from group 15 herbicides.
- All of the group 15 herbicides applied, showed less injury than Dicamba exposure on the LLGT27 soybean.

## Summary:

Initial studies showed that there could be more injury from the Group 15 applications with Liberty on Liberty Link soybean than with tank mixes of dicamba on RR2Xtend soybean. Although, in this study, there were no significant differences in crop injury between the tank mixes when evaluated at 7 and 21 days after application. There is a possibility for more injury and difference to occur when evaluated at 28 days. We will continue to evaluate crop injury, as more research needs to be done, to determine if these differences



Check



Xtendimax Injury



Warrant Injury

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Contact: K. Shelton Kayla.Shelton@uky.edu