

Nova Scotia Noxious Weeds

Yellow Nut Sedge - *Cyperus esculentus* L.

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Yellow nut sedge is a perennial, grass-like member of the sedge family. The erect, central triangular stem (up to 1 cm across) can reach 30-90 cm in height, with numerous leaves at the base, and fewer up the stem, except for a cluster of three or four around flower spikes. The leaves are arranged in three vertical rows, unlike grasses, which have two rows. The leaves are 2-3 mm wide, and yellowish green, with a smooth, shiny upper surface. Each leaf is creased into a v-shape along its central vein.



The underside of the leaves is paler green and dull, with parallel veins. Flower spikes develop on long triangular stems coming from the basal clump of leaves. Yellow, flat topped clusters of flowers form, called umbels. In one season, the flower clusters on a single plant can produce up to 90,000 seeds.

Yellow nut sedge has distinctive underground tubers, which form at the end of roots. The root system is made up of long, thin rhizomes (5-20 cm long) and masses of fibrous roots. The rhizomes are light brown with nodes surrounded by short, dark brown sheaths. The tubers produced at the ends of the rhizomes are brown, round to spindle shaped, and 5-20 mm long.

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Yellow nut sedge is a native plant of North America and Eurasia. It is considered to be one of the five worst weeds in the world. In some parts of the world, it is grown for its tubers, which taste like almonds and are eaten raw or cooked, ground into flour, and crushed or roasted to make drinks. It is also known as chufa, earth almond, rush nut, northern nut grass, ground almond, coco sedge, watergrass, and edible galingale.

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Life Cycle

This weed is a persistent perennial which is difficult to eradicate. The tubers form after the four to six leaf stage, overwinter, and sprout new plants in the spring. The tuber skins contain a chemical which inhibits sprouting, therefore, this weed requires moist soils which "wash" the tuber skins before sprouting. Shoots from the tubers reach the surface and form bulbs. Within three weeks, a new plant grows from each bulb, and makes more tuber producing roots. A tuber may have up to seven viable sprouts, which can emerge from a depth of 80 cm. A single plant's growth can produce 1,900 new plants in a year, and 7,000 new tubers. Frost will kill the visible vegetation of this weed, but it resprouts in spring. Tubers are not believed to last longer than three years in the soil unless buried deeply. Initially the seed produced by yellow nut sedge in Nova Scotia was believed to be non-viable, however, plants have been grown from seed collected from particular sites in the province.

Habitat

Yellow nut sedge prefers moist soils in fields, along riverbanks and ditches, or in irrigated cropland. It will survive in most soil types, including peat and soils with pH values as low as five. It will not tolerate shade.

Nut sedge sites exist in Kings, Annapolis and Halifax counties. It is usually found in areas where old orchards have been taken out of production. Field grown nursery stock has been found entering the province contaminated with yellow nut sedge.

Effects

Yellow nut sedge is one of the world's worst weed species due to its reproductive capacity, its extremely competitive nature, and the difficulties in controlling it. It is a principal weed of many crops in the United States, and is particularly troublesome in potatoes because its tubers will grow right through the potato. It will reduce yields, lower crop quality, and increase production and harvesting costs. Studies in corn have shown a 75 per cent reduction in yield.



Control

Tillage at intervals of four weeks has been found to deplete the tuber energy reserves. Cultivation of infested fields should begin when tubers start sprouting and continue throughout the growing season. Tall crops will reduce further tuber production and compete well for light, but yellow nut sedge often resprouts in the following spring. All equipment used in cultivation must be high pressure sprayed prior to leaving the infestation site as this weed can spread its seeds or tubers on equipment. Also, pigs can quickly find and eat the buried tubers.

Yellow nut sedge is very difficult to control because the tubers are resistant to systemic herbicides. The best control method is a combination of herbicide use and a cultivation regime. The most effective herbicide treatments are pre-emergence applications which enter young shoots prior to their emergence and enter the root systems of young plants. A number of herbicides are available which will provide some control, but not eradicate it. For further information or herbicide application rates, please contact your weed inspector or consult the most recent Guide to Weed Control (Publication 75).

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