

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

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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, Corvus + Atrazine, Degree Xtra, Guardsman Max, Zidua + Atrazine, or Lexar EZ	Glyphosate + Armezon/Impact, Callisto, Capreno, or Laudis + Atrazine; Glyphosate + Lexar EZ; Halex GT + Atrazine; Dicamba or 2,4-D
LibertyLink + Roundup Ready	Bicep II Magnum, Cinch ATZ, Corvus + Atrazine, Degree Xtra, Guardsman Max, Zidua + Atrazine, or Lexar EZ	Liberty 280 <sup>5</sup> + Armezon/Impact, Callisto, Capreno, or Laudis + Atrazine; Liberty 280 + Lexar EZ; Halex GT + Atrazine; Dicamba or 2,4-D

- (1) Glyphosate- and ALS-resistant Palmer amaranth weeds 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 if 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 it is 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 a timely rainfall or irrigation, can provide 2 to 3 weeks of Palmer amaranth control, depending on time of year, soil moisture, and pressure. Paraquat at 0.75 pound of active ingredient per acre plus a surfactant should be added to residual herbicides if glyphosate-resistant Palmer amaranth is emerged before application.

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- (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 they should be made when Palmer amaranth is 2 to 3 inches in height.
- (5) **Spray coverage is critical for weed control with contact herbicides such as Liberty 280. Be sure to use a 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.**



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