



Yellow Nutsedge

Cyperus esculentus syn. *C. lutescens*, *C. ruficomis*, *C. esculentus* var. *lutescens*, *C. esculentus* var. *sprucei*² (Aka yellow nutgrass, grass nutsedge, tigernut, chufa sedge, earth almond)

Provincial Designation:
Prohibited Noxious



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Overview:

Yellow nutsedge is a perennial sedge native to North America, but of sub-tropical origin and has spread north into temperate regions.⁴ It has become a troublesome weed world-wide, especially in certain crops and turf grass. In Canada it is a weed of potato and soybean crops.¹ Yellow nutsedge reproduces by seed, bulbs and tubers (incorrectly referred to as nuts or nutlets) but it is only the seeds and tubers which survive winter.⁴ Seedling survival is low so tubers are the primary means of propagation.⁴

Seeds germinate early spring and tubers when soil temperatures reach about 12° C. When tubers germinate short rhizomes are formed which end in a basal bulb near the soil surface. These basal bulbs generate stems and leaves above ground, and fibrous roots and long rhizomes below ground. The rhizomes form more basal bulbs or tubers at their tips. Basal bulbs sprout immediately to form new shoots, rhizomes, and these rhizomes produce more basal bulbs. New tubers begin forming in July and continue forming for the rest of growing season. It is

because of this rapid growth that successful control depends on early detection and removal of small plants before they develop tubers.³

Tubers remain dormant through winter and are viable for generally no more than 3 years. Basal bulbs are found within the top 5 cm of soil and tubers within the top 15 cm. Shade severely limits tuber production. Rhizomes lack buds therefore fragments cannot produce new plants.⁴

Young yellow nutsedge plants can easily be mistaken for grass, but the triangular stems are apparent when rolled between a finger and thumb. A related species, purple nutsedge (*C. rotunda*), can be distinguished by multiple, longer tubers, dark in color, unpleasant flavor, and attached by tough, wiry rhizomes.¹ It also has dark brown or black seeds, the flowers have a reddish tinge,³ and leaf blade tips are more blunt. *C. esculentus* bears tubers singly which are almost round, pale colored, mild, nutty flavor, and attached by soft, easily broken rhizomes.¹

Habitat:

Yellow nutsedge establishes on low ground that remains wet, heavily irrigated crops, and along waterways. It grows well on all soil types (sand to clay⁴), including peat, and grows well at pH 5 to 7.¹ Once established yellow nutsedge can tolerate drought. Does not tolerate shade well.³

Identification:

Stems: Are triangular in cross section, erect, and grow 15-60 cm tall.¹

Leaves: Are light green, 10-30 cm long, 2-10 mm wide, with a prominent mid-vein and waxy surface. Leaves gradually taper to a pointed tip. Most leaves are lower stem.⁴

Flowers: The inflorescence is terminal umbels, spikelets are yellow-brown or straw-coloured, 1-3 cm long, and composed of several florets. Three bracts 5-25 cm long occur just below the flower head.¹ Seeds are oval, 3-angled about 1.5 mm long, single seeded and yellowish brown.⁴

continued next page

Yellow Nutsedge (Continued)

Prevention:

Prevent establishment by removing small plants before they develop tubers and eliminate the wet conditions which favor nutsedge growth. In landscape plantings, use certain fabric mulches, or shade out by a thick planting of taller vegetation (not groundcovers), and avoid topsoil or other materials which may be infested with nutsedge tubers.³ Bark mulches alone are ineffective.

Control:

Grazing: Ineffective, as control of yellow nutsedge requires removal of tubers. Invasive plants should never be considered as forage.

Mechanical: To prevent tuber production, repeatedly remove small plants before they have 5-6 leaves. After tuber production, removing as much of the plant as possible will deplete energy reserves of tubers. Mature tubers can re-sprout so repetition is required. To remove an entire plant you must dig down at least 20-30 cm. Tillage increases an infestation by moving tubers around in the soil. Repeated tilling of young plants (before 6 leaves) may reduce populations. Repairs in turf require removal of the nutsedge patch and all soil down to 20 cm, re-fill and re-seed.³

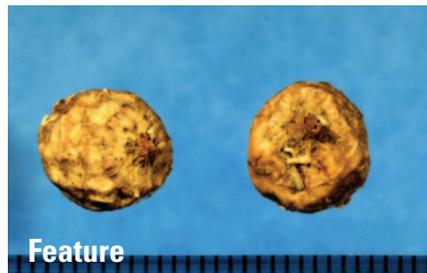
Chemical: Glyphosate is registered for use on yellow nutsedge. When using glyphosate care must be taken to protect non-target vegetation. Always check product labels to ensure the herbicide is registered for use on the target plant in Canada by the Pest Management Regulatory Agency. Always read and follow label instructions. Consult your local Agricultural Fieldman or Certified Pesticide Dispenser for more information.

Biological: None researched to date.



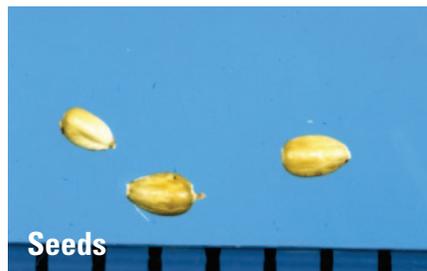
Stem

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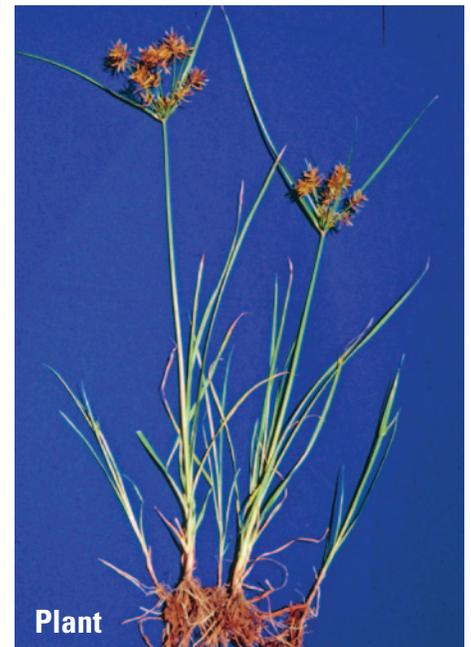
Feature

Ken Chamberlain, The Ohio State University, Bugwood.org



Seeds

Ken Chamberlain, The Ohio State University, Bugwood.org



Plant

Steve Dewey, Utah State University, Bugwood.org

REFERENCES

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- 3 Nutsedge. Pest Notes, Publication 7432. 2010 University of California Statewide Integrated Pest Management Program, Agriculture and Natural Resources. <http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7432.html>
- 4 Yellow nutsedge. Ohio Perennial and Biennial Weed Guide. Ohio State University Extension. www.oardc.ohio-state.edu/weedguide
- 5 H. Zhang, M. Hanna, Y. Ali, L. Nan. Yellow nut-sedge (Cyperus esculentus L.) tuber oil as fuel. 1999. Agricultural engineering College, Sheyang Agricultural University, Sheyang, Liaoning Province, China. www.sciencedirect.com/science/article/pii/S092669096894465