

Over-the-top grass control in sorghum on the horizon

September 13 2010

Apply today's chemicals to a sorghum crop for grass control and the sorghum will be killed off also. But a solution could be only a few years away if Texas AgriLife Research plots are any indication.

Dr. Brent Bean, AgriLife Research and Texas AgriLife Extension Service agronomist, has test plots that demonstrate sorghum hybrids tolerant to herbicides typically associated with grass control.

The control is needed not only for annual grass control but also for Johnsongrass, Bean said. Because Johnsongrass is closely related to grain sorghum, herbicides typically used in crops such as cotton and corn cannot be used in sorghum.

A solution might be found with two sorghum hybrids originating from germplasm developed in the Kansas State University sorghum breeding program about five or six years ago. The germplasm development was funded by the National Grain Sorghum Producers Board and the United Sorghum Checkoff Program.

The germplasm is now being developed into commercial hybrids by Pioneer Seed Co. and other seed companies, Bean said. Products labeled for use in these herbicide-tolerant hybrids will come from DuPont.

"There's a group of herbicides called ACCase herbicides," he told a group of producers at a recent field day. "You are familiar with those in herbicides like Fusilade, Poast, Select, Assure II and Fusion. They've

been around a number of years and are used primarily for grass control in soybeans and cotton.

"You are also familiar with ALS herbicides typically used in corn, such as Resolve, Accent and Basis," Bean said. "The tolerant hybrids being developed will eventually be tolerant to both classes of herbicides."

What will be labeled for the ACCase-tolerant sorghum is Assure II, he said. There are actually two classes in the ACCase herbicide family, so not all of them will work. Bean has a plot of ACCase-tolerant sorghum that he sprayed with Select and it killed the sorghum.

"One will kill the sorghum, so Assure2 is what you want to use. With the other group of sorghums, they are going to be SU-tolerant for those herbicides.

Jack Lyons of Amarillo, with DuPont, said what the company is looking to do is "supply some post-emerge grass control in sorghum -- something that has been missing for a long time, especially for dryland farmers."

The seed companies are dealing with two traits which are being brought forward in the development phase individually. The ALS trait is going to be called Inzenz and the Assure II trait will be called InzenzAII, and eventually they will be stacked together.

The ALS [herbicide](#) will have three active ingredients -- nicosulfuron, familiar to producers in the product Accent; rimsulfuron (Resolve and Steadfast) and metsulfuron, commonly known as Ally, which is now primarily used in wheat, Lyons said.

How these three active ingredients will be mixed together is still being determined, Bean said. His AgriLife Research studies will help determine the final product to be marketed by [DuPont](#).

This year, Bean has two trials out comparing the effectiveness of various combinations of these three active ingredients, along with other herbicides currently labeled for use in sorghum.

He said the results look very promising with good grass control being achieved, although it appears application timing will be important. Other trials are being planned for next year in farmer's fields.

The two classes of herbicides will provide two different modes of action to control grass, Bean said. This will help prevent weed resistance to the herbicides from developing.

The ACCase-tolerant hybrids will be tolerant to those herbicides commonly referred to as "fobs," products like Assure II; and that was done with some forethought, Lyons said.

"That will leave us with the 'dims,' products like Select, where we will have a tool to control volunteer sorghum in a crop rotation program or if we develop some resistance," he said.

The big question is when these traits might be available in seed, Bean said.

Lyons said he expected quantities sufficient for larger demonstrations in 2012 and then for commercial production in 2013.

Provided by Texas A&M AgriLife Communications

Citation: Over-the-top grass control in sorghum on the horizon (2010, September 13) retrieved 25 April 2024 from <https://phys.org/news/2010-09-over-the-top-grass-sorghum-horizon.html>

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