Quackgrass

Colorado Department of Agriculture
Conservation Services

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Quackgrass Identification and Management

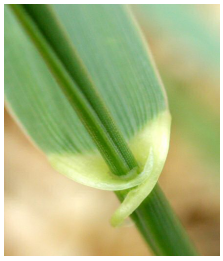
Identification and Impacts

Quackgrass (Elymus repens) is a perennial grass that is native to Europe. It grows from underground rhizomes to an unmowed height of 1 to 4 feet with erect stems. The rhizomes are yellowish-white, sharp pointed and somewhat fleshy. Both the leaf sheath and blade are hairless or sparsely hairy. The seeds germinate in the fall and spring and plants can produce seeds more than 1 time per season. Spikelets are in 2 long rows and borne flatwise to the stem. The florets have short, straight awns or are awnless. The leaves of Quackgrass are constricted near the tips. Leave blades are 0.25 to 0.5 inches wide, flat, pointed, with small ear-like appendages at the junction of the blade and the sheath. Quackgrass's flowers appear from June through August and resemble wheat head in a slender spike. Each Quackgrass plant produces about 25 seeds. These seeds remain viable for 3 to 5 years in the soil.

The habitat of Quackgrass includes: crops, pasture, rangeland, roadsides, ditches, gardens, yards, and any disturbed moist area. It is a rapid invader that does stabilize eroding soils, but take over good areas for other plants. Since it adapts to moist soils the optimal growth temperature is 68-77 degrees Fahrenheit. Quackgrass only moderately tolerates shade.

The key to effective control of Quackgrass is preventing the establishment of dense stands, once it becomes established it is hard to control. Using an integrated weed management approach proves to be the best control. Using a combination of cultural, mechanical and chemical controls can have an effect, with Quackgrass. Herbicide treatments are an option if used when plants are young, generally in the spring. Details on the back of this sheet can help to create a management plan compatible with your site ecology.

Quackgrass is designated as a "List C" species in the Colorado Noxious Weed Act. It is required to be either eradicated, contained, or suppressed depending on the local jurisdictions managing this species. For more information visit www.colorado.gov/ag/weeds or call the State Weed Coordinator at the Colorado Department of Agriculture, Conservation Services Division, 303-869-9030.



Key ID Points

1. The yellowish-white rhizomes (root systems).
2. The leaves ear-like appedages at the sheath node.

Photos © (Clockwise from lower left): Ohio State Weed Lab, Ohio State University; (Unknown) weeds.hotmeal.net; (Unknown) Shawnee County Kansas; (Next two) Steven Dewey,

Updated on:
08/08

Elymus repens

Management Recommendations

Quackgrass

CULTURAL
Cultural methods for Quackgrass include outcompeting when in crop fields, but preventing the establishment of new infestations by minimizing disturbance, and maintaining healthy native communities proves to be successful. Contact your local Natural Resources Conservation Service for seed mix recommendations.

BIOLOGICAL
Currently, there are no biocontrol agents available for Quackgrass. Biocontrol takes many years of research and development. For more information, contact the Colorado Department of Agriculture's Insectary in Palisade, Colorado at 970-464-7916.

MECHANICAL
Mechanical treatments are tricky when dealing with Quackgrass. Tilling proves to be the best method, but it can also aid in the spread of the rhizometous nature of the plant. If tilling is the only option till towards the center of the infestation, so spreading doesn't occur outward and till when the roots can be exposed to high or freezing temperatures. This will kill the roots and minimize regrowth.

Integrated Weed Management:

Using a combination of control methods proves to be the most effective method when dealing with Quackgrass. Using a mechanical and chemical approach seems to be most effective. Always revegetate with desirable grasses and forbs after treatments. Once infestations of Quackgrass become established control and containment become more difficult.

HERBICIDES

NOTE: The following are recommendations for herbicides that can be applied to range and pasturelands. *Rates are approximate and based on equipment with an output of 30 gallons per acre.* **Always read, understand, and follow the label directions. The herbicide label is the LAW!**

HERBICIDE	RATE	APPLICATION TIMING
Glyphosate (Roundup)	2 to 3 qt/acre or a 2% solution	Apply when grass is 8 of more inches tall.
Clethodim (Select 2EC)	8 to 16 fl. oz. of product /acre + 1% v/v crop oil concentrate	Apply when grass is 4 to 12 inches tall and repeat, if necessary, when 4 to 12 inches tall. *Select can be used in many crops, including alfalfa, and in non-crop areas.

Colorado State University

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