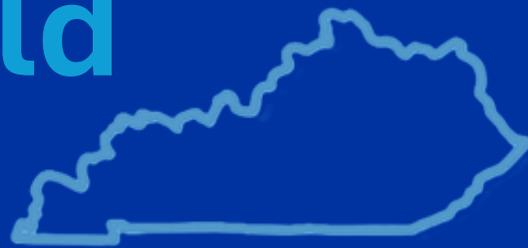


# Kentucky Field Crops News



Spanning 5 departments and 120 counties

March 2026, Volume 02, Issue 03



Grain and Forage  
Center of Excellence

UK Wheat Science Group  
UK Corn & Soybean Science Group

## *In This Issue*

New Dicamba Labels Approved for Soybean in 2026.....	2
How Can I Improve Corn Fertilizer Nitrogen Use Efficiency?.....	5
Ryegrass Burndown Options .....	7
Do We Need Large Plants to Get High Soybean Yields? .....	11
UK Welcomes New Extension Specialists .....	13
Upcoming Events.....	14

To sign up & receive the **Kentucky Field Crops News**,  
click the link: [KFCN NEWSLETTER](#)

or  
scan the QR code.



# New Dicamba Labels Approved for Soybean in 2026

**Dr. Travis Legleiter, UK Extension Weed Specialist**  
**Dr. Marcelo Zimmer, UK Extension Weed Specialist**

The dicamba labels for over-the-top applications to Xtend and XtendFlex soybean were approved by the EPA and KDA in early February, making these products available for the 2026 growing season. The new labels look similar to previous labels with a few important changes. We will review what remains the same and what has changed, although we will not cover the entire label, so remember to read the label and take your mandatory training before applying these products.

## What changed

### ***Xtendimax is now Stryax***

There will no longer be Xtendimax available from Bayer for use in dicamba-tolerant (DT) soybean, rather the new dicamba product is now called Stryax. This is the same formulation, simply a change in brand name. BASF will still offer Engenia (dicamba), and Syngenta will have Tavium (dicamba plus S-metolachlor). All three product labels have been approved for use in Kentucky.

### ***New Temperature Restrictions to Reduce Volatility***

Volatility mitigations will no longer rely on growth stage or calendar date but rather will depend on daily high temperatures as forecasted by the National Weather Service. The following temperature restrictions will apply with all three labels based on the forecasted high temperature on the day of and the day following the planned application.

<b>Forecasted High Temperature (F)</b>	<b>Rate of dicamba, required adjuvants, and mitigations*</b>
Below 85 F	0.5 lb dicamba + VRA + DRA No additional restrictions
85 F to 94 F	0.5 lb dicamba + VRA + DRA <i>DO NOT treat more than 50% of DT soybean acres managed by grower within the county</i>
95 F or greater	DO NOT APPLY
*VRA = Volatility Reduction Agent DRA = Drift Reduction Agent	

### ***VRA Rates Increased***

The VRA rates to be used with new dicamba products have doubled compared to previous registrations. For example, if using a 50% potassium hydroxide/ethanoic acid as your pH buffering agent, such as a VaporGrip® Xtra Agent (several brands available), the rate is now 40 fl oz/A. The user must check the product manufacturer's website for a list of qualified VRAs and VRA application rates (approved VRA websites currently updating).

### ***Endangered Species Runoff Mitigation***

As with all new labels, there are now runoff mitigation points required for the three new dicamba labels. Applicators and farmers must check [Bulletins Live! Two](#) within six months of the application to determine if their field occurs within a PULA (Pesticide Use Limitation Area). At the time of the writing of this article,

the only PULA in Kentucky for the three dicamba products occurs between Wickliff, Barlow, and the Ohio River in Ballard County, KY.

Fields outside of PULA's (majority of KY) will require 3 mitigation points, while fields within a PULA (small area in Ballard County KY) will require 6 mitigation points. Achieving three runoff points should be fairly simple for most growers without making any changes to their production practices. For a review of calculating runoff mitigation points, refer to our article in last year's [March Newsletter](#)

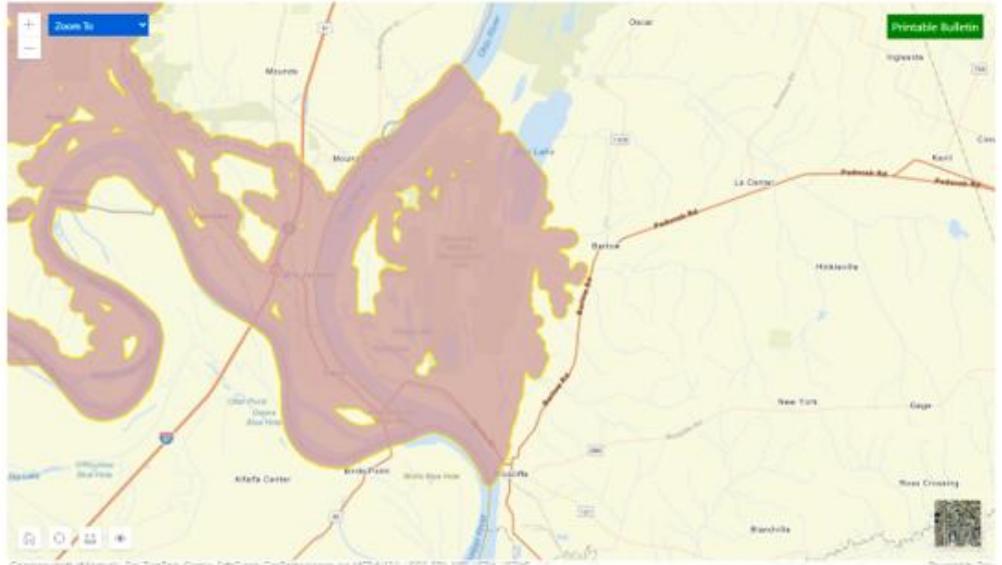


Figure 1. Screenshot from Bulletins Live! Two taken on 3-5-2026 showing PULA for Stryax, Engenia, and Tavium that occurs in Ballard County KY.

