

CONVENIENCE AND SIMPLICITY? AN ILLUSION AND A DETRIMENT TO INTEGRATED WEED MANAGEMENT. Mike Owen, Chris Boerboom and Christy Sprague, Professor, Department of Agronomy, Iowa State University, Ames, IA 50011, Professor, Department of Agronomy, University of Wisconsin, Madison, WI 53706, Associate Professor, Department of Crop and Soil Sciences, Michigan State University, East Lansing, MI 48824-0000.

Two of the main benefits growers ascribe to crop production systems based on herbicide-resistant crops (HRC) are the convenience and simplicity of weed control. However, these presumptions of convenience and simplicity are not valid and have negative environmental, ecological and economical implications. Importantly, the inclusion of integrated weed management (IWM) philosophy and resulting diversification of weed management tactics resolves these issues. The one aspect that likely could gain traction with growers is the improved economics of IWM; using a diverse weed management program improves profitability compared to single herbicide tactics most often used in HRCs. Interestingly, growers and agchem professionals are aware of negative ecological implication of the current systems but apparently have determined that the presumed convenience and simplicity of the systems override the negative aspects of the current practices. An Iowa survey of 6588 growers indicated that 26% of the growers surveyed reported that HRC fields are becoming more weedy and 45% reported that increased glyphosate rates and frequency of applications are now required for weed control. The same questions were answered by 568 agchem professionals who reported a higher concern for weedy fields (40%) and more glyphosate needed (57%). Given the rapid evolution of glyphosate-resistant weeds in cotton and soybean production systems based on HRCs, it is difficult to understand why growers continue to base weed control on a single herbicide tactic. The adoption of IWM can resolve the negative aspects of the current HRC systems but has, to date, not been widely accepted by growers.