No. 1359 Information Sheet October 2013

Herbicide Programs for Managing Glyphosate-Resistant Italian Ryegrass in Mississippi

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Herbicide Programs to Manage Resistant Italian Ryegrass.[1]

Crop	Fall[2]	Winter[4,5]	Spring[6]
Corn	*S*-metolachlor[3] at 1.27 lb/A of active ingredient or Boundary at 2 pt/A or Zidua at 2.5 oz/A or double disk	Clethodim at 0.094–0.125 lb/A of active ingredient	Paraquat[7] at 0.75–1 lb/A of active ingredient or two applications of paraquat spaced 10–14 days apart
Cotton	*S*-metolachlor[3] at 1.27 lb/A of active ingredient or Zidua at 2.5 oz/A or trifluralin at 1.5 lb/A of active ingredient or double disk	Clethodim at 0.094–0.125 lb/A of active ingredient	Paraquat[7] at 0.75–1 lb/A of active ingredient or two applications of paraquat spaced 10–14 days apart
Soybean	*S*-metolachlor[3] at 1.27 lb/A of active ingredient or Boundary at 2 pt/A or Zidua at 2.5 oz/A or trifluralin at 1.5 lb/A of active ingredient or double disk	Clethodim at 0.094–0.125 lb/A of active ingredient	Paraquat[7] at 0.75–1 lb/A of active ingredient or two applications of paraquat spaced 10–14 days apart
Rice	Command at 2 pt/A or double disk	Clethodim at 0.094–0.125 lb/A of active ingredient	Paraquat[7] at 0.75–1 lb/A of active ingredient or two applications of paraquat spaced 10–14 days apart

(1) Glyphosate-resistant Italian ryegrass is prevalent across much of Mississippi. This guide is to help aid producers in the management and/or prevention of Italian ryegrass. Intensive scouting is necessary to determine if control options employed have failed. **Timely applications are critical in controlling escaped populations.**

(2) The most effective residual glyphosate-resistant Italian ryegrass control has been achieved when residual herbicides are applied from mid-October to mid-November. **Paraquat (Gramoxone SL at 2–3 pints per acre or the 3-pound paraquat formulation at 1.33–2 pints per acre) plus surfactant should be added to soil residual herbicides if glyphosate-resistant Italian ryegrass is emerged before application.**

(3) The *S*-metolachlor rate should be increased to 1.6 pounds per acre of active ingredient on heavier-tex-

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tured soil. When applying a product that contains metolachlor (Parallel PCS, etc.), the rate should be increased by 25%.

(4) Winter applications should be made from mid-January to mid-February and applied when glyphosate-resistant Italian ryegrass is no more 4–6 inches tall.

(5) Preplant applications of Clethodim (Select Max, Arrow, Volunteer, etc.) should be made at least 30 days before planting corn or rice. The higher rate of Clethodim should be used if no residual herbicide was applied in the fall. **Multiple applications of Clethodim targeting glyphosate-resistant Italian ryegrass are discouraged due to the potential for resistance development.**

(6) Spring applications should be made from March 1 to March 20 based on careful scouting for emerged glyphosate-resistant Italian ryegrass. **Postemergence herbicide options for Italian ryegrass are limited following corn emergence. Italian ryegrass should be controlled before planting corn.** Spray coverage is critical for weed control with contact herbicides such as paraquat. 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.

(7) Research indicates that the addition of atrazine (corn) at 1 quart per acre, metribuzin (soybean) at 4 ounces per acre, or diuron (cotton) at 1.5 pints per acre will increase efficacy of paraquat against glyphosate-resistant Italian ryegrass. Sequential applications should be based on careful scouting for emerged glyphosate-resistant Italian ryegrass.

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