### **Tank Mixing**

The new dicamba labels have dropped the requirement to review potential tank mixes on the registrants' websites. Tank mixing language on the new labels is similar to most herbicide labels to follow the most restrictive directions for each product in the tank mix. As compared to the old labels, this opens up one tank mix that was not allowed previously, which may expand weed control potential. The use of glufosinate with dicamba is now allowed, although caution should be used with the larger droplet sizes required for dicamba.

The requirements of NO AMS, the use of a VRA (Volatility Reduction Agent), and the use of a DRA (Drift Reduction Agent) still apply. These requirements may also impact glufosinate efficacy. Therefore, a sequential application of glufosinate after dicamba may be more effective than a single tank mixture application.

### **Nozzle Requirements**

The new dicamba labels no longer have websites indicating specific nozzle requirements for application. Rather, the labels simply say that spray nozzles to be used must provide a "coarse or coarser" droplet spectrum.

### **Maximum Dicamba Rate Per Season**

The previous DT soybean dicamba labels allowed up to 2 lb. of dicamba per acre per season. This restriction was exclusive to the three DT soybean products and excluded any applications of other dicamba formulations that may have been applied before or after the soybean crop. The new labels only allow up to 1 lb. of dicamba per acre per season and this applies to all dicamba products including products such as Clarity or other dicamba products not labeled for use in DT soybean. Thus, if a grower applies a dicamba product like Clarity prior to soybean planting, that grower is now limited to only one in-crop application of Stryax, Engenia, or Tavium.

## What Remains the Same

The remainder of the three new labels and application restrictions look very similar to the previous labels. This list is not exhaustive; users must still take the required dicamba training, where all restrictions will be covered, and, as always, read the label prior to making any application.

- Do Not apply more than 0.5 lb dicamba per application
- Mandatory Training through registrants is required prior to purchase and application
  - Online training websites were still updating at the time of publication, but are expected to be fully available by Mid-March 2026
    - <https://bayerstewardshiptraining.com/>
    - <https://www.engeniaherbicide.com/training.html>
    - <https://syngentaus.docebosaa.com/learn>
- Mandatory Record-keeping for every application
  - Refer to label for all items needed for record keeping
  - Record wind speed, direction, and temperature at the beginning and end of the application and at **each refill**
- All applications require the use of a DRA and VRA
- Apply a minimum of 15 gallons of spray solution per acre
- Apply through R1, but not after R1 growth stage of soybean
- Apply only when winds are between 3 to 10 mph
- Do Not apply if a sensitive crop is growing in and adjacent downwind area
  - Refer to labels for list of sensitive crops
- Do Not apply if soil in area to be treated is saturated
- Do not apply if rainfall is expected within 4 hours after application
- Do Not use AMS or AMS-containing products with Stryax, Engenia, or Tavium
- Apply only between 1 hour after sunrise until two hours prior to sunset
- Do not apply if a temperature inversion is occurring
- Boom height should not exceed 24 inches above target crop or weed canopy
- Do not allow application equipment to exceed 15 mph
- Maintain a 240 ft downwind buffer
  - Areas to be included in buffer and buffer reduction mitigations can be found in the label

Citation: Legleiter, T., Zimmer, M., 2026. New Dicamba Labels Approved for Soybean in 2026. Kentucky Field Crops News, Vol 2, Issue 03. University of Kentucky, March 13, 2026.

### **Dr. Travis Legleiter, UK Extension Weed Specialist**

(859) 562-1323    travis.legleiter@uky.edu

### **Dr. Marcelo Zimmer, UK Extension Weed Specialist**

(859) 218-1287    marcelo.zimmer@uky.edu

# How Can I Improve Corn Fertilizer Nitrogen Use Efficiency?

Dr. John Grove, UK Soils Research & Extension

Corn fertilizer nitrogen use efficiency (NUE) is defined as the amount of fertilizer N (lb) needed per unit corn yield (bu). Typically calculated as the total fertilizer N rate (lb N/acre) divided by the corn grain yield (bu corn/acre). It is a ratio. There are only 3 ways to make the NUE shift in the desired direction (downwards); (1) keep N use rate steady while raising yield (doing other things better while holding N rate management constant); (2) lowering N use rate with changed N management while maintaining all other corn yield potential management practices; (3) doing both (1) and (2) – improving corn yield potential management practices and lowering the fertilizer N use rate.

I'm going to focus, mostly, on (2) by considering the "4R" concept – we want to be able to reduce our 'right rate' by optimizing our 'right timing' and 'right placement' with the 'right source' and without reducing (perhaps even raising) corn yield.

