



Texas Panicum Control in Field Crops and Commercial Vegetables



Drawing from Kansas State University

Texas panicum (*Panicum texanum* Buckl.), also referred to as Texas millet (*Urochloa texana* [Buckley] R. Webster), is an extremely competitive summer annual grass that can reach heights of 2 to 3 feet and forms dense patches in fields and roadsides. Texas panicum reproduces only by seed. Individual plants will root at nodes that come in contact with the soil.

Texas panicum is one of the most troublesome weed species in the southeastern US. Texas panicum plants will grow under a range of soil moisture levels. Seeds are capable of emerging from soil depths of 3 inches. Also, Texas panicum will continue to emerge throughout the summer.

Texas panicum is easily identifiable from other summer annual grasses because of the short thick hairs that develop on both the upper and lower leaf surface. Currently, no other grass species that infests agronomic crops in Delaware has short thick hairs on both leaf surfaces.

PREVENTION

Moving equipment can spread Texas panicum seed within a field or from field to field. Proper cleaning of equipment requires use of an air compressor, pressure hose, or sweeping. Letting the equipment run to clean itself out is not adequate.

Be sure that organic materials such as straw, mulch, manures, and seeds are not infested with Texas panicum or other weed seeds.

Make sure Texas panicum plants outside the field are controlled.

CULTURAL AND MECHANICAL CONTROL

Cultural practices that result in a rapid, dense crop canopy will improve overall level of control of Texas panicum. Since Texas panicum will emerge throughout the summer until early fall, crop canopy is very important to prevent emergence and limit seed production of these late-emerging plants. Soybeans and sorghum planted in 15-inch rows (or less) will shade the ground earlier than 30-inch rows. Varieties with good early-season vigor will also improve crop competitiveness.

A thick layer of cover crop residue will help lower seedling density and seedling growth. Cover crop species with tissue resistant to decay (i.e. cereal rye, winter wheat or triticale) would be most beneficial. Delaying cover crop termination until shortly before planting will allow for maximum biomass production and more tissue resistant to decay.

Post-harvest control with mowing, tillage, or herbicides is important to limit seed production. Texas panicum plants will recover after early harvested corn or vegetables, and without additional control measures these plants are capable of producing large numbers of seed.

Cultivation

Cultivation in combination with herbicide application can increase the overall level of control. Do not cultivate 7 days before treatment or until 7 days after treatment.

When cultivating, care must be taken to avoid bringing soil not treated with an herbicide near the soil surface, thereby increasing the opportunity for seeds to germinate and seedlings to emerge.

CONTROL IN CORN

Effective Texas panicum control can be achieved in field and silage corn production. Texas panicum control can be expected in corn when sprayed with products containing glyphosate and nicosulfuron herbicides. These products are applied postemergence.

Pursuant to the provisions of Title 3, Chapter 24 of Delaware Code, the Delaware Department of Agriculture under its Rules and Regulations has declared Texas panicum a noxious weed. Designation as a noxious weed requires that Texas panicum must be controlled.

A noxious weed is a plant that has adverse effects on or threatens agricultural production. A plant is designated as “noxious” by the U.S. or Delaware Departments of Agriculture. An attribute of a noxious weed is that it is difficult to control with many ‘standard’ weed control programs. Often fields infested with a noxious weed need special attention and require different management than non-infested fields.

Growers who have noxious weeds can call Todd Davis, noxious weed specialist, at Delaware Department of Agriculture to sign a compliance agreement. Failure to control this weed can result in fines of \$25 per acre (\$100 minimum).

Noxious weeds can be reported to Mr. Davis at 1-800-282-8685. He will contact the owner or agency to work on developing a control program. Noxious weeds also must be controlled on right-of-ways, lots and undeveloped lands as well as farmland.

Preemergence Control

Emerged Texas panicum in no-till fields should be sprayed with glyphosate prior to planting. A preemergence application of residual products such as Dual (s-metolachlor) or Zidua (pyroxasulfone) may provide some suppression, but postemergence herbicides will usually be necessary for complete control. None of the soil-applied herbicides will provide season-long control of Texas panicum.

