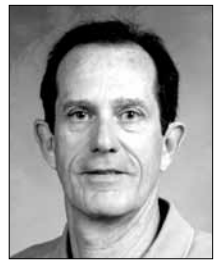


# Residual herbicides, different modes of action critical for glyphosate-resistant weed control

By **Bill Mosley**  
**Business Leader**  
**MANA Crop Protection**



If you've ever come face to face with glyphosate-resistant weeds in your cotton fields, you know there are no words to describe the havoc it can create.

A profound example of this is glyphosate-resistant pigweed - a problematic weed that is rapidly spreading across the South. Its damage potential is alarming - reducing yields by 25 percent or more.

Considering that a single plant is capable of producing over a million seeds, there's no minimizing the risk you face to future crops with resistant weeds as a threat.

Fortunately, an arsenal of tools and strategies already exist to win the war against glyphosate-resistant weeds. It's simply about being proactive and properly executing a season-long weed control plan.

Common threads in strategic recommendations among university researchers and industry experts regarding glyphosate-resistant weed control include:

1. Use of residual herbicides.
2. Rotation of different modes of action.
3. Weed control on surrounding non-crop ground.
4. Crop rotation.
5. Use of tillage and cultivation practices.

When implemented under a systematic approach, these recommendations are proven to be successful in managing glyphosate-resistance. Most critical to overall success, however, is the use of pre- and post-residual herbicides and the rotation of different modes of action.

Proven residual products like Cotoran<sup>®</sup>, Cotton Pro<sup>®</sup> and Direx<sup>®</sup> 4L

are a perfect fit for high-impact weed control systems. Cotoran is an excellent pre-emergent herbicide choice, given its broad spectrum control of grasses and broadleaves while Cotton Pro can be used as a pre-emergent or post-direct to provide contact and residual control for later-germinating weeds.

If you're seeking even more application flexibility, consider Direx 4L which provides residual activity while being one of the best performing tools for pigweed control.

With or without the added use of glyphosate, these residual herbicides offer multiple modes of action to combat herbicide-resistant weeds.

As an added bonus for 2012, these products qualify for incentives up to \$12 per gallon (\$3 per acre, per application) under the Roundup Ready PLUS<sup>™</sup> program.

At the end of the day, just remember; be proactive about weed control in 2012. Implement a variety of the strategic recommendations from university and industry experts, and don't let the headache of glyphosate-resistant weeds get the better of you.

Use residual herbicides and different modes of action like those in Cotoran, Cotton Pro and Direx 4L and you'll rest easy thanks to proven performance and consistent control of your toughest weeds.

**For more information about these residual herbicides, go to [www.manainc.com](http://www.manainc.com) or call 866-406-6262. For recommendations under the Roundup Ready PLUS program, go to [www.roundupreadyplus.com](http://www.roundupreadyplus.com).**