

# Southern Crabgrass

[*Digitaria ciliaris* (Retz.) Koeler]

Row Crop

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Fig. 1. Young Southern crabgrass plants in thin hybrid Bermudagrass turf.



Fig. 2. Southern crabgrass wrapped around a clump of smutgrass.



Fig. 3. Southern crabgrass inflorescence.

## Introduction

### Problems Created

Southern crabgrass [*Digitaria ciliaris* (Retz.) Koeler][*Digitaria sanguinalis* (L.) Scop. var. *ciliaris* (Retz.) Parl.] is an annual, spreading grass problematic in areas where grasses are desired, such as pastures, turf, and roadsides and disturbed areas like rowcrops and gardens throughout the MidSouth. Southern crabgrass has probably been used as forage in pastures or hay.

### Regulations

Southern crabgrass is not regulated as a noxious weed in the MidSouth.

## Description

### Vegetative Growth

Southern crabgrass is an annual warm-season grass reaching around 3' in height with good conditions. Plants are caespitose, but mat-forming and rooting at the lower nodes. Lower nodes are hairy, but the upper nodes may be smooth. Flowering shoots are ascending with leaves usually flat, blades around 0.25" to 0.5" wide and 2" to 6" long. Blades are pubescent to rough, often with long hairs on leaf margins near the sheath. Sheaths are hairy (papillose-pilose), especially the lower sheaths. Ligules are membranous with a fringe of hairs, 2 to 3 mm long.

### Flowering

Flowering occurs from July to October. The inflorescences are racemes, 3 to 9, and digitate. Racemes 2" to 6" long in 1 or 2 whorls, with a winged rachis (0.8 to 1 mm wide). Spikelets are 3 to 3.5 mm long in 2 or 4 rows along the rachis. The first glume is minute but evident and triangular; and the second glume, five-nerved, 2.8 to 3.2 mm, narrow and ciliate. Sterile lemma 2.8 to 3.2 mm long and strongly nerved, margins ciliate 1.5 mm long (longer than large crabgrass). Fertile lemma and palea are purplish, equal to second glume in length. Grain 2 to 2.2 mm long.

### Dispersal

Crabgrass typically does not disperse over large distances. However, human activity such as mowing and hay operations can transport crabgrass over large distances.

### Spread by

Primary dispersal mechanism for crabgrass over larger distances is human activity.

## Habitat

Southern crabgrass can be a problem in pastures, waste areas, prairies, rowcrops, fields, turf, roadsides and gardens. It generally forms dense stands in open disturbed or thin canopy sites. Southern crabgrass common in many habitats, but often confused with other crabgrass species. Fortunately, controls are generally similar for other crabgrass species. Southern crabgrass seed germinate when soil temperatures at 4 in reach 53 to 54°F for 24 hours. Germination is also dependent upon light and moisture.

## Distribution

Southern crabgrass is native to the United States according to USDA-PLANTS, although some authors report possible origins in the Old World. Its distribution in North America is slightly more southern compared to large crabgrass. Southern crabgrass also occurs in the West Indies, Mexico, Central and South America. Southern crabgrass occurs in all Mid-South states and under the right conditions it can be quite common in many habitats. Since crabgrasses are so common in turf, they are often the primary focus of spring preemergent grass weed control.

## Control Methods

### **Biological**

Since some crabgrass species are native and crabgrass has some forage value, no biological control strategies are in widespread use.

### **Chemical**

Large crabgrass is problematic in many habitats. With so many chemical controls options and different habitats and crops, the list of chemical controls would be too extensive to discuss here. Refer to the Mississippi State University Extension Service weed control guidelines at <http://msucares.com/pubs/publications/p1532.html>.

### **Mechanical**

Small patches may be mechanically removed by hand, although this method is labor intensive. In row crops or gardens, tillage may be an effective management tactic. However, this practice must be repeated on a regular basis to prevent reestablishment. Mowing removes a portion of the seed heads, but many seed heads may remain below the mower blade and produce seed.

### **Physical**

Aside from weed barriers (cloth) or plastic, no physical controls for crabgrass are in widespread use.

## References

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**USDA, NRCS. 2007.** The PLANTS Database (<http://plants.usda.gov>, 6 August 2007). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

**Watson, L., and M.J. Dallwitz. 1992.** The grass genera of the world. CAB International, Wallingford, UK.

## More Information

The Genus *Digitaria* belongs to the Grass (Poaceae or Gramineae) Family. Worldwide there are approximately 220 species of *Digitaria* with an estimated 27 species in the continental United States. Some species of *Digitaria* are native to the MidSouth, including southern crabgrass. Southern crabgrass is very similar to large crabgrass [*Digitaria sanguinalis* (L.) Scop.]. Southern crabgrass has longer spikelets and hairs on the nerves of the sterile lemma compared to large crabgrass. Other species of crabgrass, both native and exotic, may be confused with Southern crabgrass.

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