HS1178

UF UNIVERSITY of FLORIDA
IFAS Extension

Goosegrass Biology and Control in Fruiting Vegetables, Cucurbits, and Small Fruits[1]

Andrew W. MacRae[2]

Goosegrass is found in many habitats in Florida, including cultivated fields, pastures, lawns, landscapes, roadsides, and waste areas. It is a large grass often exceeding 4 ft in height and producing more than 10,000 seeds per plant. It is very common between the rows of crops grown on polyethylene mulch and will emerge from the planting holes even after fumigation. It is also commonly found in blueberry production fields, usually emerging near the base of the plants where coverage with herbicides is limited.

Classification

Common name: goosegrass

Scientific name: *Eleusine indica* (L.) Gaertn.

Family: Poaceae

Seedling Identification

The ligule is membranous with folded (flattened) leaves and a smooth surface. The leaf sheath is broad and white in color.

Mature Plant

Goosegrass has erect and spreading stems that are hairless and flattened. The base of the stems is generally white, especially when in a prostrate growing habit. Leaves can be up to 1 ft long and 3/8 of an inch wide and can sometimes have a few hairs (Bryson and DeFelice 2009). The ligule will be a short, fringed membrane. Mature plants have an extensive fibrous root system. The inflorescence usually has 4 spikes that are 2–5 in. long but can have up to 13 total spikes. There are usually 3–6 terminal spikes, with an additional spike below the terminal spikes.

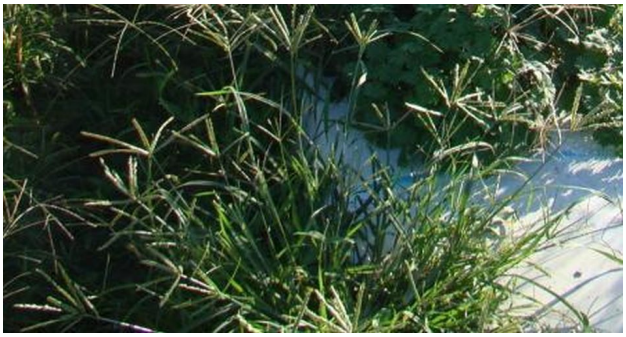

Figure 1. Goosegrass growing in the row middles in a tomato field.

1. This document is HS1178, one of a series of the Horticultural Sciences Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Original publication date May 2010. Visit the EDIS Web Site at http://edis.ifas.ufl.edu.

2. Andrew W. MacRae, assistant professor, UF/IFAS GCREC

Management Considerations

Goosegrass is often observed late in the season and should be controlled with in-season herbicides and, after the crop harvest, with herbicides or tillage. If left to reproduce after the removal of the polyethylene mulch, it will replenish the seed bank and become a problem in the field for years to come. Any herbicide application should take place prior to seedhead production to maximize control.

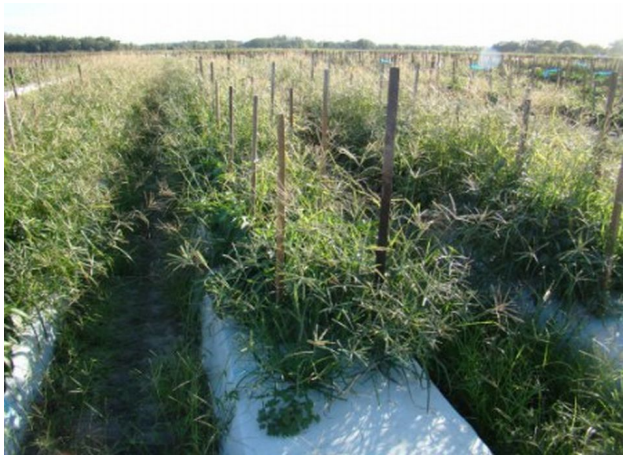

Figure 2. Goosegrass infestation in bell pepper.

Chemical Control – Preemergence

Tomato and Pepper – An application under the polyethylene plastic mulch of napropamide (Devrinol® 50DF or 2E) or S-metolachlor (Dual Magnum®) will provide good control of goosegrass. When control is desired in the row middles, either S-metolachlor or pendimethalin (Prowl® H_2O) will provide excellent control, but rain or overhead irrigation will be required to activate the herbicide.

Cucurbits – On bare-ground plantings and in row middles, DCPA (Dacthal® W-75) will provide good control, while the combination of ethalfluralin and clomazone (Strategy®) will provide excellent control. There is currently no product registered for application under the polyethylene mulch that will control goosegrass in cucurbits.

Strawberry – Napropamide is labeled for use under the plastic mulch, while pendimethalin is labeled for use in the row middles. Both products will provide excellent control of goosegrass.

Blueberry – Oryzalin (Surflan®) provides excellent control of goosegrass, while either flumioxazin (Chateau®) or mesotrione (Callisto®) will provide good control.

Chemical Control – Postemergence

Tomato, Pepper, and Cucurbits – Over the top of the crop and in the row middles, clethodim (SelectMax® and others) and sethoxydim (Poast®) will provide excellent control. Paraquat (Gramoxone Inteon®) can be applied to the row middles but will only provide excellent control of small seedlings; larger plants will regrow.

Strawberry – Over the top of the crop and in the row middles, clethodim will provide excellent control. Glyphosate (Roundup®-type products) can be used in the row middles to provide excellent control of goosegrass. Paraquat will only provide excellent control of small seedlings; larger plants will regrow.

Blueberry – Glyphosate or sethoxydim will provide excellent control. Paraquat will only provide excellent control of small seedlings; larger plants will regrow.

Sethoxydim and clethodim are the most common methods for controlling goosegrass because both products are registered for use in many crops. When using these herbicides, be sure not to use a crop oil concentrate when weather conditions are hot. Crop oils can cause a burn on the foliage of crops and should only be used when foliage is dry and on days of cloud cover to minimize the possibility of damage. SelectMax® can be used with a nonionic surfactant, which will help reduce the possibility of crop injury, but the application to grasses must be prior to seedhead emergence or control will be reduced. Any management program for goosegrass should include a cultural component in which the weed is prevented from producing seed at the end of the growing season and during fallow periods.

Literature Cited

Bryson, C. T., and M. S. DeFelice, eds. 2009. *Weeds of the South*. Athens: University of Georgia Press.