Postemergence Control

The following table lists herbicides that can be used at labeled rates and according to label directions to control emerged Texas panicum plants. See labels for details. Always consult herbicide labels for the proper adjuvants to use. Consider whether tank-mixes, split applications or follow-up applications that are recommended on the label would be preferred to using a single product or timing. Other important considerations are crop variety, soil insecticide interactions, environmental conditions, crop health and stage, and crop rotations. All of this information is available on the herbicide label.

Many of the following herbicides provide control of emerged Texas panicum plants, but they will not provide residual control (glyphosate, Impact, Laudis, Liberty, etc.). The addition of rimsulfuron or pyroxasulfone containing herbicides may provide residual control.

Herbicide	Herbicide group	Corn growth stage- maximum size or range		TX panicum maximum size	Rate/A	Efficacy rating ^a
		Broadcast	Directed			
Accent Q ^b	2	V6 or 20 in	V10 or 36 in	3 in	0.9 oz	G-E
Capreno	2 + 27	V6	n/a	3 in	3 oz	F-G
Glyphosate products ^c	9	V8 or 30 in	n/a	8 in	1 qt	G-E
Impact or Armezon	27	up to 45 days pre-harvest	as needed	3 in	1 oz	F-G
Laudis	27	up to V8	n/a	3 in	3 oz	F-G
Liberty ^d	10	through V5	n/a	4 in	22-32 oz	F-G
Steadfast Q ^b	2 + 2	V6 or 20 in	n/a	4 in	0.75 oz	G

^aE = Excellent (>90% control) G-E = Good to Excellent G = Good (80-90% control)

F-G = Fair to Good F = Fair (60-80% control)

^bAccent Q, Steadfast Q, and other herbicides contain restrictions concerning soil insecticide use. Follow label restrictions carefully or serious crop injury may occur.

^cGlyphosate is the active ingredient in all Roundup formulations. Glyphosate is also available under many other names and as part of numerous prepackaged mixtures. The rate given in the table is for glyphosate with a formulation of 4 lb ai (3 lb ae) per gallon. Adjust the rate for other formulations. All glyphosate products require the use of glyphosate-resistant corn hybrids. Using these products on corn hybrids that are not glyphosate-resistant will seriously injure or kill the crop.

^dLiberty requires the use of glufosinate-resistant corn hybrids. Using this product on corn hybrids that are not glufosinate-resistant will seriously injure or kill the corn crop.

Post-harvest Management

Mowings, diskings, or broadcast herbicide applications after harvest will prevent seed production and is very important for long-term management.

CONTROL IN SOYBEANS

Texas panicum control in soybeans relies on postemergence options. Control of emerged seedlings at planting is important, using either tillage or glyphosate. A preemergence application of residual products such as Dual (s-metolachlor), Zidua (pyroxasulfone), Warrant (Acetochlor), or Command (clomazone) may provide some suppression, but postemergence herbicides will usually be necessary for complete control. None of the soil-applied herbicides will provide season-long control of Texas panicum.

Postemergence Control

There are several highly effective postemergence herbicides available for control of Texas panicum. The following herbicides can be used at labeled rates and according to label directions to control emerged plants. Sequential or follow-up applications may be needed for full-season control.

Assure II, Targa, Fusilade DX, Select, Select Max, and Poast are very safe to soybeans, but do not provide any broadleaf weed control. If broadleaf weeds are present, consult the grass herbicide's label for the best procedures to follow. Tank-mixing broadleaf herbicides with the postemergence grass herbicides can result in antagonism (lack of control).

Always consult herbicide labels for the proper adjuvants to use. Other important considerations that are addressed on the herbicide label are crop variety, environmental conditions, crop health and stage, and crop rotation.