I say "mostly" because there are several more general practices that can significantly impact fertilizer N effectiveness. Have I soil tested and know I'm maintaining soil pH (6.0 or better) and other soil-borne nutrient levels (mid-medium or better) where they need to be to support my corn crop? Do I have some wet-natured field areas that could be better drained? Am I using manure on some of my fields? Am I growing corn after corn or after a thick, heavy winter cereal (barley, wheat or rye) cover crop? Do I do some tillage prior to planting some fields, and no-till the others? Research shows that how I answer these questions will impact the chosen N rate and my NUE for each field.

Let's start with fields where my no-till corn will follow either wheat/double crop soybean or full season soybean. When the corn N response data from 2013 to 2023 (150 site-years of data) was summarized, the [AGR-1](#) recommended total pre-plant/at-plant N rate range for no-till corn was between 140 and 170 lb N/acre for well/moderately well drained soils and 155-185 lb N/acre for somewhat poorly/poorly drained soils. This recommendation assumes that no cereal cover crop was present and no N loss inhibitor was used. The recommendation is given as a range in rates, but the recommendation assumes a N/corn price ratio of 0.1 (e.g. \$0.40/lb N and \$4.00/bu corn). Given that current prices are around \$0.70/lb N and \$4.50/bu corn (price ratio is now 0.16), I'd likely move to the lower side of the recommendation range, 150 lb N/acre for well/moderately well drained fields and 165 lb N/acre for somewhat poorly/poorly well drained fields. If I do some tillage in my fields, AGR-1 recommends a further N rate reduction of 10 lb N/acre because tillage stimulates N mineralization from the soil organic carbon and remaining crop residues.

For my somewhat poorly/poorly drained corn fields, if I decide to delay one-half to two-thirds of the total N application 4 to 6 weeks after planting, AGR-1 indicates that my corn N rate can be reduced by 25 lb N/acre. When the 2013-2023 corn N response data was reviewed there wasn't as much benefit to delayed N applications on well/moderately well drained soils. This suggests that the benefit to delayed N application on wet natured soils is due to reduced N loss, not necessarily better matching N supply to corn N uptake.

When applying most all the N pre-plant/at-planting, rainfall is more likely and N loss due to excess moisture is more probable, so use of a nitrification inhibitor (hot link to 2023 February corn/soy newsletter) is beneficial, regardless my chosen N source (usually anhydrous ammonia, but occasionally urea or urea-ammonium nitrate (UAN) solution). The recommended N rate can be reduced 15 to 20 lb N/acre.

If I'm going to delay most of my N and surface apply top/sidedressed urea/UAN solutions, then use of a good urease inhibitor (repeat hot link to 2023 February corn/soy newsletter) is warranted. This is especially true if there are considerable previous crop (especially corn) or cover crop (especially barley, wheat or rye) residues present, and the recommended N rate for no-till corn following soybean and a heavy cereal cover

crop rises to 165 to 195 lb N/acre (after corn and a heavy cover crop it rises to 185 to 215 lb N/acre). Use of the urease inhibitor causes the AGR-1 N rate recommendation to fall by 15-20 lb N/acre.

Injecting delayed UAN below the soil surface also allows me to improve NUE. The injected N is much less likely to be volatilized or tied up/immobilized by microbial action on surface residues and I can reduce my total N rate by 15 to 20 lb N/acre.

It's obvious that some of these practices substitute for one another (injection versus a urease inhibitor for delayed UAN applications to no-till corn following heavy residues), but others are unique to a given situation. Generally, all the NUE-improving practices discussed here act to conserve applied N, build corn yield potential and permit an N rate reduction relative to the general corn N rate recommendation. See the [AGR-1](#) corn N recommendations for additional information.

Grove, J.H., and E.L. Ritchey. 2023. Thoughts on corn nitrogen sources for 2023 – What really matters? *Corn & Soybean News* 5(2): 1-4.

<https://graincrops.ca.uky.edu/files/cornsoynewsletter2023vol05issue02feb.pdf>

Citation: Grove, J., 2026. How Can I Improve Corn Nitrogen Use Efficiency? *Kentucky Field Crops News*, Vol 2, Issue 03. University of Kentucky, March 13, 2026.

**Dr. John Grove, UK Soils Research & Extension**

(859) 568-1301 jgrove@uky.edu

# Ryegrass Burndown Options

Dr. Travis Legleiter, UK Extension Weed Specialist

Each year ryegrass burndown prior to no-till corn and soybean seems to get more difficult and complaints of glyphosate failure continue to increase. The conundrum of this situation is that only about a third of ryegrass samples sent to the University of Kentucky Herbicide Resistance Screening Program are confirmed glyphosate resistant. While we know glyphosate resistance in ryegrass is occurring in select populations in Kentucky it appears in many cases our glyphosate burndowns are failing due to other reasons than resistance. Here today we hope to tackle potential pitfalls causing burndown failures on ryegrass.

