

# Herbicide Programs for Managing Glyphosate- and ALS-Resistant Palmer Amaranth in Mississippi Corn

Jason A. Bond, Erick J. Larson, and Dan B. Reynolds

Herbicide Programs to Manage Resistant Palmer Amaranth in Corn. <sup>1</sup>		
Corn System <sup>2</sup>	Preemergence <sup>3</sup>	Postemergence <sup>4</sup>
Roundup Ready	Bicep II Magnum, Cinch ATZ, Degree Xtra, Guardsman Max or Lexar	Callisto, Laudis, or Halex GT plus atrazine; Lexar; dicamba or 2,4-D
LibertyLink + Roundup Ready	Bicep II Magnum, Cinch ATZ, Degree Xtra, Guardsman Max or Lexar	Ignite <sup>5</sup> or Ignite plus atrazine, Callisto, Laudis, or Halex GT plus atrazine; Lexar; dicamba or 2,4-D

- (1) Glyphosate- and ALS-resistant Palmer amaranth are prevalent across much of Mississippi. This guide is to help aid producers in the management and/or prevention of resistant Palmer amaranth. Intensive scouting is necessary to determine whether control options employed have failed. **Timely applications are critical in controlling escaped Palmer amaranth populations.**
- (2) Rotation of corn herbicide systems, such as Roundup Ready and Liberty Link, is recommended to help delay the onset of resistance if not currently present, or to manage current resistant populations.
- (3) Preemergence applications of residual herbicides may be more effective when planting corn late and/or soils are warm enough for immediate Palmer amaranth germination (morning soil temperatures are above 65°F). The use of residual herbicides is imperative in the management of resistant weeds. Residuals, when properly activated by timely rainfall or irrigation, can provide 2–3 weeks of Palmer amaranth control (depending on time of year, soil moisture, and pressure).
- (4) Postemergence applications may be more effective when planting corn early and/or soils are too cool for immediate Palmer amaranth germination (morning soil temperatures are less than 60°F). Postemergence applications may be required in fields where a preemergence herbicide was applied. Postemergence herbicide applications should always be based on careful scouting for weed spectrum and growth stages and should be applied when Palmer amaranth is 2 to 3 inches tall.
- (5) **Spray coverage is critical for weed control with contact herbicides such as Ignite. Be sure to use spray nozzle (flat fan, twin jet, etc.) that will ensure thorough coverage of the weed. Avoid use of AI (air induction) nozzles with contact herbicides.**

Bond is an associate research/extension professor at the Delta Research and Extension Center in Stoneville. Larson is an associate extension/research professor and Reynolds is a professor in the Mississippi State University Department of Plant and Soil Sciences. This document was approved for publication as MAFES Information Sheet 1353 of the Mississippi Agricultural and Forestry Experiment Station. It was published by the MSU Office of Agricultural Communications, a unit of the Division of Agriculture, Forestry, and Veterinary Medicine. Copyright 2011 by Mississippi State University. All rights reserved. This publication may be copied and distributed without alteration for nonprofit educational purposes provided that credit is given to the Mississippi Agricultural and Forestry Experiment Station.





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