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## Quackgrass and Its Control

Quackgrass is listed as a primary noxious weed of Iowa. Originally introduced into the United States from Europe, it has spread rapidly and become a serious pest. It is most serious in the northern half of Iowa, particularly in the north-eastern part of the state. However, quackgrass is found to some extent in every county in Iowa. It is in cultivated fields, pastures, lawns, gardens, roadsides, railroad embankments, fencerows, and waste areas.

Quackgrass develops a dense mat of underground rooting stems, which form a heavy sod. The plant grows 1 to 3 feet tall with bright green leaves and white to yellowish jointed rhizomes. If allowed to grow a few years without cultivation, the matted rhizomes make crop production difficult or infested areas.

New infestations of quackgrass arise from seeds or rhizomes. Within infested fields, quackgrass spreads primarily by underground rhizomes. Quackgrass often occurs in circular patches due to radial growth of the rhizomes. Although tillage may aid the control of quackgrass by bringing rhizomes to the soil surface where they are prone to desiccation, tillage also spreads the weed due to movement of rhizome fragments by the tillage implement. Seeds aid in the long distance movement of quackgrass.

Quackgrass starts growth early in the spring and continues growth until late fall. It is relatively shallow-rooted when compared to other perennial weeds found in Iowa. Rhizomes are usually found in the upper 6 to 8 inches of the soil profile.

### Quackgrass Control

#### Prevention

**Plant clean seed**—Quackgrass seed often is found in seeds of small grain and bromegrass. Buy only high-quality, tested crop seed from reliable sources that does not contain seeds of quackgrass or other weedy species.

**Avoid infested bedding**—Quackgrass seeds are commonly found as impurities in straw used for bedding or



mulching. Do not buy or use any bedding, packing, or mulching materials containing quackgrass seed.

**Avoid infested feeds**—Hay or other feeds often contain quackgrass seed. The grinding, mastication, and digestion processes of farm animals destroy many seeds found in feeds, but some pass through the alimentary canal in a viable condition. Feed containing quackgrass seed should be finely ground to destroy the viability of the seed.

#### Cultural Control

The extensive system of underground roots and rhizomes contains abundant food reserves, enabling quackgrass to resprout after mowing or cultivation. Repeated tillage can control quackgrass by depleting food reserves and preventing manufacture and accumulation of additional re-

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serves. However, consider the impacts of tillage on potential erosion losses, as well as the benefits of quackgrass control. Close grazing before tillage improves control. Tillage is most effective in warm, dry weather. It brings quackgrass roots and rhizomes to the soil surface where they dry out and die. Fall tillage exposes rhizomes to freezing temperatures and aids in quackgrass control.

## Herbicidal Control

Herbicides to control quackgrass are available for most crops. Quackgrass is most effectively controlled by a combination of chemical and cultural methods. Cultivation after herbicide treatments may control escaped plants and prevent quackgrass reinfestation.

Quackgrass must be at the proper stage of growth when using foliar-applied treatments. Treatments made too early in the spring or too soon following tillage will have little effect on the, underground rhizomes, thus the area will be quickly reinfested

## Corn

The traditional approach to quackgrass control in corn was the use of high atrazine rates. Changes in the atrazine label have resulted in the removal of this use; however, several alternatives are available that allow effective, economic quackgrass control.

Quackgrass can be controlled prior to corn emergence with Roundup applied in the fall following harvest or spring prior to planting. Fall applications generally provide more consistent control than spring treatments. Fall treatments made after light frosts have been successful as long as quackgrass is green and temperatures are relatively warm at treatment time. Applications should be made when quackgrass is at least 8 to 12 inches tall and actively growing. Delay tillage until at least 3 days after application. Rates of 1 to 3 quarts of Roundup per acre will provide adequate control. When using the 1 qt./A rate, apply in 3 to 10 gallons of water per acre and include 1 percent of nonionic surfactant.

Quackgrass may be controlled postemergence in corn using either Accent or Beacon. Treatments should be made when 4 to 8 inches of quackgrass foliage is present. Follow label recommendations regarding the use of spray additives

## Soybeans

Quackgrass management strategies in soybeans are similar to those in corn. Roundup can be used in the fall or spring prior to planting soybeans; see comments in corn section and the product label for application information. Several postemergence products, including Assure II, Fusilade 2000, and Poast Plus are registered for quackgrass control, with Assure II providing slightly more consistent control. Repeat applications may be required to obtain full season control. Consult label for appropriate timing of application and use of spray additives with these products.

## Alfalfa

Quackgrass is a common problem in alfalfa. The weed gradually invades established stands during the course of the rotation. Since quackgrass is harvested along with alfalfa, controlling quackgrass will not increase yields, and may reduce harvested forage. Removal of quackgrass and other weeds with herbicides may improve the hay quality. Growers who balance rations through forage testing or receive premium prices for high quality hay may benefit from treating quackgrass with an appropriate herbicide.

Kerb may be applied in the fall for quackgrass control in established forage legumes. Applications should be made in late October or early November when soil temperatures are below 60° F, but before soil freeze-up. Kerb should only be used on pure legume stands, not on alfalfa-grass mixtures.

Quackgrass also may be controlled in alfalfa with postemergence applications of Poast Plus. Applications should be made when 6 to 8 inches of quackgrass growth is present. A second treatment may be necessary in certain situations. Do not apply Poast within 7 days of grazing, feeding, or cutting forage, or within 20 days of cutting hay.

Quackgrass problems in corn are often most serious in corn following alfalfa. When rotating alfalfa fields with significant quackgrass infestations to corn, best control often is obtained by treating the field with Roundup in the fall. Allow sufficient regrowth of quackgrass following the last cutting to ensure complete kill. If corn is to be planted no till, the addition of 1 pt./A 2,4-D will provide better control of the alfalfa. Although this strategy may require sacrificing the final cutting of hay, it will provide more consistent quackgrass control than other options.

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To simplify information, trade names of products have been used in this publication. No endorsement is intended, nor is criticism implied of similar products not named. Product labels continually change, thus some of the information presented here may be outdated. Carefully read the product label prior to purchasing and using any herbicide

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