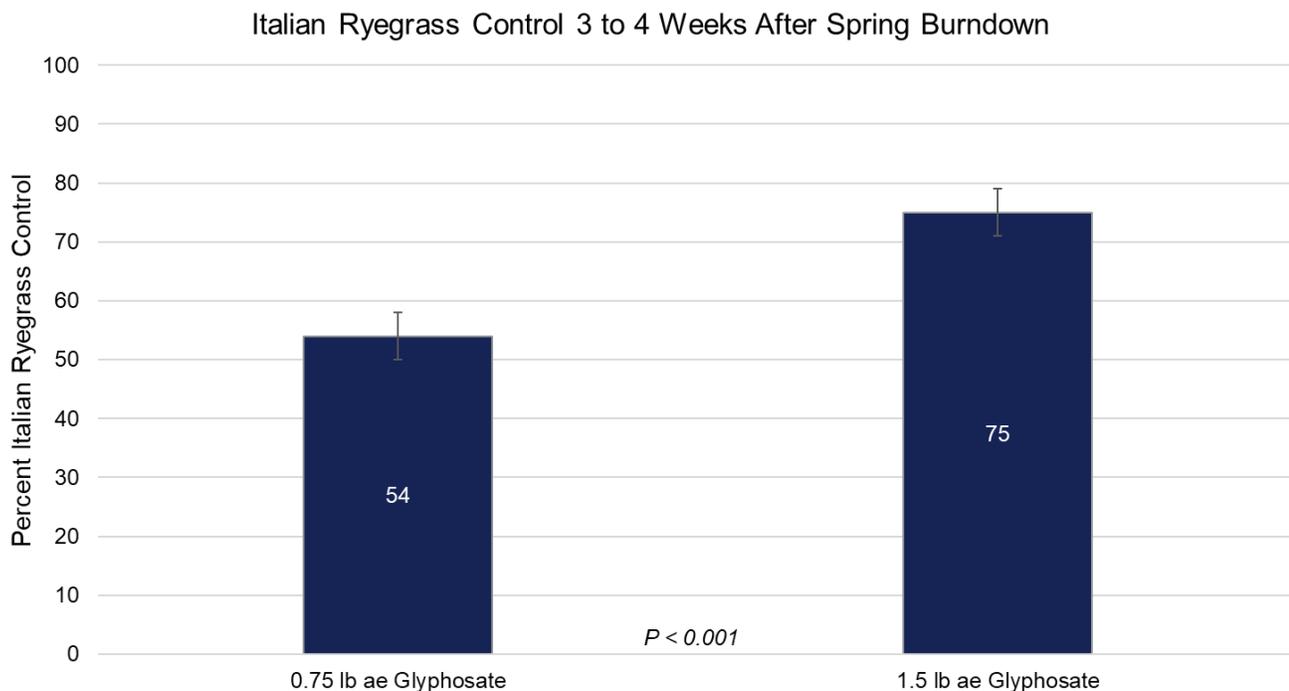
## Pay Attention to the Weather

Spring time weather can be volatile with both warm days and cold nights. When applying burndown applications to ryegrass it is important to pay attention to nighttime temperatures. We have found that making applications when nighttime temperatures 2 days prior or after dip below 40 to 45 F failures are more likely to occur. The key window is to find when those nighttime temps remain above 40F, the soil conditions allow for sprayer traffic, and when ryegrass remains small.

## Apply 1.5 lb ae glyphosate

When I receive a complaint about a ryegrass burndown failure with glyphosate, one of the first questions I ask is how much glyphosate was applied. The majority of the time the rate is around 0.75 to 1 lb ae glyphosate per acre. Our research has consistently shown that applying 1.5 lb ae glyphosate per acre is required to achieve optimal control as shown in figure 1.

Figure 1. Influence of glyphosate rate on Italian ryegrass control 3 to 4 weeks after application. Data compiled from UK research trials from 2019, 2020, 2024, & 2025.



Trial Years: 2019, 2020, 2024, 2025

## How Much is 1.5 lb ae glyphosate?

Glyphosate comes in many different formulations with different loads of glyphosate and different salts used to stabilize the active ingredient in the jug. Because of this, we often refer to glyphosate rates in lb ae (acid equivalent) per acre rather than fl oz of product per acre. The following table lists the majority of available glyphosate products and the rate in fl oz to achieve glyphosate rates of 0.56 to 1.5 lb ae/A. This table can also be found on page 17 of [AGR-6](#).

Figure 2. Glyphosate product rates in lb ae (acid equivalent) per Acre.

