

Managing Glyphosate-Resistant Palmer Amaranth In Grain Sorghum



DR. LARRY STECKEL

JACKSON, TENN.

It appears that Tennessee may have more grain sorghum planted in 2012. Several growers have figured that they can be more profitable with grain sorghum than soybean on some of their farms. Some of these fields

that are slated to go to sorghum have been more or less continuous soybean due to the productivity of the soil type and/or are prone to flooding and a June planting date. Factor in that many of these fields also have significant glyphosate-resistant (GR) Palmer pressure and one can see where sorghum is a viable option. The question is how to manage the Palmer pressure which is quite high in some of these fields in a crop of grain sorghum.

Grain sorghum does have more herbicide options for Palmer control than soybeans. However, there is not near the arsenal of Palmer amaranth effective herbicides registered for grain sorghum compared with corn. Grain sorghum is not as robust as corn when it comes to emergence and stand establishment. As a result, herbicides like simazine that is labeled in corn is NOT labeled in sorghum, as it will wipe out an establishing stand. Another corn herbicide, 2,4-D is not labeled pre emergence or pre-plant for the same reason. Even dicamba can only be applied at an 8 oz rate and only up to 15 days before sorghum planting due to stand establishment concerns.

Atrazine can be used pre and post in sorghum and will be a key herbicide in Palmer infested fields. Consider split applying the atrazine with some of it pre and the rest early post for best results. Atrazine is a good first step but it should not end there for good pigweed control. There

are some herbicides along with atrazine in grain sorghum that will provide residual control of Palmer amaranth. They are Dual Magnum, Guardsman and Degree and the atrazine pre-mixes of these (Bicep II Magnum, Guardsman Max and Degree Xtra). There has not been anything new from a herbicide standpoint in grain sorghum for many years but that changed when Lexar received a preplant/preemergence grain sorghum label. Lexar is a three way premix of atrazine, Dual Magnum and Callisto. All three of these herbicides will provide Palmer amaranth control provided they are activated by a rain. Again some care is needed when utilizing this herbicide. Lexar should not be used on course soil types. It is also much safer to an establishing sorghum stand if it is applied pre-plant 7 to 21 days before planting than pre emergence.

From a post standpoint the labeled products that can provide Palmer control are 2,4-D, dicamba, atrazine, Dual Magnum, Degree, Degree Xtra, Guardsman and Guardsman Max. Atrazine and the atrazine premixes (Degree Xtra and Guardsman Max) can be applied up to 12" tall sorghum. The Degree Xtra and Guardsman Max herbicides would be the "go to" options if similar products were not used before planting. An option here would be to start clean with a paraquat and atrazine preplant application followed with either Degree Xtra or Guardsman Max post emergence. Remember not to go over 2.5 lbs of atrazine for the season.

Grain sorghum rotation can be a good way to reduce Palmer amaranth pressure in a field. However, for fields with heavy GR Palmer pressure, it takes a preplant followed by early post-emergence herbicide application approach to best manage this weed. Δ

DR. LARRY STECKEL: Extension Weed Specialist, University of Tennessee