

Nutgrass / Nutsedge Control around Ornamentals

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Nutsedge has been on the increase locally since an extremely wet year several years ago. Dormant tubers were encouraged to germinate with the ample moisture. There is a yellow and a purple nutsedge, but all of ours is yellow to my knowledge, so far. It grows upright and spreads. It looks like a grass, but the grass herbicides will not kill it. In fact, it's not a true grass.

Everyone calls it nutgrass, but it's really a sedge. Remember, the phrase, "sedges have edges," meaning that sedges have triangular stems whose edges you can feel when you grasp them. Grasses have round or flattened stems.

Nutsedge spreads and increases by producing underground nuts or tubers. Cultivators and other implements drag and spread the tubers. Nutgrass favors low, moist areas, but can be found in dry areas also.

Nutsedge really shows up when the preemergence herbicides do a good job, eliminating competition from other vegetation, allowing the sunlight to reach the bare soil and stimulate dormant tubers to germinate. Nutsedge is difficult to control, but progress can be made if management makes a **major** effort.

Like seed, the tubers can lay dormant in the soil for several years. Several years of management will be required to rid the soil of a percentage of the dormant tubers already present.

If any of the links to the herbicide labels below do not function correctly, try searching for the herbicide name at <http://www.cdms.net/LabelsMsds/LMDefault.aspx>

Preemergence Herbicides labeled for Nutsedge

Pennant Magnum (83.7% metolachlor) will provide 60 days or so of preemergence control when applied at the rate of 2 pints per sprayed acre. It can be tank mixed with Princep (Simazine) or Gallery to provide broadleaf control. Re-apply Pennant in 50 days or so to maintain control. The label suggests directing the spray in order to minimize contact with ornamental foliage. Some foliar burn can occur on tender foliage of even labeled ornamentals. The label recommends following over-the-top applications with sufficient overhead irrigation to wash it from the foliage to reduce injury. After spraying Pennant, I have gone back over the same rows with clean water in the same tank as soon as I could and avoided injury to tender seedlings. Refer to the label for a list of ornamentals at <http://www.cdms.net/LabelsMsds/LMDefault.aspx?pd=4197&t>

Postemergence Herbicides labeled for Nutsedge

Actively growing green nutsedge can be sprayed with Gramoxone, Basagran T/O, Image, Prosedge, Roundup or Finale. Repeat applications will be required to kill the same nutsedge plant with some of these. Multiple applications will be required as new tubers germinate or as cultivation bring new tubers to the surface. It is not safe for any of these herbicides except some crops with Basagran T/O to contact foliage or green stems. A shielded sprayer would be helpful.

Basagran T/O, (bentazon) by BASF, must not touch desirable ornamental foliage except on the species labeled for over-the-top applications. The most current label (2005) lists *Ajuga* sp., *Thuja occidentalis*, *Buxus japonica* 'Winter Gem', Dusty Miller, *Ilex cornuta* 'Burfordii' and 'Dwarf Burford', *Ilex crenata* 'Compacta', *Impatiens* sp., *Hedera helix*, *Liriope muscari* (green only), *Liriope spicata*, 'Aurora Gold' Marigolds, Mugo pine, *Quercus rubra*, *Brassica* sp. Ornamental cabbage, *Pachysandra terminalis*, 'Madness Plum' and 'Ultra White' *Petunia* hybrids, 'L. Scarlet' Snapdragon, *Taxus cuspidata* 'Densiformis', *Taxus media* 'Hatfieldii' and 'Hicks' for over-the-top application.

Research reported in the Journal of Environmental Horticulture found that *Juniperus chinensis* 'Hetzii', *Pachysandra terminalis*, *Ilex vomitoria* and *Ilex cornuta* 'Burfordii' and 'Rotunda' tolerated Basagran topical applications with no visible injuries. All other plants should be shielded. Injury may occur when applying Basagran T/O as a directed spray under the tree line or over the roots of sycamore and rhododendron.

Basagran T/O should be sprayed at the rate of 2 pints in 40+ gallons of water per acre at 40 psi or 0.75 fluid ounce per 1000 square feet in 1-2 gallons of water when plants are 6-8 inches tall and not stressed. Add oil concentrate to the solution at the rate of 2 pints per acre or 3/4 fluid ounce per 1000 square feet. Basagran T/O is not effective on purple nutsedge. Increase water volume and pressure for extremely thick stands of nutsedge to obtain good coverage.

Repeat at same rate in 7-10 days, if needed. Rainfall or overhead irrigation within 8 hours may reduce effectiveness. Basagran T/O can be tank mixed with Pennant Magnum according to Basagran's label, but only on labeled ornamentals of both products. Label is at <http://www.cdms.net/LDat/ld0R4002.pdf>

Certainty (75% sulfosulfuron) by Monsanto may be applied as a post-directed spray around any established woody ornamental species in landscapes and field nurseries (not containers). Avoid contact with desirable plant parts. Certainty may be applied over-the-top of several ornamentals on the label (see a brief list at end). It may also be applied 14 days pre-plant to a list of ornamentals on the label.