### Glyphosate Products Labeled For Use in Grain Crops

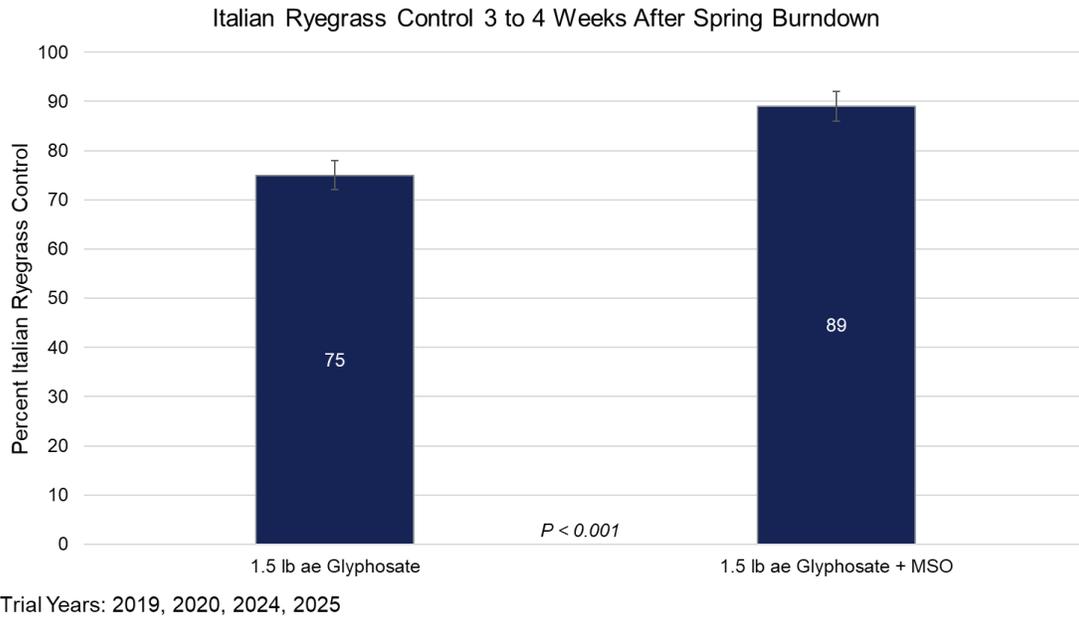
Glyphosate Product	Rate Equivalent 0.56 lb a.e./A	Rate Equivalent 0.75 lb a.e./A	Rate Equivalent 1.125 lb a.e./A	Rate Equivalent 1.5 lb a.e./A
<b>3 lb ae/gal (IPA salt)<sup>1</sup></b> Buccaneer, Buccaneer Plus, Cornerstone Plus, Credit 41Extra, Envy, Envy Intense, Four Power Plus, Glyphogan, Glyphogan Plus, Glyphosate 4 Plus, Glyphosate 41%, Gly Star Original, Gly Star Plus, Gly Star Gold, Honcho Plus, Imitator Plus, Mad Dog, Mad Dog Plus, Makaze, Razor	24 fl oz (1.5 pt)	32 fl oz (2 pt)	48 fl oz (3 pt)	64 fl oz (4 pt)
<b>3 lb ae/gal (IPA + MOA salt)<sup>1</sup></b> Showdown				
<b>3.75 lb ae/gal (IPA salt)<sup>1</sup></b> Buccaneer 5	19 fl oz	26 fl oz	38 fl oz	52 fl oz
<b>4 lb ae/gal (IPA salt)<sup>1</sup></b> Buccaneer 5 Extra, Cornerstone 5 Plus, Credit 5.4 Extra, Gly Star 5 Extra, Mad Dog 5.4, Sunphosate 5 MAX	18 fl oz	24 fl oz (1.5 pt)	36 fl oz	48 fl oz (3 pt)
<b>4 lb ae/gal (DMA salt)<sup>1</sup></b> Duramax, Durango DMA				
<b>4.5 lb ae/gal (K salt)<sup>1</sup></b> Abundit Edge, Buccaneer K, Cornerstone K, Credit K6, Gly Star K-Plus, Honcho K6, Mad Dog K6, Roundup PowerMAX, Roundup PowerMAX II, Roundup Weather MAX	16 fl oz (1 pt)	21 fl oz	32 fl oz (2 pt)	42 fl oz
<b>4.5 lb ae/gal (IPA + K salt)<sup>1</sup></b> Credit Xtreme, Envy Six Max				
<b>4.8 lb ae/gal (K salt)<sup>1</sup></b> Roundup PowerMAX 3	15 fl oz	20 fl oz	30 fl oz	40 fl oz

<sup>1</sup> IPA = Isopropylamine salt DMA=Dimethylamine K = Potassium salt MOA = Monoammonium salt

## Apply Glyphosate with 1% MSO

This recommendation is specific to ryegrass burndowns with glyphosate. The addition of 1% v/v MSO to 1.5 lb ae glyphosate per acre has consistently increased our control of ryegrass in our burndown research trials. The addition of MSO to glyphosate for ryegrass burndowns is also a standard practice in other southern states such as Arkansas who are also dealing with ryegrass burndown failures.

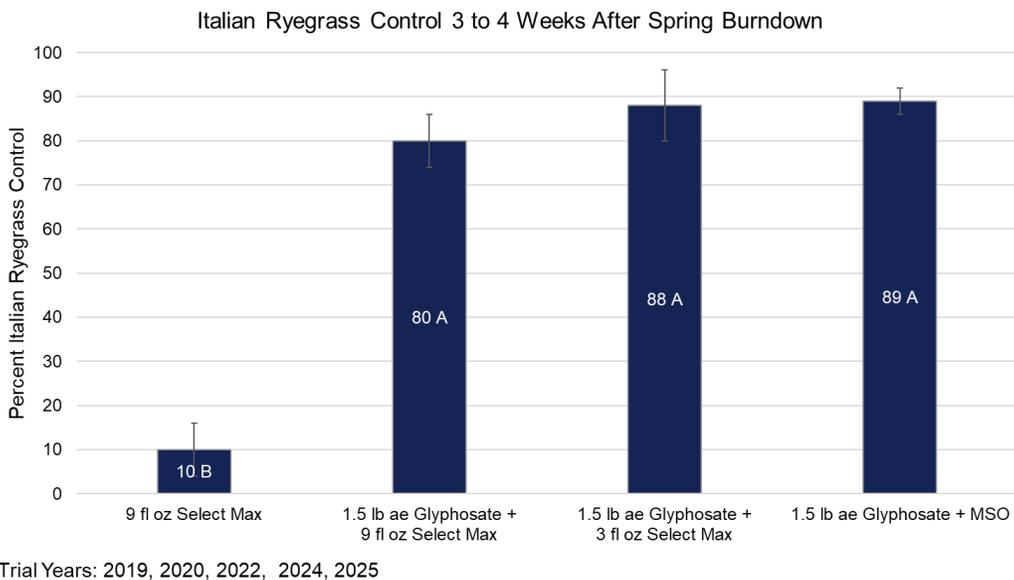
Figure 3. Influence of 1%v/v MSO with 1.5 lb ae per acre glyphosate on Italian ryegrass control 3 to 4 weeks after application. Data compiled from UK research trials from 2019, 2020, 2024, & 2025.



