

Nutsedge

 hgic.clemson.edu/factsheet/nutsedge

Nutsedges are very aggressive and persistent weeds that commonly infest lawns, vegetable and flower gardens, and home landscapes. They can be very difficult to eradicate, and their control is likely to be a long process. Successful control involves both cultural and chemical management methods.

Once a nutsedge infestation has been controlled, sanitation to prevent new introductions is critical. Any new infestations should be managed right away to prevent the spread of these aggressive and difficult-to-control weeds.

Life Cycle & Description

Nutsedges are often called “nutgrass” because they closely resemble grasses. Correct identification is very important, as most herbicides for grass control are not effective on sedges. Nutsedges can be distinguished from grasses by their stems, which are triangular or V-shaped in cross-section, while grass stems are hollow and round. Their leaves are thicker and stiffer than most grasses and are arranged in groups of three at the base. Nutsedge leaves appear creased with prominent mid-veins.

Most nutsedges are perennials whose leaves die back in the fall when temperatures decrease. Tubers (often called “nutlets”) and rhizomes (underground stems) survive in the soil and sprout the following spring. The tubers and rhizomes can grow eight to 14 inches below the soil surface.

Nutsedges thrive in almost any kind of soil. While they prefer moist soil, established nutsedge plants will thrive even in dry soil. They spread by small tubers, by creeping rhizomes, or by seed. New tubers begin



Yellow nutsedge. (*Cyperus esculentus*) has a greenish-yellow seedhead.
Photo by Joseph LaForest, University of Georgia, Bugwood.org



Purple nutsedge (*Cyperus rotundus*) has a purple seedhead.
Photo by Joseph LaForest, University of Georgia,

forming four to six weeks after a new shoot emerges. Individual nutsedge plants may eventually form patches 10 feet or more in diameter.

Identifying Nutsedges

Purple nutsedge (*Cyperus rotundus*) and yellow nutsedge (*Cyperus esculentus*) are the most common nutsedges in South Carolina. Yellow nutsedge is more widespread than purple nutsedge due to its greater cold tolerance. However, where purple nutsedge is adapted, it can be even more vigorous than yellow nutsedge. The two species often grow together. Because purple and yellow nutsedges differ in herbicide susceptibility, correct identification is critical to successful control.

Identifying Characteristics of Nutsedges.

Yellow Nutsedge	Purple Nutsedge
Long Tapered leaf tip	Leaves taper abruptly to a blunt point
Seedhead yellow	Seedhead purple
Tubers single at tips of rhizomes	Tubers connected in chains on rhizomes
Emerges early	Emerges later
Leaves light green	Leaves darker green
12 to 16 inches tall when mature	Usually under 6 inches when mature

Control in the Vegetable Garden

Cultural Control: Nutsedges thrive in moist areas, and their presence often indicates that drainage is poor, irrigation is too frequent, or sprinklers are leaky. However, once established, they will tolerate normal moisture levels or even drought.

Nutsedge tubers are spread by cultivation and introduced in topsoil, where they can persist for years. Learn to recognize nutsedge to avoid accidentally bringing it in on newly purchased topsoil. Be sure to thoroughly clean tools and equipment such as tillers that have been used in an infested area to avoid spreading tubers and rhizome pieces.

Since nutsedges do not grow well in the shade, areas of the vegetable garden can be rotated into a solidly planted, dense, relatively tall crop such as beans or southern peas for a season. This will reduce the amount of nutsedge in the garden over several seasons.

Mechanical Control: Control of nutsedge should be viewed as a long-term process. Pulling the plants out by hand is relatively ineffective because tubers deep in the ground usually break off the pulled shoots. Very young plants can be controlled by hand weeding or hoeing if they are consistently weeded out before they have five to six leaves. In summer, this will require weeding at least every two to three weeks, but doing so will cause a depletion of energy reserves, and re-sprouting will soon stop. Once nutsedge plants have more than five or six leaves, they begin to form tubers, usually in May or June. Mature tubers can re-sprout as many as 10 to 12 times.

Using a tiller to destroy mature plants will only spread the infestation as it moves the tubers around in the soil. However, repeated, frequent tilling of small areas before the plants have six leaves can gradually reduce populations. Tilling for nutsedge suppression should be limited to times when the soil is dry. Tilling when soil is wet is more likely to move tubers into new areas as they adhere to equipment.

It is possible to eliminate very small patches of nutsedge by digging. Dig at least 10 inches deep and at least eight to 10 inches beyond the diameter of the aboveground leafy portion of the plant. This will ensure the removal of the spreading tubers. Removal by digging is best done early in the spring before more tubers are produced.

