

Crabgrass Biology and Management in Turf¹

Darcy E. P. Telenko, Ramon G. Leon, and J. Bryan Unruh²

Five crabgrass species are prevalent in Florida, **India crabgrass**, **blanket crabgrass**, **southern crabgrass**, **tropical crabgrass**, and **smooth crabgrass**. Most are summer annuals, but blanket and India crabgrass tend to perennate (live longer than one growing season), which is why postemergence control is often the only option.

India crabgrass (*Digitaria longiflora*) is a mat-forming summer annual. The leaf blades are quite short, usually about 1 inch long. India crabgrass differs from blanket crabgrass in that the sheaths and blades are smooth. India crabgrass is usually found in dry sites, whereas blanket crabgrass favors moist to wet sites.

Blanket crabgrass (*D. serotina*), also a summer annual or short-term perennial, has creeping stolons. Like India crabgrass, the leaves are quite short; however, blanket crabgrass leaves are hairy.

Southern crabgrass (*D. ciliaris*) and large crabgrass (*D. sanguinalis*) are difficult to differentiate from one another. Both are tufted to prostrate summer annuals with branched stems that root at the lower nodes and are found growing in dry to moist sites. These two species form clumps or are loosely running, and they have large leaves (more than 2 inches long) that are usually hairy on both sides. Though similar in appearance to tropical crabgrass, the seedhead branches of large and southern crabgrass arise from different points along the stalk.

Tropical crabgrass (*D. bicornis*) has leaves that are usually over 2 inches long and are hairy. This species differs from large and southern crabgrass in that seedhead branches all join at the same point on the stem.

Smooth crabgrass (*D. ischaemum*) is a spreading-type plant that roots at the lower nodes along the stems. The leaves are large and have the distinguishing characteristic of being smooth on both surfaces. The seedhead has two

to six “finger-like” spiked branches. This species is found mainly in north Florida and the panhandle.

Crabgrass germinates in early spring when soil temperatures are 50°F–55°F or greater. Crabgrass will grow under close mowing situations and prefers areas where turfgrass stands are weak. Healthy turf is therefore the best way to prevent crabgrass infestation.

Cultural practices for crabgrass control follow general weed management practices to maintain healthy turf. These include (1) mowing at the recommended height for selected turfgrass species, (2) removing clippings when seedheads of grassy weeds are present, (3) applying proper fertilization at the correct time for selected turfgrass species, (4) using soil testing to determine nutrient needs and lime requirements, and (5) applying preemergence herbicides before the crabgrass germinates.

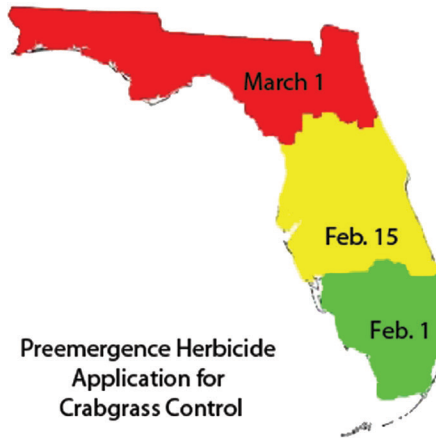
Where there has been a history of crabgrass infestation, apply a preemergence herbicide in late winter or early spring before soil temperatures remain above 50°F for 24 consecutive hours. A general rule of thumb for preemergence herbicide application for crabgrass control is February 1 in south Florida, February 15 in central Florida, and March 1 in north Florida. In addition to initial treatment, a follow-up application made 60 days after the initial treatment is very important. Postemergence control is limited. Currently there are no labeled postemergence herbicides for selective control of crabgrass in St. Augustinegrass turf. Newly labeled herbicide trifloxysulfuron (Monument[®]) is not labeled for use on residential turf, and foramsulfuron (Revolver[®]), although labeled for professional use on residential turf, is injurious to St. Augustinegrass and therefore cannot be used.

