

Herbicide Programs for Managing Glyphosate-Resistant Italian Ryegrass in Mississippi

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| Herbicide Programs to Manage Resistant Italian Ryegrass. ¹ | | | |
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| Crop | Fall ² | Winter ^{4,5} | Spring ⁶ |
| Corn | Dual Magnum ³ at 1.33 pt/A or double disk | Select Max at 12–16 oz/A or equivalent rate of 2 lb clethodim formulation | Paraquat ⁷ at 0.75–1 lb/A of active ingredient or two applications of paraquat spaced 10–14 days apart |
| Cotton | Dual Magnum ³ at 1.33 pt/A or trifluralin at 3 pt/A or double disk | Select Max at 12–16 oz/A or equivalent rate of 2 lb clethodim formulation | Paraquat ⁷ at 0.75–1 lb/A of active ingredient or two applications of paraquat spaced 10–14 days apart |
| Soybean | Dual Magnum ³ at 1.33 pt/A or Boundary at 2 pt/A or trifluralin at 3 pt/A or double disk | Select Max at 12–16 oz/A or equivalent rate of 2 lb clethodim formulation | 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 | Select Max at 12–16 oz/A or equivalent rate of 2 lb clethodim formulation | 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 Dual Magnum rate should be increased to 1.67 pints per acre on heavier-textured soil.
- (4) Winter applications should be made from mid-January to mid-February and should be based on careful scouting for emerged glyphosate-resistant Italian ryegrass.

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- (5) Preplant applications of Select Max should be made at least 30 days before planting corn or rice. The higher rate of Select Max or the 2-pound clethodim formulation should be used if no residual herbicide was applied in the fall. **Multiple applications of Select Max or the 2-pound clethodim formulation targeting glyphosate-resistant Italian ryegrass are discouraged.**
- (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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