### Clethodim is Not the Answer

It is very common that farmers and applicators want to turn to clethodim the first time they encounter a failure with glyphosate. Clethodim, unfortunately, is not going to work well for ryegrass burndowns in March when cool weather (especially overnight temps) is going to work against this active ingredient. In the figure below you can see that 9 fl oz/A of Select Max only provided 10% control of Italian ryegrass, an obvious failure in weed control. The addition of clethodim to glyphosate also did not influence control as compared to the 1.5 lb glyphosate plus 1% MSO. If anything, the use of clethodim in the spring for ryegrass burndown we are simply selecting for clethodim resistance which is becoming apparent as many populations sent to the Herbicide Resistance Screening Program are showing levels of clethodim resistance already. Our best advice is to read the following options below and save your clethodim for grass control in soybean in the summer.

Figure 4. Influence of clethodim on Italian ryegrass control 3 to 4 weeks after application. Data compiled from UK research trials from 2019, 2020, 2022, 2024, & 2025.



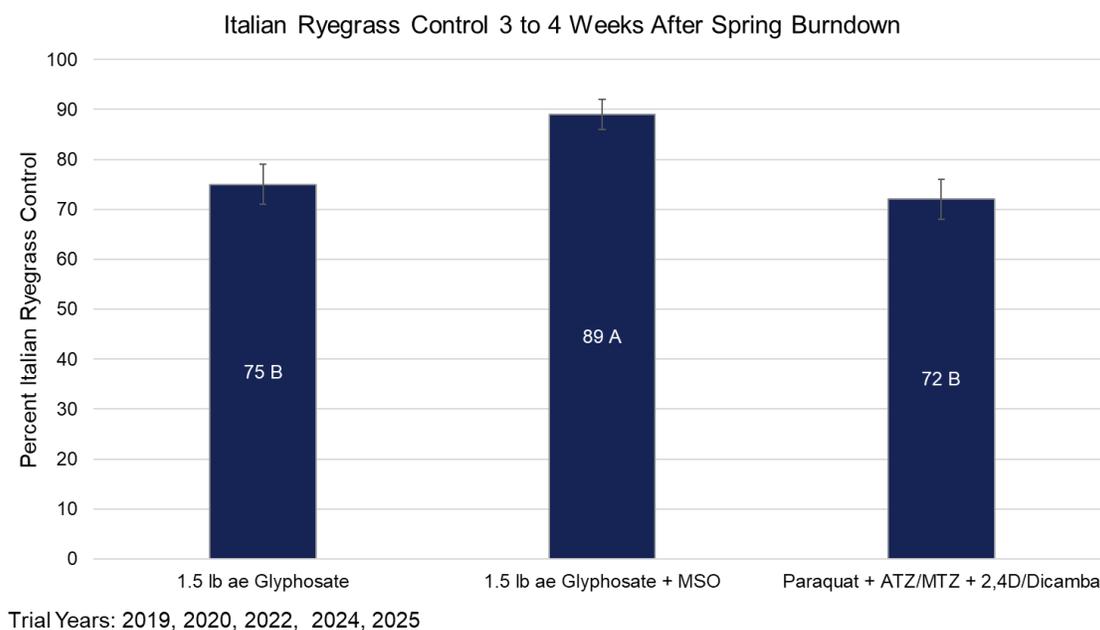
## Pay attention to Plant Back Restrictions

If you choose to ignore the above section and use clethodim in your burndown, be aware that the plant back restriction to corn is 30 days. While many assume plant back restrictions are in place to protect the crop from injury, this is a false assumption. Plant back restrictions are in place to protect the end consumer products from containing pesticide residues; thus it is extremely important we follow these restrictions. This fact sheet from WSSA does a great job of laying out the importance of plant back restrictions: [Label-Mandated Plant-Back Restrictions](#)

## What If you do have Glyphosate Resistance?

As mentioned earlier, despite the lack in glyphosate resistance confirmations we do know that resistance has occurred and is occurring in select locations within the state. In these cases, you are best off using a mixture of paraquat with either atrazine (in front of corn) or metribuzin (in front of soybean). The mixture of these active ingredients are synergistic and increase control as compared to the products applied alone. You will note our mixtures also contain 2,4-D or dicamba which are simply in the mix for broadleaves and have no influence on ryegrass control. Note in the figure below that you should only expect 70 to 80% control from this mixture and should expect to need to do a second burndown. Additionally, if you are in this scenario, we highly recommend fall herbicide programs which we will cover in future editions as we approach fall.