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²Darcy E. P. Telenko, former postdoctoral research associate; Ramon G. Leon, assistant professor, Agronomy Department; and J. Bryan Unruh, professor, Environmental Horticulture Department; UF/IFAS West Florida Research and Education Center, Jay, FL 32565.

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Herbicide Options for Controlling Crabgrass in Florida Turfgrass

(Always refer to the label for specific uses, application rates, and turfgrass tolerance)

BER

Preemergence: benefin, benefin+orizalin, benefin+trifluralin, bensulide, bensulide+oxadiazon, DCPA, dimethenamid-P, dithiopyr, ethofumesate (dormant turf only), indaziflam, mesotrione (dormant turf only), metolachlor, napropamide, oryzalin, oxadiazon, pendimethalin, proflam, proflam+isoxaben, proflam+sulfentrazone
Postemergence: amicarbazone (suppression), metribuzin, quinclorac, sulfentrazone+imazethapyr, thiencazone+iodosulfuron+dicamba, thiencazone+floramsulfuron+halosulfuron, trifloxysulfuron (suppression)

STA

Preemergence: benefin, benefin+orizalin, benefin+trifluralin, bensulide, DCPA, dimethenamid-P, dithiopyr, ethofumesate (reduced rate and only on well-established turf), indaziflam, mesotrione (reduced rate and only on well-established turf), metolachlor, napropamide, oryzalin, oxadiazon, pendimethalin, proflam, proflam+isoxaben
Postemergence: amicarbazone (suppression), dithiopyr (a preemergence herbicide with some postemergence activity on large, smooth, and southern crabgrass if the herbicide is applied to the 3-leaf or smaller crabgrass), thiencazone+iodosulfuron+dicamba. Control of mature crabgrass in St. Augustinegrass will require hand pulling or spot treatment with a nonselective postemergence herbicide such as glyphosate or glufosinate. Using a nonselective postemergence herbicide will create a void in the turf.

CENT

Preemergence: benefin, benefin+orizalin, benefin+trifluralin, bensulide, DCPA, dimethenamid-P, dithiopyr, indaziflam, mesotrione, metolachlor, napropamide, oryzalin, pendimethalin, proflam, proflam+isoxaben, proflam+sulfentrazone
Postemergence: amicarbazone (suppression), clethodim (sod production only), mesotrione, sethoxydim, sulfentrazone+imazethapyr, thiencazone+iodosulfuron+dicamba

Preemergence: benefin, benefin+orizalin, benefin+trifluralin, bensulide, DCPA, dimethenamid-P, dithiopyr, indaziflam, metolachlor, napropamide, oryzalin, pendimethalin, proflam, proflam+isoxaben, proflam+sulfentrazone
Postemergence: sulfentrazone+imazethapyr (reduced rate)

BAHI

Preemergence: dimethenamid-P, dithiopyr, indaziflam, oxadiazon, pendimethalin, proflam, proflam+isoxaben, proflam+sulfentrazone
Postemergence: amicarbazone (suppression), quinclorac

PASP

Preemergence: benefin, benefin+orizalin, benefin+trifluralin, bensulide, bensulide+oxadiazon, DCPA, dimethenamid-P, dithiopyr, indaziflam, metolachlor, oryzalin, oxadiazon, pendimethalin, proflam, proflam+isoxaben, proflam+sulfentrazone
Postemergence: amicarbazone (suppression), fenoxaprop, fluazifop, quinclorac, sulfentrazone+imazethapyr, thiencazone+iodosulfuron+dicamba, trifloxysulfuron (suppression)

ZOYS

Preemergence: benefin, bensulide, dimethenamid-P, dithiopyr, proflam+isoxaben
Postemergence: fenoxaprop, quinclorac

RYE

BER=Bermudagrass; STA=St. Augustinegrass; CENT=Centipedegrass; BAH=Bahiagrass; PASP=Seashore paspalum; ZOYS=Zoysiagrass; RYE=Perennial rye

Refer to the publication *Pest Control Guide for Turfgrass Managers* at http://turf.ufl.edu/pdf/2012_UF_Pest_Control_Guide.pdf for brand names associated with chemical names listed.