


# MESSENGER-INQUIRER

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## Farm Update

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AGRICULTURE & NATURAL RESOURCES  
EDUCATION

Clint Hardy

Daviess County Extension Office

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### **Weed Control Begins with a Strong Burndown**

Dr. Travis Legleiter, UK Extension Weed Scientist wrote the following article on getting the growing season started off right with a successful herbicide burndown.

One essential key for a successful annual ryegrass burndown is making applications only when ryegrass is less than 6" tall and nighttime lows are above 45F three nights before and after application. Unfortunately, capturing this window of the correct growth stage, air temperatures, and soil conditions can be difficult. With the understanding that we may not be able to capture this magical window on every acre, we must focus on maximizing our burndown applications in other ways. Based on our research, we have found that the following keys are essential to maximize the burndown of Italian ryegrass. Use at least 1.5lb ae/a glyphosate (40 fl oz Roundup PowerMax 3). This has been proven in UK weed science research numerous times and is the biggest mistake I find when a failure occurs. Adding 1 fl oz Sharpen or 15 fl oz Verdict to 1.5 lb ae glyphosate consistently results in the greatest ryegrass control. Our research in 2024 found preliminary results that the inclusion of MSO as an adjuvant in this tank mix may be the leading contributor to the increased consistency in ryegrass control.

Do not include atrazine or metribuzin with glyphosate as these products will antagonize glyphosate activity on ryegrass. The best non-glyphosate mixture is Gramoxone plus atrazine or

# MESSENGER-INQUIRER

metribuzin plus 2,4-D or dicamba. Paraquat (Gramoxone) and atrazine or metribuzin are synergistic and increase control as compared to each of the components applied alone. Adding 2,4-D or dicamba is optional for those fields where troublesome broadleaves like marestalk (horseweed) exist. These tank mixtures work best on small ryegrass and under warm sunny conditions. A follow-up application to capture any regrowth should be planned.

Do not use clethodim or other group 1 herbicides. The group 1 herbicides (clethodim, quizalofop, sethoxadim, etc) work very slowly compared to other systemic herbicides when the weather is warm. When you spray these products in the spring when temperatures are cool, especially overnight, this only exacerbates the slow activity and ryegrass almost always escapes application of the group 1 herbicides.

We have heard of a few applicators using low rates of Select Max (2 to 3 fl oz/a) with glyphosate and have observed increased control over glyphosate alone. We always discourage the use of reduced rates of herbicides, as this is a known pathway to herbicide resistance. Additionally, I suspect that the increased activity has less to do with the active ingredient (clethodim) and more to do with the EC or 'oily' formulation acting as an adjuvant similar to the MSO mentioned above.

Make sure you understand what adjuvants are needed to be sure your herbicide applications are effective. Adjuvants are often needed to ensure the product can effectively find its way into the weed and to its target site of action. The exclusion of an adjuvant such as MSO from a Sharpen application can be the difference between a successful and a failed burndown

Last year, we received a few questions about using liquid nitrogen as a carrier for spring burndown applications. While including a small amount of nitrogen (such as ammonium

# MESSENGER-INQUIRER

sulfate) can be beneficial in getting herbicides into plants, larger amounts such as liquid N as a carrier may have the opposite effect. Liquid nitrogen can cause rapid plant tissue necrosis and antagonize the movement of a systemic herbicide to its target site of action allowing weeds to survive the herbicide application.

We recommend using water as your burndown carrier for the most effective herbicide applications. All water is not created equally. We must be aware of the properties of the water we use for herbicide applications. As we start a new growing season it may be wise to check your water sources' pH and hardness. Adjustment of water hardness and pH can be critical for successful herbicide applications throughout the season. In the challenging conditions of spring burndowns, having a quality water carrier can go a long way.

## **Upcoming Meeting:**

The Daviess County Agricultural Development Council will meet at 7:00 p.m. on March 27 at the Daviess County Extension office to review recently submitted funding requests. For more information visit <https://www.kyagr.com/agpolicy/2025-Program-Guidelines-and-Applications.html> or call the extension office.

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