Certainty will kill several weeds (little barley, bluegrass, buttercup, chickweed, white clover, dandelion, tall fescue, wild garlic, johnsongrass, wild mustard, perennial ryegrass, and others) in addition to nutsedge and suppress a few also (Carolina Geranium, henbit, ground ivy, quackgrass, wild violet, yellow woodsorrel and others).

Best results are obtained when target weeds are actively growing & not disturbed by mowing for at least 2 days before and 2 days after application. Certainty is absorbed by roots and foliage and rapidly inhibits growth of susceptible weeds within 24 hours even though visual symptoms of yellowing or browning may not show for 2-3 weeks. Warm moist conditions following application will accelerate activity; cold, dry conditions will delay activity. Drought stressed weeds are less susceptible.

While recommended rates vary from 0.25 to 2.0 ounces of product per acre, only the 1.25 oz/acre rate is recommended for green or purple sedge control in the 3-8 leaf stage. A sequential application of 1.25oz/acre rate may be made 4 or more weeks after the initial treatment, if needed.

Spot Spraying: Add 1 large scoop (0.8 gram scoop) to 2 gallons of water. Apply 2 gallons of spray solution per 1000 sq ft. Apply 4 teaspoons (2/3 fl oz) of nonionic surfactant to 2 gallons of water. (1-2 qt/100 gal) Do not spray to point of runoff. Rainfast within 2 hours, it is systemic, 12 hour REI.

Here is a partial list of the ornamentals that Certainty can be applied over-the-top of. See label to learn which species and cultivars: arborvitae, azalea, boxwood, burning bush, forsythia, holly, hydrangea, juniper, lilac, mondo grass, monkey grass, ninebark, Vinca, photina, privet, redbud, rhododendron, serviceberry, spirea, viburnum, & weigela.

<http://www.cdms.net/LDat/ld6QJ014.pdf> is the general label.

<http://www.cdms.net/LDat/ld6QJ013.pdf> is the supplemental label for landscaped and nurseries.

Gramoxone (paraquat) can be mixed 1 ounce per gallon to control nutsedge. Add a nonionic surfactant at rate of 1 pint per 100 gallons or 1 Tablespoon per 3 gallons water. Spray to wet. One application should kill the plant and the first tuber. Additional tubers will germinate when the sun is allowed to reach the soil, as the vegetation dies down. Regrowth from seed or additional nutsedge tubers can be rapid and is often mistaken as lack of control from previous herbicide applications. Gramoxone is rainfast in 1/2 to 1 hour.

<http://www.cdms.net/LDat/ld77A061.pdf> [A Pesticide Certification card (available at Extension offices) is required to purchase this "Restricted Use Pesticide".]

Prosedge (halosulfuron) by NuFarm has replaced Manage by Monsanto and Sedgehammer by Gowan. It is labeled for yellow and purple nutsedge but cannot go over the top of any ornamentals. It does have residual soil activity so avoid use inside containers. Prosedge is a 75 percent water dispersible granule (WDG). It is effective if no rainfall occurs within 3 hours, but best results are obtained with no rainfall or irrigation for at least 8 hours.

Spray Prosedge when the nutsedge has 3-8 leaves. Mix 0.9 gram (use measuring scoop provided) plus 2 teaspoons of nonionic surfactant in 1 gallon of water to treat 1000 square feet. Use level scoops. The nonionic surfactant must be high quality. Sun-It II was the best one evaluated in a UT research project. Prosedge works best when applied to dry foliage. Wet the entire leaf surface. It has no effect on bermudagrass.

Symptoms of dying are slow, taking 7-10 days to yellow, and 30 days to brown. A second treatment may be required 6-10 weeks later at the same rate. Can be tank mixed with Roundup (glyphosate to kill other weeds at same time. Prosedge is available for about \$80/1.3 oz. (1.3 oz = 36.855 grams = enough for 41 gallons of solution = about \$2/gal of solution) Local experience is good. Label is at <http://www.cdms.net/LDat/ld9CS000.pdf> Here is the Sledgehammer by Gowan label if you should have some or find some still available http://www.rosecare.com/label_sedgehammer.pdf

Roundup (glyphosate) is effective on nutsedge when mixed at a 5% solution according to the Monsanto rep, Joe Paul Downs. The secret for success is that it must be sprayed very lightly across the foliage tips. Sweep a hand wand rapidly over the maturing nutsedge plants or use an 8002 tip. Surprising, but effective. Roundup is also more effective on nutsedge as it approaches flowering (maturity). Roundup is rainfast in 2-4 hours. Repeat treatments will be required as new tubers germinate that are already present in the soil. A 5% solution requires 20 fl oz in 3 gal or 5 qts in 25 gallons.