Figure 5. Comparison of glyphosate and paraquat based mixtures on Italian ryegrass control 3 to 4 weeks after application. Data compiled from UK research trials from 2019, 2020, 2022, 2024, & 2025.



Citation: Legleiter, T., 2026. Ryegrass Burndown Options. Kentucky Field Crops News, Vol 2, Issue 03. University of Kentucky, March 13, 2026.

**Dr. Travis Legleiter, UK Extension Weed Specialist**

(859) 562-1323    travis.legleiter@uky.edu

# Do We Need Large Plants to Get High Soybean Yields?

**Dr. Dennis Egli, UK Professor Emeritus**

At first glance, the answer to this question seems obvious – of course larger plants will produce higher yields. Unfortunately, it's just not that simple.

Soybean plants that grow rapidly will be large and produce high yields. Plenty of water, adequate nutrition, and no problems with weeds, insects or diseases are characteristics of a high-yield environment that results in rapid plant growth and large plants. Rapid growth produces large plants and high yields.

High yields are usually associated with large numbers of pods and seeds which are related to the crop growth rate between Growth Stage R1 and R5. A high growth rate during this critical period produces lots of pods and seeds and high yields (assuming there is no stress during seed filling (Growth Stage R5 to R7).

The opposite of this relationship is also true. Stress during vegetative growth and the R1 to R5 period will slow growth, reduce plant size, the number of pods and seeds, and yield.

But the growth rate - plant size relationship is not the whole story. Plants can also be large by growing for a long time. There are always two ways to get large plants, they can grow rapidly, or they can grow for a long time or any combination of the two. Understanding how crops grow and produce yield is never simple.

Variation in variety maturity results in differences in the length of the vegetative growth phase (planting to R5) and plant size. Late maturing varieties have a longer vegetative growth phase and, even though they may grow at the same rate as earlier varieties, they will produce larger plants because they grow for a longer time. We compared varieties from Maturity Groups (MG) 00, I, III, and V in irrigated experiments for two years on Spindletop Farm near Lexington, KY using a mid-May planting date. The length of vegetative growth (from planting to growth stage R5) varied from 55 days for MG 00 to nearly double that (90 days) for MG V (Fig. 1). The weight of the vegetative plant at Growth Stage R5 (beginning of seed fill) was closely associated with these differences in time, but yield was not. The differences in plant size did not necessarily translate into differences in pod and seed number or yield because the differences were due to time, not to the rate of growth.

Delayed planting also shortens the vegetative growth phase, resulting in smaller plants. For example, delaying planting from mid-May to late-June on Spindletop Farm shortened the vegetative growth phase from 73 to 60 days in a Maturity Group II variety and from 87 to 68 days in a Maturity Group IV variety. With less time to grow, the plants are smaller.

Plant size also plays an important role in the interception of solar radiation. Solar radiation provides the energy to drive photosynthesis and plant growth, so maximum growth rate and yield requires intercepting all the solar radiation. Solar radiation that makes it to the ground (is not intercepted) is wasted, in fact, it's worse than wasted because it helps weeds grow. The plant growth rate is related to the proportion of the solar radiation intercepted by the leaves, so the plant must be large enough to provide complete ground cover by at least R1 (or shortly thereafter) to get maximum yield. Reaching complete ground cover earlier will contribute to better weed control, but it's not necessary for maximum yield (assuming no problems with weeds). We can circumvent the size issue when it comes to solar radiation interception by using narrower rows.

The effects of variety maturity or planting date on plant size and productivity is complicated by the fact that changing maturity or planting date puts critical growth stages (flowering, seed set and seed filling) in a different environment. The MG 00 variety that we used in our research reached Growth Stage R5 on July 19 compared with August 23 for the MG V variety with a mid-May planting date. The early variety probably

received more solar radiation during seed set and seed filling than the late variety, but which one got more rainfall could vary from year to year. Changes in the environment probably has a greater effect on the lower yields in late plantings than the smaller plants, assuming narrow rows are used to provide complete ground cover.

Do we need large plants to get high soybean yields? Yes and no! It all depends on why they are large. Plants that grow rapidly are large and have the potential to produce high yields. Plants that grow for a longer time are also large, but, in this case, large does not necessarily mean higher yield. Always remember – “imagination is more important than knowledge. Knowledge is limited. Imagination encircles the world.” Albert Einstein, 1879 – 1955. Theoretical physicist.

