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Controlling Field Sandbur (Grassbur) in Turfgrass

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Field sandbur (grassbur) is a summer annual grassy weed that can be found in home lawns, sports fields, parks and along roadsides. This weed is especially adapted to dry, sandy soils but can be found growing in other types of soils as well. The big problem with this weed is the sharp, spiny burs that are part of the inflorescence. These burs can be painful and are difficult to remove from clothing material. Field sandburs (grassburs) generally start germinating in late spring and will continue to germinate until late summer or early fall months. This weed will continue to grow until the first hard frost or freeze occurs in the fall.

Field sandburs (grassburs) are generally not a problem in well maintained turfgrass areas. With proper fertilization, mowing and irrigation, you can produce a turf that is dense enough to prevent sandbur (grassbur)s from becoming a problem. However, if field sandburs (grassburs) do become a problem there are several effective herbicides that can be used to control this particular weed. The most effective and efficient method of control is to use a pre-emergent herbicide. Table 1 contains a list of the pre emergent herbicides that have sandburs (grassburs) listed as a weed that is controlled by the chemical in the herbicide. To be effective, these pre emergents need to be applied before weed seeds germinate -- generally when the soil temperature (NOT the air temperature) reaches 52 degrees F. This usually occurs by March 15 in the central Texas area. In north Texas areas, apply the pre-emergent by April 1 and in southern areas of the state by March 1. Note: in south Texas and even in central Texas during mild winters the field sandbur plants will survive and act like a perennial weed. In these cases, a pre-emergent herbicide will not be effective in controlling these particular plants, but will work on any of the seeds that try to germinate. If a post-emergence herbicide such as MSMA or DSMA is used, wait until the day time temperatures are about 75 degrees F. for the products to be most effective. To insure complete control of germinating grass burrs in heavily infested areas, extend the residual of the herbicide barrier in the soil and thus extend the length of control period by making applications of the pre-emergent herbicide EVERY 6 WEEKS through September. In areas with a light infestation of grass burrs, two applications that are 6 weeks apart and after the initial application should control seed germination. As always, the pre-emergent application needs to be watered in thoroughly. Not applying enough water after application of a pre-emergent herbicide is one of the main reason for failure to effectively obtain control of the annual grassy weeds such as sandburs (grassburs).

For post-emergent field sandbur (grassbur) control, use MSMA or DSMA. These products will do a good job of controlling the field sandbur (grassbur) when it is young. As the sandbur (grassbur) matures, it becomes more difficult to obtain effective control with MSMA or DSMA. A few years ago, I discovered that by mixing some Imazaquin (Image) with the MSMA you could enhance the control of field sandbur (grassbur). The rate for this mixture is 2.0 lbs. active ingredient per acre of MSMA plus .38 lbs. active ingredient per acre of Image. For example, if using Greenlight's MSMA Crabgrass Killer use 2 Tbsp. per gallon of water and add Cyanamide's Image at 6 Tbsp. per gallon of water. The gallon of spray should

cover 1,000 square feet. Remember, MSMA cannot be used on St. Augustine or Centipede lawns. For these turfgrass areas, you will have to rely on the use of a pre-emergent herbicide.

REMEMBER: A dense stand of healthy grass provides the best weed control. Because most weeds are "opportunists" that invade weakened lawns, the fight against weeds starts with good management. All cultural practices such as mowing, fertilizing and watering should be done in a manner and time that will favor the grass rather than the weeds. Height of mowing influences competition against weeds such as crabgrass - the higher the cut, the lower the infestation. Frequent light sprinkling encourages shallow-rooted weeds and seed germination. Less frequent "deep-soak" watering that maintains a dry surface layer provides the grass with a competitive advantage.

Temperature, light, soil moisture and other factors determine the time and extent of weed germination and development. Some weeds germinate in early spring while others sprout in summer or fall. If conditions are favorable, a weed may be particularly abundant in a given year, but under different conditions the next year, it may be little in evidence.

