

News release

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Effective Control of Cover Crops Including Annual Ryegrass  
Success Relies on Good Chemistry and Attention to Optimal Conditions

Jamie Scott introduced cover crops slowly and carefully. Like most farmers, Scott was cautious about putting cover crops in his fields over the winter that could impact production of corn and soybeans. His initial 100-acre foray into cover crops was with annual ryegrass. While he now plants a variety of cover crops, annual ryegrass is still his preferred one.

Last fall, Scott oversaw the aerial seeding of about 30,000 acres in NE Indiana, while also providing cover crop seed to others in the area. Along with each sale came education: printed material and website links, expert advice and field demonstrations. "Any crop can become a problem if you don't pay attention to management details," Scott said. "Cover crops, including annual ryegrass, are no different."

The spring of 2012 brought early warmth. The annual ryegrass he aeriually seeded last September began to green-up and grow in early March. He told his customers to wait before applying a burndown. They were concerned about too much spring growth impeding corn planting. But his recipe was simple and it worked. "We had uniform success killing the annual ryegrass because people followed the protocol," he said. "And beyond the other benefits – like deep rooting, nitrogen scavenging and low cost – annual ryegrass reduces the growth of annual weeds like mare's tail," he added.



Successful burndown of annual ryegrass and radish: one pass. 1.5 qts. glyphosate, 1.0 pt. 2,4-D , 2.1 oz. of Canopy , citric acid and 12 gallon of water

Scott's basic package for killing annual ryegrass involves 1.5 quarts of generic glyphosate and a pint of 2,4-D with 12 gallons of water. Because water chemistry impacts glyphosate effectiveness, Scott adds citric acid to lower the pH to between 4.5 and 5.5. The rate of citric acid (reducing pH) and AMS (reducing hardness) will vary depending on your water. In addition, Scott adds herbicides that provide another mode of action but don't cause antagonism with the glyphosate (like Round Up). Herbicides he added to the glyphosate this year included:

- 2.1 oz. of Canopy or,
- 1.0 oz. of Sharpen with 2.1 oz. of Canopy and bean oil or,
- 1/3 oz. of Basis

He increased the 2,4-D rate from a pint to a quart if crimson clover was part of the cover crop mix with annual ryegrass.

"I urge people to use a combination of herbicides (at least two). Glyphosate and 2,4-D alone will often do the trick, but Canopy or Sharpen can be added insurance for control," Scott said. "I got uniform control using any of the herbicide mixes," he said, "and the only calls I got from customers were from those that hadn't followed the control procedures properly."

Mike Plumer, an agronomist and crop consultant in central Illinois, conducted additional herbicide trials this year, as well as in previous years. He concurred with Scott's results and added this advice: "The weather, the temperature and time of application are very important factors in management of cover crops, especially annual ryegrass. Overnight temperatures should consistently be above freezing. (It's important that the annual ryegrass be completely out of dormant phase when the herbicide is applied.)"

"Moreover," Plumer added, "daytime temperatures should be above 50 degrees, the weather dry, and spraying herbicides must be done early enough in the day to allow translocation of the chemical into the plant." Scott's acreage, shown in photos above and below, was all sprayed before noon. "With warmer weather and longer daylight hours, you can spray later and still get good translocation," he said.

Plumer, who worked for the University of Illinois Extension for three decades, is well regarded for his cover crop expertise. He said, "If you're properly managing annual ryegrass and other cover crops, control is not a problem."



New corn crop emerging amid annual ryegrass and crimson clover residue. Double the amount of 2,4-D when using clover with annual ryegrass: 1.5 qts generic glyphosate, 2.1 oz Canopy, quart of 2-4D, citric acid, and 12 gallons water.

"Finally, Plumer added, "it's not enough to spray herbicide once and presume that your work is done. Scouting the acreage is part of the protocol. There are times when a second application is necessary, especially when the first application was applied when the conditions weren't ideal."

For more details about cover crop management, visit [www.ryegrasscovercrop.org](http://www.ryegrasscovercrop.org)