

Burndown of Ryegrass Cover Crops Prior to Crop Planting¹

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Cover crops are commonly used after fall harvest to stabilize the soil over winter, improve soil organic matter content, and allow winter grazing on otherwise fallow ground. Many different small grain crops (oats, wheat, rye, etc) can successfully be used as a cover crop, but ryegrass is a common choice. Ryegrass is used because it is very hardy and produces large amounts of biomass during the winter for grazing. However, if ryegrass is not successfully controlled prior to crop planting, it can become a major weed problem.

Glyphosate or Gramoxone are commonly used to burn down existing vegetation in order to provide a weed-free environment for planting. Most grasses are very sensitive to glyphosate and a single application will usually be sufficient to kill most cover crops. However, ryegrass has proven to be quite tolerant to both glyphosate and Gramoxone. Many research trials conducted across the southeast have shown that a single application of glyphosate or Gramoxone is rarely sufficient. Therefore, a program approach is generally needed to maximize ryegrass control.

Applying glyphosate at 0.75 lb ae/A will often provide about 70% ryegrass control (Image 1). However, if a follow-up application is not made, it can be difficult to tell that any burndown was applied after about 2 weeks (Image 2). Increasing the glyphosate rate by 1.12 lb ae/A can improve control, but failures at this rate are still possible, particularly during dry weather. Therefore, using a sequential application program is the best way to ensure complete ryegrass control. It is important to begin the spray program at least 10 days prior to planting to allow the herbicide sufficient time to work and regrowth to occur before the second application is made.

Recommendations for Specific Crops

For glyphosate rate conversion see Table 1.

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Figure 1. Ryegrass receiving one applicator of glyphosate. Note that complete control was not achieved. Credits: Steve Williams, Albaugh Inc.



Figure 2. Ryegrass regrowth 2 weeks after receiving one applicator of glyphosate. Regrowth has occurred and corn yield reduction will likely occur. Credits: Steve Williams, Albaugh Inc.

Corn

Option 1. Glyphosate 0.75 lb ae/A 10-14 days prior to planting followed by Gramoxone Inteon 1.9 pt/A + atrazine 3 pt/A.

Option 2. Glyphosate 1.12 lb ae/A + atrazine 3 pt applied at least 7 days prior to planting.

Option 3. Gramoxone Inteon 1.9 pt/A 10-14 days prior to planting followed by Gramoxone Inteon 1.9 pt/A + atrazine 3 pt/A.

It is important to use atrazine in the ryegrass control program. Atrazine possesses activity on ryegrass and although atrazine alone is not sufficient, it works well with the other herbicides to enhance control. Also, since corn is often planted in March when ryegrass is still actively growing, the additional herbicidal benefit of atrazine is needed.

Cotton or Peanuts

Option 1. Glyphosate 0.75 lb ae/A 10-14 days prior to planting followed by Gramoxone Inteon 1.9 pt/A.

Option 2. Glyphosate 0.75 lb ae/A 10-14 days prior to planting followed by glyphosate 0.75 lb ae/A.

Table 1. Conversion of glyphosate rates based on product formulations.

Brand	0.75 lb ae/A	1.12 lb ae/A
<u>3 lb ae/gal</u> ClearOut, Cornerstone, Credit, Glystar, Glyfos, Glyphomax, Glyphosate 4, Honcho, Rattler, Razor, Roundup Original, Touchdown	32 fl. oz/A	48 fl. oz/A
<u>4 lb ae/gal</u> Glystar 5, Glypro	24 fl. oz/A	36 fl. oz/A
<u>4.5 lb ae/gal</u> Roundup Weathermax	22 fl. oz/A	32 fl. oz/A