Reed canary-grass

Phalaris arundinacea L.

Grass Family (Poaceae)

DESCRIPTION

Reed canary-grass is a cool-season grass that grows 3–8 feet tall. It forms dense, monospecific stands in wet meadows, riparian areas, and marshes; spreading by means of stout rhizomes. Established plants of reed canary-grass can tolerate prolonged periods of inundation.

Other species that might be confused with reed canary-grass include: common reed (*Phragmites australis*), Canada bluejoint (*Calamagrostis canadensis*), or orchard grass (*Dactylis glomerata*). The long, membranous ligule of reed canary-grass can be helpful in distinguishing it from the others. In addition, unlike common reed, the stems of reed canary-grass do not remain standing through the winter.

flowering stems of reed canary grass

Height - Flowering stems grow from 3–7 feet tall.

Stem - The stem is smooth, green, and erect.

Leaves - Leaves are 4–8 inches long and about ½ inch wide; the ligule is unusually large - up to ½ inch long.

Flowers - Flowering occurs in June and July.

Fruit and seed - The 3–10 inch long branched inflorescence is at the top of an erect stem. It is green with a purplish tinge; although narrow at first, it opens up when in flower. The plume contracts and becomes light tan in color in the fruiting stage. Seeds germinate most readily immediately after they mature.

Roots - Reed canary-grass spreads by rhizomes to form large clonal colonies.

DISTRIBUTION AND HABITAT

Reed canary-grass is a circumboreal species; in North American it grows from Newfoundland to Alaska and south to North Carolina, Kansas, and California.

Why it has become so invasive is not fully known, but may be related to the development of agronomic cultivars with increased vigor and drought tolerance. As early as the 1830s efforts were underway in New England to develop superior forms of reed canary-grass for use as a forage crop. Whether we are also dealing with several naturally occurring genotypes, as we have learned recently is the case with common reed (*Phragmites australis*), has not been determined.

Reed canary-grass occurs throughout Pennsylvania in marshes, alluvial meadows, shores, and ditches. It dominates the extensive riparian flats along the upper Delaware River.

EFFECTS OF INVASION

Reed canary-grass forms dense, monospecific stands in open wetlands, wet meadows, riparian areas, and shores. It effectively excludes all other plant species, causing greatly decreased biological diversity in wetland communities.

REPRODUCTION AND METHODS OF DISPERSAL

Both seed production and vegetative spread by means of rhizomes contribute to the success of reed canary-grass. Seeds are wind-disseminated; both seeds and rhizome fragments are undoubtedly also transported by water. Reed canary-grass produces few viable seeds unless cross pollination between clones occurs.

CONTROL

Whatever means is used to eliminate reed canary-grass, it is essential to replant immediately with something that can out compete any residual plants or seeds, and retard erosion.

Mechanical - Hand pulling is practical in small areas that are newly infested. Follow-up will be needed over 4–5 years, as fragments of rhizome will inevitably remain and grow. Mowing 5 times in a season has been found to be effective. Burning also works, however, timing is important; late spring or late fall are recommended.

Reed canary-grass along the upper Delaware River

Discing or plowing is another way to control reed canary-grass; however, many places where it is a problem are too wet for this to be practical. Flooding will kill the seeds, which cannot survive prolonged inundation, but established rhizomes are unaffected.

Chemical - Glyphosate will control reed canary-grass; but, because it often grows in or near water, only formulations approved for aquatic use (Rodeo) should be utilized.

Biological - No biological control options are currently known.

NATIVE ALTERNATIVES FOR LANDSCAPE USE

Reed canary-grass should not be planted in wetland restoration programs, native grasses and other monocots that do not exhibit invasive tendencies include: big bluestem (*Andropogon gerardii*), meadow foxtail (*Alopecurus pratensis*), Canada wild rye (*Elymus canadensis*), hairy wild rye (*Elymus villosus*), bottlebrush grass (*Elymus hystrix*), fowl mannagrass (*Glyceria striata*), rattlesnake grass (*Glyceria canadensis*), slender mannagrass (*Glyceria melicaria*), Indian grass (*Sorghastrum nutans*), soft rush (*Juncus effusus*), soft-stem bulrush (*Schoenoplectus tabernaemontana*), wool-grass (*Scirpus cyperinus*), and many sedges (*Carex* spp.).

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Internet resources – http://www.paflora.org, http://www.invasivespecies.gov

Invasive species fact sheet prepared by:
Ann F. Rhoads and Timothy A. Block
Morris Arboretum of the University of Pennsylvania
100 Northwestern Ave., Philadelphia, PA 19118
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