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Yellow Nutsedge (*Cyperus esculentus*) Control in Home Lawns With Cool Season Turfgrasses.

Yellow nutsedge is a fast spreading perennial plant in the *Cyperaceae* family (Image 1). It is native to North America and is a highly problematic weed in turfgrass, landscapes, ornamental nurseries, and several other agronomic and horticultural crops throughout the United States.



Image 1: Yellow nutsedge in a home lawn.

Yellow nutsedge reproduces mainly by underground tubers called nutlets. A single nutsedge tuber can produce up to 1,900 shoots in a year (Tumbleson and Kommedahl, 1961). The yellow nutsedge plants start producing new rhizomes in late July to early August. By early September, the rhizome tips swell and produce new tubers. A single yellow nutsedge plant can produce as many as 7,000 additional tubers each year (Tumbleson and Kommedahl, 1961). In Connecticut, tuber formation has been observed as early as beginning of August

(Personal observation Jatinder Aulakh). A majority of the tubers are located in top 6 to 8 inches of soil, with a few being observed as deep as 18 inches of the soil profile.

IDENTIFYING CHARACTERISTICS

Despite a close resemblance to grasses, sedges have peculiar morphological characteristics that distinguish them from grasses. Unlike grasses, which have round stems, sedges have triangular stems (Image 2).



Image 2: Triangular stem of a sedge plant.

Grasses have nodes and internodes which are absent in sedges. In sedges, leaves are arranged in a whorl of three while in grasses, leaves have an alternate arrangement on the stem. Sedges have rhizomes and tubers whereas, most grasses have a fibrous root

system. In yellow nutsedge, tubers occur at the tip of the rhizomes (Image 3).



Image 3: Yellow nutsedge rhizomes and tubers.

Yellow nutsedge reproduces and spreads mainly via rhizomes and tubers. Production of viable seed (78% germination) has also been reported by some researchers in the United States (Thullen and Keeley 1977). However, the role of seed in yellow nutsedge establishment is still not very clear.



Image 4: Yellow nutsedge seedhead.

MANAGEMENT

Yellow nutsedge is highly difficult to manage because of its large underground reserves. The best non-chemical method for controlling yellow nutsedge is maintaining a healthy, dense, vigorous turfgrass that can compete with yellow nutsedge and other lawn weeds. Adopt the best turf management practices, including proper irrigation and drainage, proper mowing height and frequency, proper fertilization, and pest management.

Chemically, yellow nutsedge in home lawns can be controlled by using the active ingredient (a.i.) halosulfuron, contained in products such as Sedgehammer®, Sedgehammer+®, **OR** by using products containing sulfentrazone, such as Dismiss turf herbicide.

Apply any of the recommended herbicides when the yellow nutsedge is in the 3 to 8 leaf stage. Sedgehammer will require a non-ionic surfactant for improved efficacy on yellow nutsedge. Apply 0.9 g (0.03 oz) of Sedgehammer (75% a.i.) in 1 to 2 gallons of water plus 1/3 fl oz of non-ionic surfactant to treat a 1,000 square feet area. Alternatively, Sedgehammer+ already contains non-ionic surfactant and no additional surfactant is required. Apply 13.5 g (0.5 oz) of Sedgehammer+ (5% a.i.) in 1 to 2 gallons of water to treat 1,000 square feet of turfgrass. Do not irrigate the turf at least 4 hours after herbicide treatment. A follow-up treatment may be required 6 to 8 weeks after first treatment.

The Dismiss herbicide rate for treating 1,000 square feet of cool season turfgrasses, except for creeping bentgrass, is ½ a teaspoon (0.092 fl oz) in 1 to 4 gallons of water. Repeat this treatment 35 days after initial application. Creeping bent grass is very sensitive to sulfentrazone and could be seriously injured at Dismiss turf herbicide rates recommended for yellow nutsedge control.

Cool season turfgrasses tolerance to Dismiss herbicide varies with grass species and variety. Occasionally, some temporary discoloration has been reported on some cool season turfgrasses. When using Dismiss turf herbicide for the first time, treat a small area prior to treating large turf areas. The first application of Dismiss turf herbicide can be applied as soon as after the 2nd mowing of newly seeded/sodded/sprigged turfgrass that has a uniform stand and a well-developed root system.

Other herbicides available for homeowners for yellow nutsedge control include: Hi-Yield Nutsedge Control® (halosulfuron), Nufarm Halosulfuron Pro® (halosulfuron), Nutgrass Killer Selective Herbicide® (halosulfuron), Nutgrass Killer II Selective Herbicide® (halosulfuron), Ortho's Nutsedge Killer for Lawns® (sulfentrazone), Bonide Sedge Ender® (sulfentrazone+ prodiamine), and Image herbicide kills crabgrass II® (sulfentrazone + quinclorac) which also control many other grassy and broadleaf weeds (consult herbicide labels for details on use rates, and application methods). Of these products, Ortho's Nutsedge Killer for Lawns is a ready to use product that needs no mixing or additional equipment to apply. For optimal herbicide absorption and translocation by yellow nutsedge plants, do not mow a couple of days prior to or at least two days following the herbicide application. Yellow nutsedge must have 3 to 8 leaves at the time of herbicide treatment.

No matter what herbicide active ingredient you use, multiple applications over many years will be required for satisfactory control of yellow nutsedge. Timing of herbicide treatment is very critical. Late summer herbicide treatment (August onwards) when yellow nutsedge has already produced new tubers may not be very effective. Therefore, strike it as early as possible. Remember, a single uncontrolled yellow nutsedge plant may produce up to 1,900 shoots in a year. Therefore, follow up an aggressive treatment plan and exercise patience if you desire to satisfactorily control this weed. Follow label directions about when to make follow-up applications, if required.

The mentioning of trade names in this publication is solely for the purpose of providing specific information. The CAES does not guarantee or warranty the products named, and references to them in this publication do not signify our approval to the

exclusion of other products of suitable composition.

INFORMATION SOURCES

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