

News Column

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Weed management options for post-emergent control of grain sorghum

We have been fortunate in receiving plenty of moisture for our spring row crops. Even though this is great, it is also bringing on weeds that can compete with our crops. Good crop rotation and herbicide selection are essential components of managing weeds in grain sorghum.

According to Dr. Curtis Thompson, K-State Research & Extension weed specialist, "In a wheat-sorghum-fallow rotation, it is essential that broadleaf (winter annual: field pennycress and mustards; warm season broadleaf: palmer amaranth and kochia) and grassy weeds do NOT produce seed during the fallow period ahead of grain sorghum planting. It is equally important that winter annual grasses (downy brome or jointed goatgrass) are NOT allowed to head in the spring, before the sorghum is planted. Thus, an effective burndown should be applied prior to winter annuals going into the flowering/heading stages." Most winter annuals produce seed in April and early May. With all of the precipitation, it might have been difficult to make that application in a timely manner, so there may be weeds present that might be challenging to insure an adequate crop stand.

In sorghum, proper weed identification is critical as the best choice of herbicides will depend on the weed species present. Broadleaf weeds generally can be controlled with a combination of pre-emergence and post-emergence applied herbicides. With the development of herbicide-resistant weeds, however, this is becoming increasingly difficult.

Post-emergent broadleaf weed control products will be most effective when applied in a timely manner. Weeds that are 2-4 inches tall will be much easier to control than weeds that are 6-8 inches tall, or larger. Controlling weeds in a timely manner will result in less weed competition with the crop compared to waiting too long to control the weeds. Atrazine combinations with Huskie, Banvel, 2,4-D, Buctril, or Aim (or generic versions of these herbicides) can provide excellent broad-spectrum weed control.

Huskie, the newest herbicide registered in sorghum should be applied at 12.8 to 16 fl. oz/acre with 0.25 to 1.0 lbs. of atrazine, NIS 0.25% v/v or 0.5% v/v HSOC (high surfactant oil concentrate), and spray grade ammonium sulfate at the rate of 1 lb./acre to sorghum from 3-leaf to 12 inches tall. Huskie alone, without atrazine, can now be applied to sorghum up to 30 inches tall prior to flag leaf emergence, however it will be less effective. Huskie is effective on kochia, pigweeds, and many other broadleaf weed species. Huskie is most effective on small weeds. The larger pigweed and kochia get, the more difficult they are to control. Temporary injury to sorghum is often observed with Huskie.

The presence of certain weed species will affect which post-emergence herbicide programs will be most effective. See the grain sorghum section in the K-State Research & Extension, "2017 Chemical Weed

Control Guide” to help make the selection at www.ellis.ksu.edu or at your local K-State County Extension Office.

The crop stage at the time of post-emergence herbicide applications can be critical to minimize crop injury. Delayed applications to large sorghum increase the risk of injury to the reproductive phase of grain sorghum, thus increasing crop injury and yield loss from the herbicide application. Timely applications not only benefit weed control, but can increase crop safety. Always read and follow label guidelines.

For additional information contact me at the K-State Research & Extension Office in Ellis County.