

# MESSENGER-INQUIRER

 Cooperative  
Extension Service



## Farm Update

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AGRICULTURE & NATURAL RESOURCES  
EDUCATION

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### Fall Burndown for Control of Italian Ryegrass

This spring I had several calls to visit corn fields that had grass that survived the post-emergence herbicide application. The grass was Italian ryegrass. Dr. Travis Legleiter, Extension Weed Control Specialist, wrote the following article concerning the increased levels of Italian Ryegrass appearing in our fields.

Italian ryegrass has long been a problem in the wheat producing counties along the Tennessee border. It is becoming more common in our area to encounter ryegrass escapes and burndown failures prior to corn and soybean planting each spring. Traditionally we have relied on spring burndown applications for control of winter annuals, including ryegrass, prior to corn and soybean planting. While this strategy is highly effective against most winter annual weed species, Italian ryegrass is now challenging this strategy. We need to explore alternative strategies to reduce the pressure on spring burndown applications that are increasingly failing to control Italian ryegrass. This is where the use of fall residual herbicides is an option that can relieve the pressure on the spring burndown applications.

Several products that contain pyroxasulfone or S-metolachlor either have federal label language or 24 (c) special needs labels that allow for application in the fall for control of Italian ryegrass or fall germinating weeds. Products that have label language allowing for fall

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applications in Kentucky are Anthem MAX, Boundary, Dual II Magnum, Helmet MTZ, and Zidua SC.

Research trials evaluating fall applied residual herbicides were conducted at the University of Kentucky Research and Education Center in Princeton, KY in 2022 and 2023. Additionally, a trial evaluating residual herbicide and cover crop combinations was implemented in 2023. Results of the experiments were that all residual herbicides provided greater than 94% ryegrass control the following spring and had greater control than a burndown herbicide alone which provided 2% control of ryegrass. Winter annual ground cover was significantly reduced by all residual herbicide as compared to a fall burndown without a residual herbicide indicating an increased risk of potential soil erosion with the use of fall residual herbicides. Italian ryegrass density five months after fall residual applications was reduced to one to two plants per square foot as compared to a non-residual burndown application with 14 plants per square foot. The use of residual herbicides increased control of Italian ryegrass in the spring following applications both applied pre and post to cover crop emergence. The combination of residual herbicides and cover crops resulted in the greatest control of Italian ryegrass.

Cover crop injury in 2023-24 was minimal on wheat, with less than 5% injury occurring. Cereal rye injury was insignificant in the 2023-24 trial. Cover crops were able to be established successfully in combination with both pre and post applications of residual herbicides allowing the use of a residual herbicide while minimizing overwinter soil erosion potential.

Here are my fall 2024 recommendations for those farmers dealing with Italian ryegrass based off these research results. Farmers dealing with a highly suspected or confirmed glyphosate resistant Italian ryegrass population should apply a fall application of a tank mixture

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of paraquat (Gramoxone) plus either Boundary or Helmet MTZ. We know that paraquat and metribuzin have synergistic activity on Italian ryegrass thus the use of a residual premix with metribuzin will be beneficial. Farmers still able to control ryegrass with glyphosate should apply a residual herbicide with either glyphosate or paraquat. Those using glyphosate should include any of the residual herbicide listed above, all provided significant reductions in spring ryegrass densities. The incorporation of a cover crop of either wheat or cereal rye with a residual herbicide creates a scenario where Italian ryegrass suppression can be achieved while also maintaining a cover on the soil to reduce soil erosion potential. Plan to follow up with a spring burndown application to control any escapes. All residual herbicides provided significant reductions in ryegrass populations but did not provide 100% control of ryegrass in the spring.

## **Cost Share reminder**

Call the extension office to ask that a 2024 County Agricultural Investment Program (cost share) request be mailed to you. Projects must be complete and the required documentation must be postmarked by November 30. Visit <https://www.kyagr.com/agpolicy/2024-Program-Guidelines-and-Applications.html> to discover which projects and items are eligible for reimbursement.

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