

1476 Palmer amaranth (*Amaranthus palmeri*) management in enhanced glyphosate-resistant cotton

Dr. J. Wayne Keeling , Texas Agricultural Experiment Station, Lubbock, TX
Mr. John D. Everitt , Texas Agricultural Experiment Station, Lubbock, TX
Mr. Max A. Bata , Texas Agricultural Experiment Station, Lubbock, TX

Field studies were conducted in 2005 and 2006 at the Texas Agricultural Experiment Station near Lubbock to evaluate preplant incorporated (PPI) and postemergence topical (POST) residual herbicides with glyphosate for improved Palmer amaranth control in enhanced glyphosate-resistant cotton. Treatments consisted of no PPI or trifluralin PPI followed by Roundup POST with or without Staple or Dual Magnum. Residual herbicides were tank-mixed with Roundup and applied only with the first POST application. The second POST application of Roundup was made "as needed".

Season-long Palmer amaranth control was not improved when trifluralin PPI was followed by Roundup plus Staple or Dual Magnum compared to Roundup alone. However, when trifluralin was not used, Staple or Dual Magnum POST improved mid-season Palmer amaranth control 8 to 10%. Delaying the initial POST application 7 to 14 days did not reduce weed control or cotton yield. Although residual herbicides were not always necessary to control Palmer amaranth season-long, they are important for resistance management. In both years, no difference in cotton yield was observed when the initial Roundup application was delayed.