



Driving Homeowners 'Nuts': Sedge in the Lawn

*Authored by Michael Goatley, Jr., Professor and Extension Turfgrass Specialist;
Jeffrey Derr, Professor and Extension Weed Scientist, School of Plant and Environmental Sciences, Virginia Tech,
and Shawn Askew, Professor and Extension Turfgrass Weed Specialist*

Introduction

Have you got grass-like patches that grow at least twice as fast as your turf during the summer, even during some of the hottest weather possible (Figure 1)? You likely are combating one of the many species of nutsedge or closely related plants, very common warm-season lawn weeds all across Virginia and the mid-Atlantic.



Figure 1. Sedges are typically bright green and have an upright growth rate that is much faster than the lawn grasses during the warmest times of the year.

Identification characteristics and conditions that promote these weeds

Lots of questions come in to the offices of the VT Turf Team and those of our statewide Virginia Cooperative Extension network alike during the summer/early fall period regarding 'grass-like patches that just can't be mowed often enough' (Figure 1). Probably 9 times out of 10, those 'grass' patches turn out to be patches of yellow nutsedge, a

plant that is commonly referred to as 'nutgrass', but it is not in the grass family. The way to identify these plants is to remember the phrase 'sedges have edges' (Figure 2). Since these plants are not grasses, that affords us the opportunity for selective weed control in our lawns.



Figure 2. Sedges and the closely related kyllingias can be distinguished vegetatively from grasses by their three sides.

There are two primary species of nutsedges in Virginia lawns, with the most prevalent form being yellow nutsedge (*Cyperus esculentus* L., Figure 3). In the warmest parts of the state, purple nutsedge is added to the mix (*Cyperus purpureum* L.), Figure 3. Yellow and purple nutsedge come back in the spring from underground tubers that are about ¼ to ½ inch long.



Figure 3. Yellow nutsedge gets its name from its distinctly yellow seedhead and has the greatest distribution as a lawn weed in the mid-Atlantic.



Figure 4. As suggested by its name, purple nutsedge has a distinctly purple seedhead and is typically a shorter plant than yellow nutsedge.

The color of the seedheads make distinguishing between yellow and purple nutsedge very easy. However, what if there are no seedheads present, as might occur in a regularly mowed turf? Carefully pulling these plants from the ground reveals that both have rhizomes (i.e. below-ground stems) that have nutlets (reproductive structures often called tubers) that are arranged differently on the rhizome depending on the sedge species. Yellow nutsedge produces its nutlet at the tip of the rhizome, whereas purple nutsedge produces its nutlets in chains along the rhizome (Figure 5).



Figure 5. Nutlets form at the end of the rhizomes for yellow nutsedge (left) and in chains on the rhizomes for purple nutsedge (right).

Two of the most rapidly expanding sedge-family weeds in mid-Atlantic landscapes are the closely related plants false-green kyllinga (*Kyllinga gracillima* Miq.) and perennial green kyllinga (*Kyllinga brevifolia* Rottb.). These plants form dense mats in turfgrass rather than distinct patches as is common for the sedges (Figure 6). The kyllingas are very difficult to tell apart because they are so similar in appearance, but they are much finer textured than the sedges and have a very distinct circular seedhead (Figure 7). In general, the mid-Atlantic has greater populations of false green kyllinga because of its superior cold tolerance, and this plant keeps migrating further north each year. These perennial members of the sedge family do not produce nutlets on their lateral stems.



Figure 6. False green kyllinga is a creeping plant that can form dense mats in turfgrass stands.

Sedges prefer warm temperatures, full sun, and higher soil moisture. Mowing at the higher recommended mowing heights will help to shade and thus suppress yellow nutsedge and other sedges.

Do not over-water as this will increase sedge and kyllinga growth. Improve soil drainage if the soil does not drain well.



Figure 7. False green kyllinga has three sided stems but is a lower growing, mat-forming finer textured plant with a distinctly circular seedhead above three leaves.

Control alternatives and application timing

There are four primary sprayable herbicides available for nutsedge control in the homeowner market. The active ingredients to look for on the herbicide label are: bentazon, halosulfuron, imazaquin, or sulfentrazone. Of this group, the most effective for controlling yellow nutsedge are sulfentrazone and halosulfuron, and these two herbicides are also used for controlling other sedge species, including kyllinga species. Imazaquin and bentazon have been staples for many years in targeting various sedge species but often require more frequent application. The newest herbicide for sedge control in turf is pyrimisulfan, sold in granular form and applied dry. The VCE Pest Management Guide for Home Grounds and Animals will provide you with the latest information on herbicide selection, rates, and timing of applications for these and other pests.

The ideal time to chemically control sedges and kyllingas is when they are young and actively growing in early to mid-summer. However, there is still an opportunity to gain appreciable control of sedges in late summer/early fall, understanding that every day closer to a killing frost that an application is delayed is reducing the potential control of the weed by the herbicide. Late in the season the plant begins to concentrate more on producing seed than it does storing carbohydrates in its rhizomes and tubers, and this general change in 'flow direction'

within the plant means it is harder to get the herbicide to the below-ground survival structures in sufficient quantity to kill the plant entirely. Late summer applications will help reduce the number of tubers that are formed for yellow and purple nutsedge, though. As a rule of thumb, expect yellow nutsedge control even under ideal conditions to require more than a single application of a herbicide, and often multiple seasons of treatment are necessary due to tuber dormancy and prolific tuber production.

In search of further information?

There are a variety of other extension publications available under the Lawn and Garden tab on the VCE website that provide you with science-based tips that will help you have healthy, environmentally responsible lawns, landscapes, and gardens.

Visit Virginia Cooperative Extension: ext.vt.edu

Virginia Cooperative Extension programs and employment are open to all, regardless of age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, genetic information, veteran status, or any other basis protected by law. An equal opportunity/affirmative action employer. Issued in furtherance of Cooperative Extension work, Virginia Polytechnic Institute and State University, Virginia State University, and the U.S. Department of Agriculture cooperating. Edwin J. Jones, Director, Virginia Cooperative Extension, Virginia Tech, Blacksburg; M. Ray McKinnie, Administrator, 1890 Extension Program, Virginia State University, Petersburg.

2021

SPES-344NP