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## **Weed Control Programs for Xtend Soybeans in No-Tillage**

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### **Summary**

The development of glyphosate-resistant weeds has greatly complicated weed control in soybeans. Roundup Ready 2 Xtend (dicamba tolerant) soybeans provide growers an alternative herbicide option for preplant and postemergence weed control in no-tillage soybeans. Preplant programs that included dicamba provided excellent control of giant ragweed. All sequential programs provided excellent control of the weeds present in the experiment.

### **Introduction**

Weeds are a major production problem in soybeans, especially with the development of glyphosate-resistant weeds. Roundup Ready 2 Xtend (RR2X) soybeans provide a new herbicide option for preplant and postemergence weed control in no-tillage soybeans.

### **Procedures**

A field experiment was established near Manhattan, KS, on a Reading silt loam soil with 3.3% organic matter and a pH of 6.7. The plot area had a natural infestation of henbit, giant ragweed (moderate level of glyphosate resistance), Palmer amaranth, and large crabgrass. Preplant (PP) treatments were applied to blooming henbit, and 1- to 12-inch giant ragweed on May 3, 2016, at 72°F, with 35% relative humidity and mostly clear skies. Asgrow 34X6 RR2X soybeans were planted at 120,000 seeds/a in 30-inch rows on May 23, 2016. Postemergence (P) treatments were applied to 2 trifoliolate leaf soybeans (6 inch), 3- to 6-inch Palmer amaranth, and 1- to 6-inch large crabgrass on June 13 at 84°F, with 58% relative humidity, and partly cloudy skies. Treatments were applied with a CO<sub>2</sub> backpack sprayer, delivering 15 GPA at 35 psi through TTI110015 flat-fan spray tips to the center 6.3 ft of 10 by 25 ft plots. The experiment had a randomized complete block design with three replications. Crop injury and weed control were visually evaluated throughout the growing season.

### **Results**

None of the herbicide treatments caused any important crop injury (data not presented). All treatments eventually provided very good control of all weeds evaluated.

**Table 1. Weed control in RR2X soybeans on May 31, 2016, Manhattan, KS**

Treatment*	Application timing	Application rate oz/a	Henbit	Giant ragweed % control	Large crabgrass
RU Power Max+Xtendimax#/	PP/	32+22/	100	93	87
RU Power Max+Xtendimax	P	32+22			
RU Power Max+Xtendimax+Valor/	PP/	32+22+2.5/	100	100	92
RU Power Max+Xtendimax	P	32+22			
RU Power Max+Xtendimax+Fierce/	PP/	32+22+3/	100	100	97
RU Power Max+Xtendimax	P	32+22			
RU Power Max+Xtendimax+Fierce/	PP/	32+22+3/	100	100	97
RU PMax+Xtendimax+Warrant	P	32+22+48			
Least significant difference ( $P < 0.05$ )			NS	NS	10

\* RU Power Max and RU PMax = Roundup Power Max; / indicates sequential application; all treatments included nonionic surfactant at 0.25% v/v; PP = preplant; and P = postemergence.

# Non-labelled dicamba product actually applied, but equivalent Xtendimax rates presented.

**Table 2. Weed control in RR2X soybeans on July 26, 2016, Manhattan, KS**

Treatment*	Application timing	Application rate oz/a	Henbit	Giant ragweed % control	Large crabgrass
RU Power Max+Xtendimax#/	PP/	32+22/	100	93	87
RU Power Max+Xtendimax	P	32+22			
RU Power Max+Xtendimax+Valor/	PP/	32+22+2.5/	100	100	92
RU Power Max+Xtendimax	P	32+22			
RU Power Max+Xtendimax+Fierce/	PP/	32+22+3/	100	100	97
RU Power Max+Xtendimax	P	32+22			
RU Power Max+Xtendimax+Fierce/	PP/	32+22+3/	100	100	97
RU PMax+Xtendimax+Warrant	P	32+22+48			
Least significant difference ( $P < 0.05$ )			NS	NS	10

\* RU Power Max and RU PMax = Roundup Power Max; / indicates sequential application; all treatments included nonionic surfactant at 0.25% v/v; PP = preplant; and P = postemergence.

# Non-labelled dicamba product actually applied, but equivalent Xtendimax rates presented.



**Figure 1. Application of Fierce plus Roundup Power Max plus dicamba preplant followed by Roundup Power Max plus dicamba postemergence.**