
**VEGETATION MANAGEMENT
GUIDELINE: Reed Canary Grass
(*Phalaris arundinacea* L.)**

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The Eurasian ecotype of reed canary grass (*Phalaris arundinacea*) is a major threat to marshes and other natural wetlands because of its hardiness, aggressive nature, and rapid growth. This species occurs in a variety of wetlands, including marshes, wet prairies, wet meadows, fens, stream banks, and swales. It has been planted widely for forage and for erosion control. Native wetland and wet prairie species are replaced after several years of reed canary grass presence. Reed canary grass invasion is of particular concern because of the difficulty of selective control.

Reed canary grass is a coarse, sod-forming, cool-season, perennial grass native to temperate regions of Europe, Asia, and North America and adapted to much of the northern half of the United States. It occurs in a range of moisture conditions from wet to dry and its best growth occurs on fertile and moist or wet soils (shores, swales, meadows). Reproduction is from seed and vegetatively by stout, creeping rhizomes. It begins growth in early spring, grows vertically for five to seven weeks after germination, and then expands laterally. Growth peaks in mid-June and declines in mid-August. Vegetative vigor is related to maximum root and shoot production. Seeds ripen in late June and shatter when ripe. The native reed canary grass is not thought to be aggressive.

Fire can help control the invasion and spread of reed canary grass in high-quality wetlands. Repeated late autumn or late spring burning for several years can control this species. Annual burning may be needed for

five or six years before good control is apparent. Burning is most effective where other species are present or in the seed bank because fire allows native, fire-adapted species to compete successfully. Fire is not very effective in dense monocultures of this grass where seeds or plants of native species are absent.

Reed canary grass should not be totally eliminated from a site because no reliable method for telling the difference between the native and Eurasian forms is known. Control measures should be implemented when reed canary grass degrades the natural quality or diversity of a community.

Hand removal for control may be feasible in small stands. There is evidence that hand chopping the culms at flowering time may kill small clones. However, hand control is very slow and too labor-intensive for large stands.

In disturbed sites, where there is no real concern for damage to surrounding native species, certain herbicides are effective. Rodeo, a formulation of glyphosate designed for use in wetlands, will kill reed canary grass, especially young plants, when applied to foliage according to label recommendations. Rodeo should be applied in early spring when reed canary grass is green and most native wetland species are still dormant. The area should be checked after spraying, and any surviving reed canary grass should be sprayed the following spring. Dalapon and Amitrol also reportedly kill canary grass, although no Illinois natural area managers were found that have experience with these herbicides. All three herbicides are licensed for use in aquatic areas. Rodeo and Amitrol are nonselective herbicides that will kill all vegetation contacted. Dalapon selectively kills grasses and monocots, but not broadleaf plants. Spraying foliage with Roundup (a formulation of glyphosate) mixed according to label instructions and subsequent burning of dead residue has been moderately effective in northern Illinois. However, Roundup is not licensed for use in aquatic areas and should only be used in areas without standing water.

When using any herbicide, precautions

should be taken to avoid contacting nontarget species. Do not spray so heavily that herbicide drips off the target species. The chemical should be applied while backing away from the treated area to avoid contacting wet herbicide. By law, herbicides may be applied on public properties only according to label directions and by licensed herbicide applicators or operators.

Where practical, it may be beneficial to sow seed of nearby native grasses and forbs after reed canary grass has died through control efforts or gone dormant. Seed of nearby native grasses and forbs should be collected when ripe and then raked into the sod as soon as the reed canary grass has died. This practice should be used in conjunction with prescribed burning because few native species can outcompete reed canary grass in wetlands in the absence of periodic fire. Reed canary grass reportedly will even crowd out cattails. Prescribed burning allows native species that are present or seeded-in to compete successfully.

Several other control methods are ineffective or problematic. Mowing probably is not effective as a control measure. It is probable that no herbicides are selective enough to be useful in high-quality areas. Grazing is probably not a practical method of control in wetland areas where canary grass usually is a problem. No biological controls are known that are feasible in natural areas. Many wetlands are drier now than historically, and restoring water levels may be a means of controlling reed canary grass.

REFERENCES

- Apfelbaum, S.I. and C.E. Sams. 1987. Ecology and control of reed canary grass (*Phalaris arundinacea* L.). *Natural Areas Journal* 7: 69-74.
- Phillips Petroleum Company. 1956. Undesirable grasses and forbs. Section 3 of series. Bartlesville, Okla.