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Controlling Yellow Nutsedge

Michigan State University Extension Service

IPM Facts

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What is a Perennial Weed?

A perennial weed is any weed capable of surviving for three or more years. Perennial weeds are characterized by vegetative reproduction. Vegetative reproduction in these species is due to (a) rhizomes—underground creeping stems commonly found in perennial grasses; (b) stolons—prostrate stems or runners on the soil surface with roots at the nodes; (c) creeping roots; (d) tubers—underground enlarged storage stems; or (e) bulbs—underground storage organs consisting of a stem axis covered with many overlapping leaf scales.

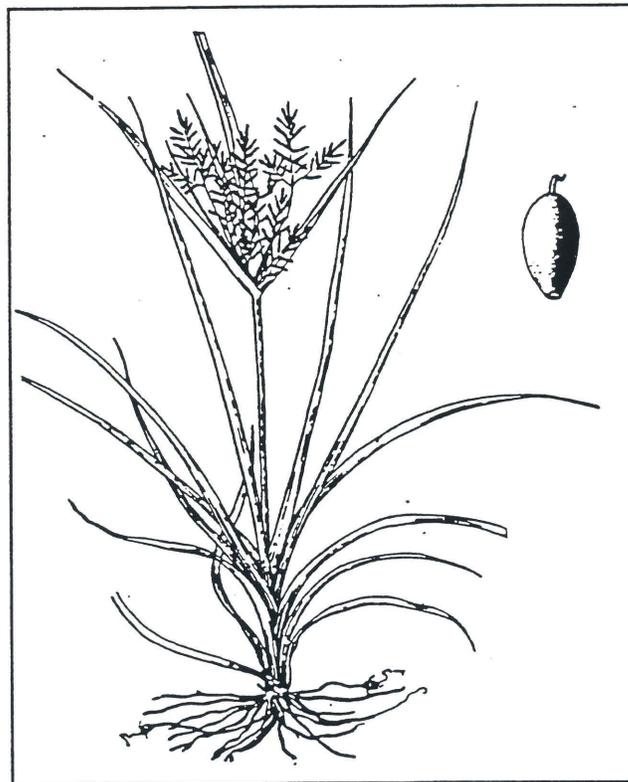
Perennial weeds may or may not reproduce by seed. They always, however, have the potential to reproduce by vegetative means.

Description of Yellow Nutsedge

Yellow nutsedge is grass-like in appearance, but it is not a grass. Stems are solid, erect, triangular in cross section, and can reach a height of 8 to 24 inches. Leaves are yellowish-green, narrow, sprout from the base of the plant, and appear to grow from three sides of the stem when the plant is viewed from above. The seedhead has many yellow-brown, widely spaced, narrow spikelets, each 1/2 to 1 1/4 inches long, and is surrounded by 3 to 9 leafy structures. Seeds are

usually sterile. The plant reproduces primarily by hard tubers, often called nutlets, located at the ends of rhizomes. These tubers overwinter. New plants emerge from each tuber. A single yellow nutsedge plant is capable of producing over 100 tubers.

Yellow nutsedge becomes a perennial within 3 weeks of emergence. It is often found in wet areas and is troublesome in low areas of cultivated fields and pastures.



Methods of Control

Methods of perennial weed control fall into three categories: (a) cultural, such as crop rotation; (b) mechanical, tillage including various implements such as plows, disks, or cultivators; and (c) chemical, using herbicides. Control of perennial weeds may require a combination of all these methods. Consider the energy and environmental implications when choosing a method of control.

Mechanical Control

Mechanical control may increase or decrease perennial weed infestations. Tillage may increase infestations by moving perennial weeds to new areas of the field or breaking dormancy of underground buds resulting in new shoot growth. Tillage during cool, wet conditions results in reduced control.

Tillage may decrease perennial weed infestations if done frequently enough to deplete underground root reserves. The field should be tilled every two or three weeks. Warm, dry soil conditions increase the effectiveness of tillage for perennial weed control by drying plant roots on the soil surface.

