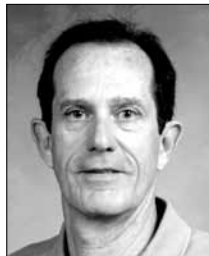


# Use residual herbicides early for glyphosate-resistance management

By **Bill Mosley**  
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Glyphosate-resistance has thrown a wrench into some of our traditional programs for effective and economical weed control on cotton.

While most growers want to continue relying on glyphosate as part of their weed control success story, an important factor is that different tools must be part of the equation to win the war against herbicide-resistant weeds.

Early-season use of residual herbicides as part of an integrated weed management strategy is endorsed by Southern university weed experts. Growers operating from a glyphosate-based weed management system are encouraged to include multiple soil pre-plant or pre-emergence residual herbicides in their program. The advantage of this is not only in preventing early weed competition, but in addressing weeds showing signs of or confirmed with resistance.

Alongside the use of residual herbicides is the need to alternate modes of action throughout the season to stay ahead of resistance build-up, regardless of when weeds may appear.

Based on our understanding of glyphosate-tolerant Palmer amaranth and marehail, it only takes one or two years before these weeds can become very difficult to control economically.

The goal is to get a handle on the problem from the onset versus a wait and see approach. Ask any grower who is currently battling glyphosate-resistant Palmer amaranth and I guarantee he will tell you playing catch up is not only difficult, but very expensive.

Where glyphosate-resistance is on high alert, experienced go-to pre-plant

and pre-emergence residual herbicides like Cotoran<sup>®</sup> offers the right dynamic needed for a systematic weed control approach.

A proven performer under any high-impact control system, Cotoran is an excellent pre-emergence choice especially given its broad spectrum control of grasses and broadleaves. As a foundation tool, its residual activity can last up to two and a half weeks which gives you an edge in eliminating early-season competition.

Cotoran's mode of action also has the diversity to break the cycle of resistance in weeds appearing later in the season.

Better yet, Cotoran qualifies for an incentive of \$12 per gallon (\$3 per acre, per application) under the Roundup Ready PLUS<sup>™</sup> program. From an economic vantage point this helps in reducing annual input costs.

In evaluating 2012 strategies, shift your mindset from glyphosate as a singular solution and focus on an arsenal of inputs that support a total weed management approach.

With the decision to use an early-season residual herbicide and multiple modes of action with overlapping weed spectrums, be sure Cotoran is at the top of your weed control solution list. Cotoran will deliver and help you beat the odds against glyphosate-resistant weeds.

**To learn more about Cotoran, go to the MANA Crop Protection website at [www.manainc.com](http://www.manainc.com), or call 866-406-6262. For Roundup Ready PLUS details visit [www.roundupreadyplus.com](http://www.roundupreadyplus.com).**