Herbicide	Herbicide group	Maximum Texas panicum size	Rate	Efficacy rating ^a
Fusilade DX	1	8 in	12 oz	G
Glyphosate products ^b	9	12 in	32 oz	G
Liberty ^c	10	4 in	29-36 oz	F-G
Poast	1	8 in	16 oz	G
Select	1	6 in	6-8 oz	G
Select Max	1	6 in	12-16 oz	G
Targa / Assure II	1	4 in	10 oz	G

^aE = Excellent (>90% control) G-E = Good to Excellent G = Good (80-90% control)

F-G = Fair to Good F = Fair (60-80% control)

^bGlyphosate products require the use of glyphosate-resistant soybean varieties. The rate given in the table is for glyphosate with a formulation of 4 lb ai (3 lb ae) per gallon. Adjust the rate for other formulations. Using these products on soybean varieties that are not glyphosate resistant will seriously injure or kill the soybean crop.

^cLiberty requires the use of glufosinate-resistant soybeans. Two postemergence applications of Liberty can be used; max rate per application is 36 fl oz and total application cannot exceed 65 fl oz.

CONTROL IN GRAIN SORGHUM

There are no satisfactory broadcast treatments currently available for controlling Texas panicum in grain sorghum. Grain sorghum should not be planted in fields where there is a heavy Texas panicum infestation.

CONTROL IN PASTURE AND FORAGE

There are no satisfactory broadcast treatments currently available for controlling Texas panicum in permanent pasture. Mowing may be an appropriate alternative to chemical control to prevent seed production.

In alfalfa, Select (6 to 8 oz/A), Select Max (12 to 32 oz/A), or Poast (1.5 pt/A) can be used for postemergence control of Texas panicum.

Always consult herbicide labels for surfactants to use, appropriate weed and crop stages, grazing, feeding, haying, and slaughter intervals, and other restrictions.

CONTROL IN VEGETABLE CROPS

Successful Texas panicum control in vegetable crops can be obtained with timely management. It is important to recognize that control strategies will rely on timely postemergence sprays of Select, Select Max, Poast, or Assure II/Targa. Refer to the labels for those registered for use in your area.

Laudis, Impact, or Armezon will provide postemergence control in sweet corn.

Mowings, diskings, or broadcast herbicide applications after harvest will prevent seed production and is very important for long-term management.

SPOT-SPRAY CONTROL (Crop and Non-crop)

Spot treatment can be made in corn, soybeans, wheat, barley, oats, sorghum, forage, pasture, and non-crop areas. For small or localized areas, use the chart below and apply the recommended concentration on a spray-to-wet basis (1 gal/1000 ft²) to provide thorough coverage. For larger areas, refer to the herbicide label for rates to apply on a per-acre basis. Also, include surfactants based on manufacturers' recommendations. Mowing may be an appropriate alternative, but repeated mowing may be needed to prevent seed production.

Gallons of water	Amount of herbicide to mix with various volumes of water ^a					
	Glyphosate ^b	Targa / Assure II	Fusilade DX	Poast	Select Max	Crop oil conc. ^c
100	2.5 qt	25 fl oz	30 fl oz	40 fl oz	40 fl oz	1 gal
25	20 fl oz	6 fl oz	7.5 fl oz	10 fl oz	10 fl oz	1 qt
1	0.8 oz (1.6 Tbsp)	0.2 oz (1.4 tsp)	0.3 oz (1.8 tsp)	0.4 oz (2.4 tsp)	0.4 oz (2.4 tsp)	1⅓ oz (2½ Tbsp)

^aSpot applications are based on spraying to wet leaves but not to the point of spray running off the leaves

(estimated at 50 gal/A of spray volume).

^bAdd a surfactant as required by the label. Amount is based on a 4 lb ai (3 lb ae) formulation of glyphosate.

^cAdd a crop oil concentrate at 1% v/v to all the postemergence grass herbicides.

NOTE: Glyphosate will kill non-glyphosate resistant crops and the postemergence grass herbicides will kill any grass-like crops (corn, sorghum, pasture grasses, etc.) in the treated area. Take care to avoid drift outside the target area. These products do not provide residual weed control; therefore, Texas panicum plants that have not emerged at time of application will not be controlled.

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Revised Jan. 2019

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