Chemical Control of Yellow Nutsedge

Soybeans

| <u>Herbicide</u> | <u>Rate</u> | <u>Timing¹ (Weed ht.)</u> | <u>Effectiveness</u> |
|---|------------------------------|--|----------------------|
| Synchrony STS ² + 28% N + COC ³ | 0.85 oz/A + 2 qt + 1% | 2-3" POST | Excellent |
| Classic ⁴ + NIS ³ | 0.75 oz/A | 4" POST | Excellent |
| Dual | 2.5 pt/A | PPI, PRE | Good, Fair |
| Frontier 6.0 L | 25 oz | PPI, PRE | Good, Fair |
| Lasso or Micro-Tech | 3 qt/A | PPI, PRE | Fair, Poor |
| Canopy ⁵ | 4 oz/A | PPI, PRE | Fair, Poor |
| Scepter | 0.67 pt/A (2.8 oz 70 DG) | PPI, PRE | Fair, Poor |
| Pursuit | 0.25 pt/A (1.4 oz 70 DG) | PPI or PRE | Fair |
| Basagran ⁶ + COC | 1.5 pt/A + 1 qt/A and repeat | 6-8" POST | Fair |
| Pursuit + 28% N + NIS | 1.4 oz | 4" POST | Fair |
| FirstRate + 28% N + NIS | 0.3 oz/A | POST | Fair |
| Raptor + 28% N + NIS | 4 oz/A | POST | Fair, Poor |
| Roundup Ultra + AMS or 28% N ^{6,7} | 1 qt | 4-6" POST ⁸ | Good |

¹PPI applications are more effective than PRE applications.

²Synchrony STS can be applied to all fields south of I-96. Do not use Synchrony north of I-96 if soil pH is greater than 7.0.

³NIS = nonionic surfactant; COC = crop oil concentrate.

⁴Do not use Classic at .5 or .75 oz/A if soil pH is greater than 7.0. Classic at .5 oz/A provides fair-good control of 3" nutsedge.

⁵Do not use Canopy if soil pH is greater than 6.8.

⁶A second application is recommended 10 to 14 days later. A cultivation may replace the second application.

⁷Ammonium sulfate (AMS) at 17 lbs/100 gal or urea-ammonium nitrate (28% N) at 4%.

⁸For spot treatment only. Broadcast applications can be made to Roundup Ready soybean only. Increasing the rate to 2 qt/A may improve control if only one application is planned.

Corn

| <u>Herbicide</u> | <u>Rate</u> | <u>Timing (Weed ht.)</u> | <u>Effectiveness</u> |
|---|---------------------|------------------------------|-------------------------|
| Permit + NIS ¹ | 1 oz/A | 4" POST | Excellent |
| Harness | 2.3 pt/A | PPI, PRE | Good, Fair ² |
| Surpass | 2.5 pt/A | PPI, PRE | Good, Fair ² |
| Eradicane | 3 qt/A | PPI | Good |
| Sutan Plus | 3 qt/A | PPI | Good |
| Dual | 2.5 pt/A | PPI, PRE ³ | Good, Fair |
| Frontier 6.0 L | 25 oz | PPI, PRE | Fair, Fair |
| Lasso or Micro-Tech | 3 qt/A | PPI, PRE ³ | Fair, Poor |
| Basagran + COC ^{1,4} | 1.5 pt/A and repeat | 6-8" POST | Fair |
| Lightning + NIS + 28% N or AMS ⁵ | 1.28 oz/A | 4" POST | Good |

¹NIS = non-ionic surfactant; COC = crop oil concentrate; 28% N = 28% liquid urea:ammonium nitrate, AMS = ammonium sulfate

²Effectiveness increases with higher application rates.

³PPI will provide greater control than PRE applications.

⁴Sequential applications of Basagran or atrazine should be made 10 to 14 days apart.

⁵28% liquid nitrogen fertilizer at 1 qt/A or ammonium sulfate at 2.5 lb/A

Spot Treatments and Between Crops

Tillage may provide suppression in a dry year.

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