

New technologies emerging for sorghum weed control

Year in and year out, the most significant problem sorghum growers face in our area, other than drought, is grass weed control in their fields.

Until now there has not been any way to chemically control grassy weeds after they have emerged in the sorghum crop. While pre-emergence herbicides are available, activity on weeds is dependent on proper incorporation into the soil, such as watering in with irrigation. In the case of dryland production, sporadic rainfall events often are too late for effective incorporation at the optimum time.

With most of the sorghum acres in eastern New Mexico being dryland, this is a significant problem. Combine that with the fact that many of the problem weeds are closely related to sorghum genetically, it is safe to say grass weeds have been a thorn in the side of sorghum farmers for a long time.

All that may change in the not-so distant future. There are new technologies (non-genetically modified organisms) currently being developed that would allow for post-emergence grass weed control in grain sorghum (or milo), and eventually forage sorghums.

DuPont Crop Protection is licensing herbicide tolerance traits to seed companies that are developing grain sorghum lines tolerant to either acetolactate synthase herbicides, such as Accent and Resolve, or Assure II herbicide.

The benefit is that growers will eventually be able to spray over the top of grain sorghum (herbicide-tolerant

types) with particular herbicides to control grass weeds (and some broadleaf weeds). Specific chemistries that can be used and rates of products are still being evaluated.

At first release, sorghums will be tolerant to either the ALS or the Assure II herbicide. Eventually, both tolerances will be combined within the same sorghum variety.

These technologies will be only in newly developed lines of sorghum and will not be available in currently grown lines.

While the concern of weeds developing the same resistance to the herbicides is a valid one, this issue is being addressed through such methods as multiple modes of action with the two different herbicides, and eventually having both tolerance technologies in one sorghum plant. That way, growers can alternate their herbicide chemistries and not use the same herbicide over and over again. Products, such as Roundup and Select, will still be available to kill sorghum in situations where volunteer plants are unwanted. In addition, management practices such as crop rotations will need to be practiced.

Growers need to keep in mind that this technology is only one tool and it

must be used properly in order to prevent weed resistance.

Full scale release of the products is predicted to still be a few years away. However, a series of demonstrations will be conducted throughout the region over the next couple of growing seasons to highlight the benefits of herbicide-tolerant sorghum.

In 2010, New Mexico State University demonstrated these new technologies in large and small plots near the Agricultural Science Center at Clovis. Results from the research plots indicate that excellent control can be obtained with this technology with minimal or no damage to the crop; however, the summer of 2010 was a very wet one at the station and herbicide efficacy and crop response could vary considerably in a dry year.

In 2011, NMSU plans to once again evaluate the technology. Growers will be able to see the differences between treated and non-treated plots of both

herbicide types at these demonstrations. It is anticipated that this technology will be a major benefit to eastern New Mexico where nearly 100,000 acres are planted to sorghum each year. This effort is funded in part by the United Sorghum Checkoff Program and New Mexico Sorghum Producers.



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