Study Results Released - Weed Control in Roundup Ready® Cropping Systems

Michael D. Owen
Iowa State University, mdowen@iastate.edu

Follow this and additional works at: http://lib.dr.iastate.edu/cropnews

Part of the Agricultural Science Commons, Agriculture Commons, Agronomy and Crop Sciences Commons, and the Weed Science Commons

Recommended Citation
http://lib.dr.iastate.edu/cropnews/628

The Iowa State University Digital Repository provides access to Integrated Crop Management News for historical purposes only. Users are hereby notified that the content may be inaccurate, out of date, incomplete and/or may not meet the needs and requirements of the user. Users should make their own assessment of the information and whether it is suitable for their intended purpose. For current information on integrated crop management from Iowa State University Extension and Outreach, please visit https://crops.extension.iastate.edu/.
Study Results Released - Weed Control in Roundup Ready® Cropping Systems

Abstract
Weed scientists from six universities have joined forces to examine grower weed management practices and develop programs to evaluate and improve the sustainability of weed control in Roundup Ready® cropping systems. Called the Benchmark Study, this multi-state research project is now in its fourth year. Funding for the study has been provided by the Monsanto Company.

Keywords
Agronomy

Disciplines
Agricultural Science | Agriculture | Agronomy and Crop Sciences | Weed Science

This article is available at Iowa State University Digital Repository: http://lib.dr.iastate.edu/cropnews/628
Study Results Released - Weed Control in Roundup Ready® Cropping Systems

By Micheal Owen, Department of Agronomy

Weed scientists from six universities have joined forces to examine grower weed management practices and develop programs to evaluate and improve the sustainability of weed control in Roundup Ready® cropping systems. Called the Benchmark Study, this multi-state research project is now in its fourth year. Funding for the study has been provided by the Monsanto Company.

University weed scientists have been concerned that frequently employed herbicide programs could affect the sustainability and effectiveness of weed control in Roundup Ready cropping systems. They reasoned that weed populations may shift to species that are more tolerant to glyphosate. Also, without proper management, the potential to select for weeds resistant to glyphosate could adversely impact the utility and life cycle of the weed management system on the farm.

The Benchmark Study began in the winter of 2005-2006 with a telephone survey of approximately 1200 growers from six states. Growers planting Roundup Ready corn, soybean or cotton for a minimum of three years were included in the survey. The survey was developed by a team of university weed scientists to evaluate tillage practices, herbicide use patterns, grower perceptions of weed pressure, and problematic weeds before and after adopting Roundup Ready cropping systems. Growers were questioned about their awareness of and actions taken regarding weed resistance to glyphosate.

The results of this survey were recently published in the journal Weed Technology in a series of peer reviewed scientific papers. The university collaborators and Monsanto are releasing summary reports – herbicide, weeds, resistance, tillage and overview summaries – highlighting information from each of the Benchmark Study scientific papers. More details are available under new articles on the ISU Extension weed science Web site.

In addition to the survey, the Benchmark Study is in year four of a field study that began in 2006. Approximately 150 growers in six states were randomly selected from among the survey respondents to participate in on-farm trials. In each of these on-farm trials, the growers’ current herbicide program is compared to a herbicide program recommended by university weed scientists.

The researchers expect the herbicide program recommended by the university to reduce the potential risk of selecting for glyphosate resistance. They have been monitoring weed populations, weed species diversity, weed seedbank, crop yields and economic returns from both herbicide programs throughout each growing season.

This information is currently being reviewed and evaluated, with targets to publish the first two years of the field study in late 2009. The results of the Benchmark Study may provide valuable data comparing the sustainability of
growers’ current weed management programs compared to more diversified weed management programs, while reducing the risk of selecting for weed resistance to glyphosate.

Micheal Owen is a professor of agronomy and weed science extension specialist with responsibilities in weed management and herbicide use. Owen can be reached by email at mtdowen@iastate.edu or by phone at (515) 294-5936.

This article was published originally on 6/16/2009. The information contained within the article may or may not be up to date depending on when you are accessing the information.

Links to this material are strongly encouraged. This article may be republished without further permission if it is published as written and includes credit to the author, Integrated Crop Management News and Iowa State University Extension. Prior permission from the author is required if this article is republished in any other manner.