Growers tell me that Roundup (glyphosate) only yellows nutsedge when they follow the label. The label calls for 3 quarts per acre in 20-30 gallons of water per acre. More water would decrease the effectiveness. Use a 1-2 percent solution for spot spraying. **A 1% solution is 1 1/3 fluid ounce per gallon or 4 fluid ounces per 3 gallons or 1 quart per 25 gallons for spot spraying.** A 2% solution is 2.5 fluid ounce per gallon or 7.5 fluid ounces per 3 gallons or 2 quarts per 25 gallons for spot spraying. Here is the link to Monsanto; choose the specific Roundup label you need.

<http://www.cdms.net/LabelsMsds/LMDefault.aspx?manuf=23&t=1,2,3,4> Dr. Joe Neal, NC State said "We have not seen good success with glyphosate," but I believe he only tested label rates.

The **Finale** (glufosinate) label says that 4-6 quarts per acre or 3-4 fluid ounces per gallon will control nutsedge. Finale is rainfast in 4 hours. Strive for thorough spray coverage, and don't use excessive water. Like Roundup, keep Finale off of all foliage and bark of ornamentals. <http://www.cdms.net/LDat/ld0DI005.pdf>

Landscape Label only, not field or container nursery

Image (imazaquin) 70 DG by BASF (American Cyanamid formerly had Image 1.5), is labeled for yellow and purple nutsedge, but only in the landscape, not in field or container nurseries. "...can be safely applied at the labeled use rates around and over the top of those plants listed. ... Mix 0.5 oz per 3 gallons and spray to wet." Use surfactant and antifoaming agent. Label is at <http://www.cdms.net/LDat/ld3SG003.pdf>

I have included information about several herbicides in order to be fair, but, at the moment, I think Pennant Magnum as a pre and Gramoxone or Prosedge as a post offer the best all around control, unless you can go over the top with Basagran T/O. Nutsedge must be actively growing and not stressed in order to obtain good control.

Nutsedge Control in Containers

Nutsedge will find wet areas around container yards. Persistence will be required to keep it from becoming rampant. There is no excuse for allowing it to grow in the actual containers.

Like many things in life it is easier to keep nutsedge from getting out of control from the beginning than to get it under control once it has gone wild.

None of the postemergence herbicides that are effective killing green nutsedge are safe to spray over ornamentals, except Basagran T/O. Refer to the label to learn which ornamentals Basagran T/O can be sprayed over the top of.

After spraying or hand pulling existing nutsedge, the preemergence herbicide Pennant Magnum can be sprayed over a limited list of container grown plants to reduce the germination of nutsedge seed, not tubers however. Refer to the label for a list of ornamentals. The label states to “follow with sufficient overhead irrigation to wash Pennant Magnum from the foliage to reduce the chance of injury.” Any foliar burn on tender foliage is usually quickly covered by new growth.

Nutsedge Control between pots and areas away from containers

Green actively growing (May-Sept) nutsedge can be spot sprayed with Basagran T/O, Gramoxone, Prosedge, Roundup (glyphosate) or Finale. Repeat applications will be required to kill with some of these. Avoid getting any of these herbicides on any ornamental plant parts by being careful, avoiding windy days or improvising a hand-held shield. Repeat applications will be required as new tubers germinate.

Pennant Magnum preemergence herbicide can be used on the floor and over some ornamentals in containers. Pennant Magnum is the only preemergence herbicide that offers any preemergence activity on nutsedge. The 2 pints per acre rate will provide about 60 days of control. It can be repeated. The 2 pints per acre rate equals 20 ml or 4 teaspoons per 1000 sq. ft. applied in 1-2 gallons of water for spot spraying. The Pennant Magnum label states that it can be tank mixed with Roundup, but not as an over the top application. Basagran T/O can be tank mixed with Pennant according to Basagran’s label, but not as an over the top application.

Pennant Magnum should be washed off with irrigation within 30 minutes of application to avoid injury to ornamental foliage. Any foliar burn on tender foliage is usually quickly covered by new growth however.

NC State’s information <http://www.ces.ncsu.edu/depts/hort/hil/hil-647.html>

READ AND FOLLOW ALL LABEL DIRECTIONS!!! Comm/Weed Control/Nutsedge Control

Disclaimer: This handout is intended to provide information about the use of herbicides to control nutsedge in nursery settings. The mentioning of product names is merely for informational purposes and is not intended to endorse or discourage the use of any product. Products listed may not be comprehensive and other products may exist. This handout is not intended to supersede or replace the label. Always refer to a current label before making the application, which may contain updated or additional information not provided in this handout.

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