

Grain Sorghum (Milo) Rotation Considerations

Wesley Everman, Weed Science Extension Specialist and Thierry Besancon
Crop Science Department, North Carolina State University

The increased interest in grain sorghum production in North Carolina has led to the rise of several important questions that should be considered before planting a sorghum crop. A primary consideration will be what crop is to be planted the next season. Several products used in sorghum list long rotation restrictions on their label (Table 1). Pre-mixes containing atrazine have rotation restrictions based on rate and timing; therefore it will be important to plan atrazine applications accordingly. According to labels, if atrazine or atrazine containing products are applied after June 10 only corn or sorghum may be planted the following season. The most severe restrictions are to crops such as peanut and tobacco, especially where an atrazine based product is applied.

Herbicide use in the season prior to sorghum should be another consideration as several products used in cotton, peanut, and wheat will negatively affect sorghum growth and yield (Table 2). ALS-inhibiting products such as Cadre, Osprey, Pursuit, Staple, and Strongarm will be the most restrictive products, preventing sorghum from being planted. Always consult the herbicide label for crop specific recommendations.

Table 1. Rotation intervals for herbicides used in sorghum (listed in months).

HERBICIDE	SOYBEAN	COTTON	PEANUT	TOBACCO	CORN	WHEAT
2,4-D amine	FS ¹	FS	FS	FS	FS	- ¹
AATREX ²	FS	FS	FS	18	0	3
AIM EC	0	0	0	0	0	0
BASAGRAN	0	0	0	0	0	0
BICEP II MAGNUM ²	FS	FS	FS	18	0	15
BUCTRIL	1	1	1	1	1	1
BULLET / LARIAT ²	FS	FS	FS	Do not plant FS	FS	3
CALLISTO	10	10	10	10	0	4
CLARITY	3	3	3	3	3	1
DEGREE XTRA ²	FS	FS	FS	18	0	15
DUAL II MAGNUM	0	0	0	FS	0	4.5
EXPERT	FS	FS	FS	18	0	10
GRAMOXONE SL	0	0	0	0	0	0
GUARDSMAN MAX ²	FS	FS	FS	18	FS	15
HUSKIE	4	Bioassay ³	Bioassay ³	Bioassay ³	9	0.25
INTRRO / MICROTECH	FS	FS	FS	- ¹	FS	3
LEXAR/LUMAX ²	FS	FS	FS	Do not plant FS	0	15/4.5
LINEX 4L	4	4	4	4	4	4
MARKSMAN ²	FS	FS	FS	Do not plant FS	0	3
OUTLOOK	0	FS	0	FS	0	4
PEAK	10	10	10	10	1	0
PROWL H2O	FS	FS	FS	FS	10	4
RAGE D-TECH	1	1	12	12	1	1
SANDEA	9	4	6	36	1	2
SEQUENCE	0	0	0	FS	0	4.5
SHARPEN	2	3	5	5	0	0
STARANE	FS	FS	FS	FS	3	4
WARRANT	0	FS	FS	FS	0	4
WEEDMASTER	4	4	4	4	4	2
YUKON	9	4	6	- ¹	1	2

¹ 'FS' = Following Spring; '-¹' = no interval mentioned on the label.

² If applied after June 10 can only rotate to corn or sorghum the following year.

³ Bioassay by planting desired crop on a small area to observe if injury will occur. See label for more details.

Table 2. Rotation intervals for various herbicides applied to crops prior to sorghum*.

Herbicide	Months	Label Comments
ACCENT Q	10	18 if pH is > 7.5
AUTHORITY ASSIST **	18	
AUTHORITY FIRST	12	
AUTHORITY MTZ **	18	12 if applied at 20 oz/A or less
AUTHORITY XL **	18	10 if soil pH less than 6.8
Axial XL	4	
Axiom	12	
CADRE **	18	
CANOPY	12	9 if applied at a reduced rate. See label for details.
CAPAROL	FS	Sorghum may be planted the following season.
CAPRENO	10	18 if pH>7.5, Capreno rate>3 fl oz/A, or thien carbazone-methyl>0.014 lbs ai/A
CLASSIC	12	
COMMAND	9	
COTORAN	9	
DEVRIKOL	12	
ENVIVE	10	
DIURON/DIREX	FS	Sorghum may be planted the following season.
EVIK	11	
FINESSE **	18	Bioassay the treated area to determine if injury may occur. See label for details.
FIRSTRATE	9	
FLEXSTAR	10	
FLEXSTAR GT	10	
HARMONY EXTRA	0.5	
LAUDIS	10	
LIGHTNING **	18	
OPTILL **	18	
Osprey	10	
POWERFLEX	3	
PREFIX	10	
PROWL	10	
PURSUIT **	18	
REFLEX	10	
RESOLVE Q	10	18 if dry and less than 15" of rainfall or irrigation occurs during growing season
SCEPTER	11	
SPARTAN	10	
STAPLE **	18	Do not plant sorghum the following season
STEADFAST Q	10	18 if pH is > 7.5
STOUT	10	18 if pH is > 7.5
STRONGARM **	18	
SYNCHRONY STS	9	12 if greater than 1.5 oz applied and pH less than 7.0
TREFLAN	12	
TRICOR **	18	12 if more than 20 inches of rainfall
VALOR XLT	10	18 if pH is 7.0 or greater

* Only herbicides with a rotation interval 9 months or greater are listed in this table.

** Sorghum is not recommended the season following application.

For all herbicides, consult the herbicide label for specific soil type, organic matter content, and rainfall effects on rotation restrictions.