

# Managing Resistance

## Early Season Control Is Best Bet In Managing Resistant Weeds

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**H**erbicide resistance was a top issue at the Northeastern Research Station Crop Production and Pest Management Field Day recently. Bill Williams, state weed specialist, discussed the issue with those attending.

"The big issue that gets a lot of press is herbicide resistance," he said. "We have yet to document or confirm glyphosate resistance in the state. We strongly suspect we have glyphosate resistant ryegrass and that's probably the closest thing that we are to confirming. The one that everybody is worried about would be Palmer amaranth and some of the pigweeds because of some of the problems they've had in Georgia, North Carolina, Arkansas and various places."

Williams has been out on a number of calls in

said scientists do suspect that Louisiana has ryegrass that is glyphosate resistant.

"We know we have resistance to all the ALS herbicides in ryegrass, we also have resistance to some of the graminicides, things like Select, Assure, Hoelon. We know Hoelon resistance in wheat is out there and now we're starting to get some cases where we suspect glyphosate resistance. In fact growers are convinced that it's glyphosate resistant. I've pulled samples in several fields, and unlike the pigweeds even on proper timings, it's still taking me 10-12 times the normal use rate of to get control. We don't have any real good solutions for that right now, particularly if you run into a situation where you've got multiple resistance to different herbicides. If you don't have glyphosate resistant ryegrass, adding some Resolve in your corn burndown program helps out on the ryegrass



"Herbicide resistance is the big issue," said Dr. Bill Williams, State Weed Specialist at a field day recently.

Photo by John LaRose, Jr.

the last few years and observed misses or escapes in various fields. However, when those plants are collected and taken back in for screening, it is found they are actually sensitive to glyphosate. The problem is farmers are waiting until they're 10-12 inches tall before trying to kill them and that's just too late. The weeds are too big.

"Farmers are doing a pretty good job following our recommendations as far as tank mixing but they're still waiting too long to make their first application. A lot of Sequence glyphosate plus metolachlor or glyphosate plus a generic metolachlor was used last year; but these applications were being made late and on large weeds. Metolachlor will not help control large weeds; it only provides residual control. If someone wants to use something like metolachlor to help manage herbicide resistance, they need to make those applications early when weeds are small to take advantage of the residual weed control."

Another issue tea weed, prickley sida. Currently nobody suspects resistance, but it is becoming more problematic. It's an old weed, been around for years, and it's making a comeback. Glyphosate works well on it when it's small but when it gets any size on it, it won't control it.

"We've really had our best success at controlling tea weed and/or the pigweeds when we use a residual herbicide in our burndown programs," Williams said. "Like in soybeans Goal or Valor; corn - Resolve or Valor; cotton - Valor, or Reflex. If we use those in our preplant programs, or when we plant, we still have that two week window to make the first glyphosate application, and use something like metolachlor, we actually can get the benefit of that residual compound. That gives us that little bit of flexibility."

"However, the main thing is if farmers are not doing anything, as soon as their cotton, corn, soybeans, whatever comes out of the ground they need to make that first glyphosate application; they can't wait two or three weeks, the weeds just get too large and that's leading to a problem."

It's also rather common to go out and see soybean fields and cotton fields where the weeds have taken over. You barely can tell there's a field, the weeds are so thick.

"Sure, they can clean them up, but that is going to lead to resistance issues, at the very least it's costing farmers a lot of money in lost yields," Williams added. "That's the main point that we want to get across today. Early season weed control will pay in improved yields and help manage herbicide resistance."

Going back to the preplant problems, Williams

quite a bit."

Most people now are using Select to try to pick up the ryegrass if they have a resistant ryegrass problem; or they're using things like Axial and some of the wheat herbicides to control the ryegrass.

"This year we were real successful late in the season burning down ryegrass with something like a Gramoxone plus Diuron; but the key thing to making that work is the ryegrass actually has to head out," Williams said. "Gramoxone is a peculiar, funny herbicide when it comes to ryegrass. It won't kill it prior to heading, it'll burn it back and the ryegrass regrows; but once it heads out we've been pretty successful with killing it with a Gramoxone program. People have done that a lot and they've really liked that."

"Graminicides can be used in cotton and soybeans to control ryegrass; a Gramoxone plus Diuron program can be used also. If you don't have ALS resistant ryegrass, then Accent or Steadfast is really good in the corn. That is the basic ryegrass program," he summed. "Essentially, if they didn't pick up the ryegrass with glyphosate the first time, there's no point in trying to go back and pick it up. That's kind of where we are on that."

The big problems are the common and tall waterhemp and palmer amaranth. The waterhemp are more dominant in the northeast part of the state. In the central part of the state, there is a little more Palmer amaranth. The northwest part of the state has almost all Palmer amaranth.

"They have a pretty serious infestation of it over there," Williams said "We haven't had any calls on Palmer over there, but I was there yesterday looking at it and they're doing a pretty good job of controlling it with the Roundup programs, but they're waiting until they're large. I saw a lot of Palmer fields where they looked like they had pretty decent control, but some of the larger pigweeds are going to regrow. They're just blowing the terminals out and then it's going to stool out on them and make a plant they can't kill. That will eventually or has the potential to help speed up the development of glyphosate resistance. It's the same thing as using reduced rates, something we don't recommend at the Ag-Center; we believe very firmly that leads to the quicker development of herbicide resistance."

"It's all about timing; herbicides are most effective on small actively growing weeds, and glyphosate is no exception." Δ

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