

Harvest Aids In Corn And Grain Sorghum

DR. DANIEL STEPHENSON

ALEXANDRIA, LA.

It is that time of the year when corn and grain sorghum harvest is about to begin in earnest, which puts the spotlight on harvest aids. The question I hear most often is, "How can I kill the johnsongrass and morningglories in my corn/grain sorghum before I harvest?" There really are not many options, but the options we have will perform if they are applied correctly at the correct time.

The primary benefit from applying a harvest aid to corn or grain sorghum is desiccation of green crop/weed material. However, do not expect a harvest aid application to dry down the crop and bring the moisture content down so that you can harvest quicker. Harvest aids only desiccate (brown and crispy) green material. They don't reduce the moisture content of the corn or grain sorghum kernels. However, a harvest aid should help harvesting efficiency and increase combine speed because the amount of green material ran through the combine is reduced.

It is important that a producer does not apply a harvest aid to corn or grain sorghum until after the grain has reached physiological maturity and a specific moisture content. In both corn and grain sorghum, black layer formation is the most definitive sign of physiological maturity.

In corn, physiological maturity (black layer) typically occurs two to three weeks after the kernel dents. The starch layer in each kernel has reached the cob and a black layer forms at the

base of the kernel. Please note that kernels near the tip of the ear develop black layer earlier than kernels near the base of the ear. Typically, grain moisture content at this time ranges from 25 to 35 percent. Applying a harvest aid prior to black layer or when grain moisture content is greater than 35 percent may damage the grain.

Grain sorghum kernels at the top of the seed head will mature before those at the bottom. Typically, a kernel has reached black layer when it appears pinched at the base and has a black spot (black layer) where the grain was attached to the seed head. At times, the moisture content of black layer grain sorghum kernels will exceed 30 percent. As a rule, it is important to wait until the grain sorghum kernels have reached 30 percent or less moisture or grain can be damaged by the application.

Whether a producer is considering applying a harvest aid to corn or grain sorghum, he/she should collect numerous kernel samples from the crop, determine if black layer has formed and the moisture content of the grain. When applied correctly, a harvest aid can increase harvesting efficiency while decreasing potential harvest troubles such as high foreign matter content.

Below are products labeled for use as harvest aids in Louisiana. Note that sodium chlorate, Aim 2EC, and glyphosate are labeled for use in corn and grain sorghum. However, paraquat (Gramoxone Inteon or generic) is NOT labeled as a harvest aid in grain sorghum. Δ

DR. DANIEL STEPHENSON: Weed Scientist, LSU AgCenter

CROP	PRODUCT & RATE	TIMING OF APPLICATION	REMARKS & PRECAUTIONS
Corn and Grain sorghum	Sodium chlorate @ 4.5 - 6 lb/acre	Apply 7 - 10 days prior to harvest.	Desiccation of green vegetation.
Corn and Grain sorghum	Aim 2EC @ 1 - 2 oz/acre + CDC @ 1% v/v	Apply 3 - 7 days prior to harvest.	Desiccation of morningglories. Apply after black layer. Use a minimum of 10 gpa.
Corn	Glyphosate @ 1.9 - 2.3 lb ai/acre <i>Example:</i> Roundup PowerMax @ 44 - 64 oz/acre	Apply 7 days prior to harvest.	Apply after black layer and 35% moisture content or less. Apply lower rate by air and higher rate by ground.
Grain sorghum	Glyphosate @ 1.6 lb ai/acre <i>Example:</i> Roundup PowerMax @ 44 oz/acre	Apply 7 days prior to harvest.	Apply after black layer and 30% moisture content or less. Do not apply to grain sorghum grown for seed.
Corn	Paraquat @ 0.3 - 0.5 lb ai/acre + NIS @ 0.25% v/v <i>Example:</i> Gramoxone Inteon @ 1.2 - 2 pt/acre + 0.25% v/v NIS	Apply 7 days prior to harvest	Apply after black layer. Use a minimum of 20 gpa by ground or 5 gpa by air.