

**IMPACT OF TECHNOLOGY ON CONSULTANTS: WEED MANAGEMENT**

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**Abstract**

Growers rapidly adopted Roundup Ready technology once it was commercialized in 1997. By 2001, 67% of the U.S. cotton acreage was planted to Roundup Ready cotton for numerous reasons; most notable was the fact that weed control with Roundup Ready cotton was simple, easy, effective, and economical. During this time period, weed control became simple and the value of those providing weed control recommendations decreased accordingly. As growers relied more on glyphosate and less on tillage and other herbicides, the value of those providing weed control recommendations continued to be reduced. Although glyphosate-resistant horseweed was first confirmed in the cotton belt during 2001 and spread to eight states in the cotton belt by 2009, the pest only slightly increased value to those providing weed control recommendations because glyphosate-resistant (GR) horseweed management recommendations were moderately simple and economical. However with the confirmation and rapid spread of GR Palmer amaranth (130 counties in eight states by 2009), weed control will be forever changed and likely will never be as simple again. GR Palmer amaranth has changed and will continue to change agriculture because of the complex systems required to obtain adequate control. Understanding the biology of the pest from its rapid spread, massive seed production, and rapid growth as well as understanding herbicide rates and herbicide use patterns are essential for the management of this pest, thereby greatly increasing the value of those providing weed control recommendations. As more weeds become resistant to herbicides, such as GR johnsongrass, GR ryegrass, GR common ragweed, and GR giant ragweed, the impact and value of those providing weed control recommendations will continue to rise as management programs will become even more complex.