Chemical Control:

Pelargonic Acid: Pelargonic acid is a naturally occurring fatty acid found in many plants. Herbicides containing pelargonic acid are labeled for postemergence, non-selective, weed control. As such, non-target plants, such as tomatoes, must be shielded to prevent spray contact and potential injury. Pelargonic acid is a severe eye irritant. Examples of herbicides containing pelargonic acid include:

- Scythe Herbicide (57% pelargonic acid)
- BioSafe AXXE Broad Spectrum Herbicide (40% ammoniated nonanoate) OMRI
- BioSafe Weed Control RTU (premixed) (5% ammoniated nonanoate) available in 32 fl oz., “Caution”
- Mirimichi Green Pro Concentrate (40% ammoniated nonanoate) OMRI
- Mirimichi Green Pro RTU (premixed) (5% ammoniated nonanoate) OMRI



Yellow nutsedge (*Cyperus esculentus*)
growing among sweet potato vines.
Joey Williamson, ©2016 HGIC, Clemson
Extension

Note: Pelargonic acid is a fatty acid that occurs naturally as esters in the oil of pelargonium plants. It is often called nonanoic acid. The ammonium salt of nonanoic acid, ammoniated nonanoate, is an herbicide. These products have “warning” as the safety signal word on the label.

Plant Essential Oil-based Herbicides: These are made from naturally occurring plant sources. However, vegetable plants must be shielded to prevent damage from these herbicides. Examples include:

SafeGro Weed Zap (contains 45% cinnamon oil & 45% clove oil) (OMRI)

This cinnamon and clove oil product has “caution” as the safety signal word.

Orange Oil (d-limonene) -based Herbicides: These are made from naturally-occurring sources, such as citrus fruits. However, vegetable plants must be shielded to prevent damage. These include:

- Avenger Weed Killer Concentrate (70% d-limonene) Concentrate; and RTU (OMRI)
- Avenger AG Burndown Herbicide (55% d-limonene) (OMRI)
- Worry Free Weed and Grass Killer (70% d-limonene) (OMRI)

This orange oil product has “caution” as the safety signal word.

Acetic Acid-based Herbicides: These are made from naturally occurring sources, including vinegar. However, vegetable plants must be shielded to prevent damage. Examples include:

Summerset Brand All Down Concentrate (23% acetic acid & 14% citric acid); also RTU (8% acetic acid & 6% citric acid)

These acetic acid products have “danger” as the safety signal word. Acetic acid can cause eye damage, so also wear eye protection (goggles).

Bentazon: Certain formulations of bentazon (such as in Arysta Basagran) are labeled for use around a very few vegetable crops – beans, corn, peas, and peanuts only. Always read the pesticide label for specific instructions.

Glyphosate: Glyphosate can be used pre-plant to control nutsedge in vegetable gardens. Examples of products containing in homeowner sizes are:

- Roundup Original Concentrate,
- Roundup Pro Herbicide,
- Martin’s Eraser Systemic Weed & Grass Killer,
- Quick Kill Grass & Weed Killer,
- Bonide Kleenup Weed & Grass Killer 41% Super Concentrate,
- Hi-Yield Super Concentrate,

- Maxide Super Concentrate 41% Weed & Grass Killer,
- Super Concentrate Killzall Weed & Grass Killer,
- Tiger Brand Quick Kill Concentrate,
- Ultra Kill Weed & Grass Killer Concentrate,
- Gordon's Groundwork Concentrate 50% Super Weed & Grass Killer,
- Zep Enforcer Weed Defeat III,
- Eliminator Weed & Grass Killer Super Concentrate,
- Monterey Remuda Full Strength 41% Glyphosate,
- Knock Out Weed & Grass Killer Super Concentrate,
- Southern States Grass & Weed Killer Concentrate II,
- Total Kill Pro Weed & Grass Killer Herbicide,
- Ace Concentrate Weed & Grass Killer.

Glyphosate will damage or kill crop plants if it touches their foliage. For post-planting sprays, care must be taken to avoid damaging plants with glyphosate spray drift. Repeat applications as new plants emerge. After planting, avoid using Glyphosate near tomatoes.

Pesticide Safety

Always read the pesticide label and follow its directions exactly. You may ***only*** use the pesticide on sites or crops listed on the label. Be sure to observe all special precautions that are listed on the label. Wear protective clothing or equipment as listed on the label when mixing or applying pesticides. Mix pesticides at the rate recommended for the target site as listed on the label. Never use more than the label says. Follow all label directions for safe pesticide storage and disposal. Always remember to read and heed the six most important words on the label: **“KEEP OUT OF REACH OF CHILDREN.”**