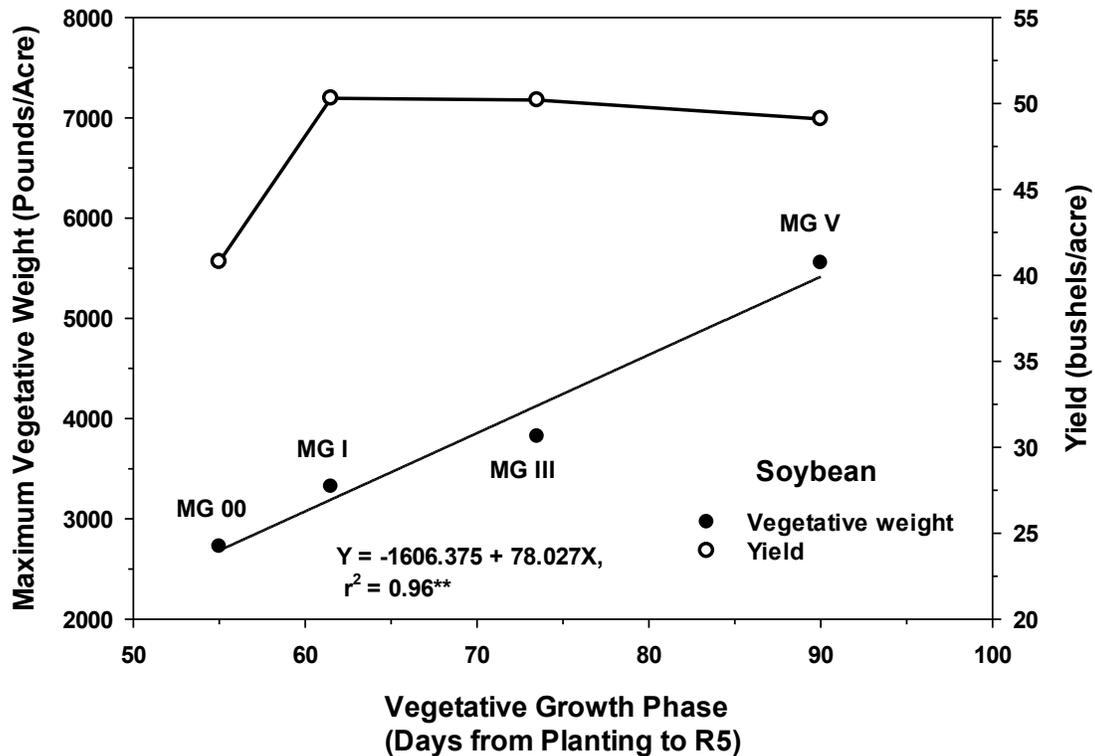


Figure. 1. Effect of variety maturity on the length of the vegetative growth phase, plant size and yield. Mid-May planting date. Adapted from Egli, D.B. 1993. Field Crops Res. 32: 147-158.

Citation: Egli, D., 2026. Do We Need Large Plants to Get High Soybean Yields? Kentucky Field Crops News, Vol 2, Issue 03. University of Kentucky, March 13, 2026.

**Dr. Dennis Egli, UK Professor Emeritus**

(859) 218-0753 degli@uly.edu

## UK Welcomes New Extension Specialists



**Dr. Ricardo Ribeiro** joined the University of Kentucky in August 2025 as an Extension Assistant Professor in Soil Sciences. His work focuses on soil and nutrient management to enhance the productivity, profitability, and resilience of Kentucky grain and forage systems, with the goal of helping producers optimize nutrient inputs while sustaining long-term soil productivity.

For grain production, Dr. Ribeiro emphasizes practical, science-based strategies to improve nutrient use efficiency, soil structure, water infiltration and retention, and overall soil health. He also works on fertility management in pastures and hay systems and integrated crop–livestock, including the strategic use of grazing cover crops within grain systems to improve soil function and overall system performance.

His extension efforts are grounded in on-farm research and participatory engagement with producers, consultants, extension agents, and industry partners to develop solutions responsive to Kentucky’s soils, climate, and production challenges.

Prior to joining UK, he completed a postdoctoral appointment at The Ohio State University, where he led research on grazing management, carbon sequestration, and soil health in large-scale on-farm trials. He holds a B.S. in Agronomy and M.S. and Ph.D. degrees in Soil Science.

**Dr. Marcelo Zimmer** joins the University of Kentucky as an Assistant Extension Professor of Weed Science based in Lexington, KY.

Marcelo’s program focuses on the management of weeds in pastures, forages, roadsides, and other perennial systems, with primary responsibility for developing and implementing extension weed science programs in central and eastern Kentucky.

Dr. Zimmer obtained his MS and PhD from Purdue University under the supervision of Dr. Bill Johnson. He was a Program Specialist in the Purdue Weed Science Extension program from 2019 to 2025. He obtained a BS degree in Agronomy at the Federal University of Pelotas in Brazil. Marcelo originates from Princesa, Santa Catarina state, a small town in southern Brazil, where he grew up on a row crop and dairy cattle farm.



# Upcoming Events

**May 12, 2026, UK Wheat Field Day, Princeton, KY**

**May 28, 2026, Crop Scouting Clinic, Princeton, KY**

**June 25, 2026, Pest Management Field Day, Princeton, KY**

**July 21, 2026, UK Corn, Soybean and Tobacco Field Day, Princeton, KY**

**July 23, 2026, High School Crop Scouting Competition, Princeton, KY**

**TBA 2026, Drone Pilot Certification Workshop, Madisonville, KY**

## Cooperative Extension Service

Agriculture and Natural Resources  
Family and Consumer Sciences  
4-H Youth Development  
Community and Economic Development

## MARTIN-GATTON COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT

Educational programs of Kentucky Cooperative Extension serve all people regardless of economic or social status and will not discriminate on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, sex, sexual orientation, gender identity, gender expression, pregnancy, marital status, genetic information, age, veteran status, physical or mental disability or reprisal or retaliation for prior civil rights activity. Reasonable accommodation of disability may be available with prior notice. Program information may be made available in languages other than English. University of Kentucky, Kentucky State University, U.S. Department of Agriculture, and Kentucky Counties, Cooperating.  
Lexington, KY 40506



Disabilities  
accommodated  
with prior notification.