

GROWER UTILIZATION OF ROUNDUP READY CROPS AND PERCEIVED PERFORMANCE OF GLYPHOSATE-BASED WEED MANAGEMENT SYSTEMS. Bryan G. Young, Southern Illinois University, Carbondale, IL 62901; Luke A. Farno and David R. Shaw, Mississippi State University, Mississippi State, MS 39762; Micheal D. K. Owen, Iowa State University, Ames, IA 50011; Stephen C. Weller, Purdue University, West Lafayette, IN 47907; John W. Wilcut, North Carolina State University, Raleigh, NC 27695; Robert G. Wilson, University of Nebraska, Scottsbluff, NE 69361.

A grower survey (n=1,195) was conducted in six states, Illinois, Indiana, Iowa, Mississippi, Nebraska, and North Carolina from November 2005 to January 2006 to characterize the historical utilization of Roundup Ready (RR) crops, discern herbicide use patterns, and gain grower insight on the performance of glyphosate-based weed control systems. The participants were selected randomly from a list of growers who have used RR seed technology and the sample size for each state represented was near 200.

The most common crop rotations included RR soybean rotated with a non-RR crop (freq 32%), RR corn rotated with RR soybean (freq 26%), and continuous RR soybean (freq 20%). A continuous RR cotton rotation was cited by approximately 25% of the grower respondents in Mississippi and North Carolina. Growers in all cropping rotations indicated weed pressure decreased after utilizing a RR crop. The weed species creating the greatest challenge for growers in RR corn/RR soybean rotation or a RR soybean non-RR crop rotation was waterhemp according to 13 and 9% of respondents, respectively. The weed species creating the greatest challenge for growers in RR cotton rotations was morningglory (21 to 26% of the respondents). Growers indicated the amount of conventional tillage was reduced after the adoption of RR crops. However, the availability of RR seed traits was not cited as the major reason why growers decided to reduce tillage inputs.

Less than 36% of the growers in a continuous RR soybean, continuous RR corn, or a RR corn/RR soybean rotation indicated that weed resistance to glyphosate is a concern. Conversely, 55 to 64% of growers utilizing RR cotton in any crop rotation were concerned about weed resistance to glyphosate. The most common strategy to manage potential glyphosate weed resistance cited by growers was to use the correct label rates of herbicides at the proper timing for the size and type of weeds present.