Herbicide application

Although most herbicides are formulated with reliable safety factors, application rates higher than those recommended may cause injury to turf and other ornamental plants. Many people over apply herbicides, especially when using fertilizer-herbicide combinations. The user needs to follow instructions on containers carefully to avoid overdoses.

before weeds sprout from seeds. Apply two to four weeks ahead of germination. Less effective control may be expected if applied more than a month before germination. Applications should not be made until excess lawn clippings and leaf litter are removed. Irrigating immediately after application will help move materials down to the soil.

after weeds appear. Liquid sprays are more effective than dry materials, especially on hard-to-kill weeds. Apply post-emergence materials when weeds are growing vigorously. Tough old weeds are hard to kill, and if mature seeds are already formed, the lawn is likely to be infested again next year. Amine forms are safest because they give off fewer vapors that might damage other plants. Volatile ester formulations should not be used around ornamental plants. Select a time when winds are calm to prevent spray drift. Using wax bars or granules impregnated with herbicides near ornamentals will minimize such hazards.

Fertilizer-herbicide combinations are extremely popular because they combine two operations. Combinations with pre-emergence chemicals are generally effective since both the fertilizer and herbicide action are dependent on contact with the soil. Post-emergence herbicide action depends more on absorption by leaves, and granules in such combinations do not adhere well to smooth-surfaced leaves. They will stick better if applied when weed leaves are damp. "Weed and feed" materials present a conflict in desirable actions. Proper time for weed control often does not coincide with the most desirable time and rates for fertilizing. If used for follow-up fertilizations, there is danger of herbicide overdose.

Equipment

Fertilizer spreaders can be used for applying granular herbicides. Be sure to adjust the spreader to apply recommended rates. If possible, apply half the desired rate in one direction and the remaining half at right angles to the first application.

A sprayer used for application of 2,4-D and related chemicals should not be used to spray garden or

flower plants. Cleaning procedures are not always reliable. To be safe, have a separate sprayer for weed-killing purposes.

Eliminating weeds is of little value unless enough desirable grass is present to fill in bare spots. A reseeding program deserves first consideration if the turf is so weak that it will not recover once weeds are eliminated. Study soil and other conditions to determine reasons for low vigor of the original turf.

Table 1. Pre-emergent Herbicides Labeled for Sandbur (grassbur) Control

Brand Name	Common Chemical Name	Company Name
PreM	Pendimethalin	Lesco
Amaze Grass & Weed Preventor	Benefin/Oryzalin	Green Light
Surflan, A.S.	Oryzalin	Southern Ag.
Weed & Grass Preventor	Oryzalin	Lilly Miller
Weed Stoppere	Oryzalin	Lawn & Garden Products

CLASSIFICATION

Common Name: Southern Sandspur (Southern Sandbur) Grassbur

Scientific Name: Cenchrus echinatus L.

Family: Gramineae (Poaceae), Grass Family

SEEDLING The blades are flat and like sandpaper on the upper surface (Plate: seedling). The ligules are up to 1.6 mm long. The lower papery portion of the ligule is only 0.2 mm long and the fringe of hairs is up to 1.4 mm long.

MATURE PLANT Southern Sandspur is an annual with ascending stem tips from the lower nodes which bend and root. The leaf sheaths are completely without hairs or can have long hairs along the margins. The blades lack hairs above and below, or can have long scattered hairs above. The seed heads are composed of spiny burs and are 3-14 cm long and 1-2 cm wide. The burs, excluding the spines, are 4.1-6.3 mm wide and 5.3-8.0 mm long to the tip of the spikelets. The spines are of two kinds: 1) flattened spines that are spread over the body of the bur and 2) fine slender bristle-like spines that are situated in a ring at the base of the bur. The seed heads appear throughout the year in the South and during the summer and fall in the North.

HISTORY The name Cenchrus is from the Greek word for millet, cenchros . The Greek species name echinatus means armed with spines.