

2017

Weed Control Programs for Xtend Soybeans in No-Tillage

D. E. Peterson

Kansas State University, dpeterso@ksu.edu

C. Thompson

Kansas State University, cthomps@ksu.edu

C. L. Minihan

Kansas State University, cminihan@ksu.edu

Follow this and additional works at: <https://newprairiepress.org/kaesrr>



Part of the [Agronomy and Crop Sciences Commons](#), and the [Weed Science Commons](#)

Recommended Citation

Peterson, D. E.; Thompson, C.; and Minihan, C. L. (2017) "Weed Control Programs for Xtend Soybeans in No-Tillage," *Kansas Agricultural Experiment Station Research Reports*: Vol. 3: Iss. 6. <https://doi.org/10.4148/2378-5977.7445>

This report is brought to you for free and open access by New Prairie Press. It has been accepted for inclusion in Kansas Agricultural Experiment Station Research Reports by an authorized administrator of New Prairie Press. Copyright 2017 the Author(s). Contents of this publication may be freely reproduced for educational purposes. All other rights reserved. Brand names appearing in this publication are for product identification purposes only. No endorsement is intended, nor is criticism implied of similar products not mentioned. K-State Research and Extension is an equal opportunity provider and employer.



Weed Control Programs for Xtend Soybeans in No-Tillage

D.E. Peterson, C.R. Thompson, and C.L. Minihan

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 CO₂ 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.