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Controlling Quackgrass

Michigan State University Extension Service

Michigan Energy Conservation Program for Agriculture and Forestry

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CONTROLLING QUACKGRASS

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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 Quackgrass

Quackgrass is characterized by clasping auricles. At the base of the leaf where the leaf blade meets the stem sheath there are two structures that wrap partially or completely around the stem. Another major characteristic is the slender, white creeping rhizomes found in the soil at a depth of 2 to 8 inches. These rhizomes are short-lived, only lasting for two summers and one winter. Shoots and roots arise from nodes on the rhizomes. Stems are 1½ to 3 feet tall and erect, branching at the base. Leaves are finely ribbed, sparsely hairy

on the lower sheath and smooth (or nearly smooth) on the upper sheath. The seedhead is a spike 2 to 10 inches long. Quackgrass reproduces primarily by rhizomes; less than 20% of the seeds can produce a new plant.

Quackgrass may be found in cultivated fields, pastures, and waste places.

Methods of Control

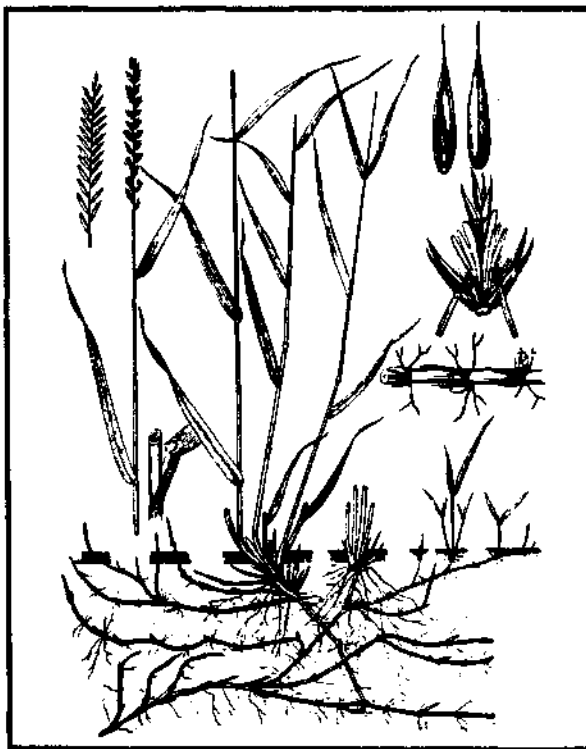
Methods of perennial weed control fall into three categories: (a) cultural, such as crop rotation; (b) mechanical, tillage including various implements such as plows, disks, or cultivators; and (c) chemical, using herbicides. Control of perennial weeds may require a combination of all these methods.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

Soybeans

<u>Herbicide</u>	<u>Rate</u>	<u>Timing</u> ¹	<u>Effectiveness</u>
Assure + COC ²	1¼ pt/A + 1%	POST	Excellent
Fusilade 2000 + COC ²	1½ pt/A + 1 qt/A	POST	Good
Poast + 28% N + Dash	1½ pt/A + 1 gal/A + 1 qt/A	POST	Fair

¹ Apply when quackgrass is 6-8 inches tall. May require a second application or cultivation 14-21 days later.

² COC = crop oil concentrate

Corn

<u>Herbicide</u>	<u>Rate</u>	<u>Timing</u> ¹	<u>Effectiveness</u>
Atrazine	1½ lb/A + 1½ lb/A	PPI + PRE	Fair
Atrazine	1½ lb/A + 1½ lb/A	PPI + POST	Fair
Atrazine	1½ lb/A + 1½ lb/A	PRE + POST	Fair
Atrazine	1½ lb/A + 1½ lb/A	POST + POST	Fair
Eradicane	3½ qt/A	PPI	Fair

¹ Atrazine effectiveness is greatest when applied POST. Add crop oil concentrate at 1 qt/A to all POST applications.

Spot treatments between crops

<u>Herbicide</u>	<u>Rate</u>	<u>Timing</u> ¹	<u>Effectiveness</u>
Roundup	2 qt/A	Spring or fall	Excellent
Roundup + NIS ²	1 qt/A + ½%	Spring or fall	Good
Ranger	1½ qt/A	Spring or fall	Good
Roundup	1%	Spot treatment (see label)	Excellent

¹ All treatments should be made when quackgrass is 8 inches tall or greater.

² NIS = nonionic surfactant

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To protect yourself and others and the environment, always read the label before applying any pesticide.

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