REED CANARYGRASS  
(*Phalaris arundinacea*)

**Description:** Reed canarygrass is a member of the Poaceae or grass family. Reed canarygrass is a cool season, sod-forming, perennial. Stems of the plant can reach between 2 and 7 feet in height and are covered with a waxy coating giving the plant a blue-green appearance. Stems are hollow with open sheaths, small clasping auricles, and membranous ligules. Leaf blades are flat, up to 16 inches long, and 1/4 to 3/4 of an inch wide. Flowers are arranged in dense, branched panicles that can range from 2 to 8 inches in length. New panicles are more or less compact and resemble spikes, but open and spread slightly as the plant matures. Spikelets are lanceolate, pale in color and approximately 1/64 of an inch long. Florets are densely clustered and change from green to purple to beige as the plant matures.

**Plant Images:**

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**Distribution and Habitat:** Reed canarygrass is native to North America, but may have also been introduced from Europe. The plant can occur under a variety of moisture conditions, but thrives on moist or wet soils, particularly in wetlands. The plant occurs in northwestern and northcentral regions of the United States and is commonly found throughout the northern Great Plains region. Wet meadows, wetlands, marshes, wet prairies, roadsides, ditchbanks, streambanks, and lake shores are areas where reed canarygrass can successfully establish. The plant also invades areas that have been disturbed by ditch building, stream channeling, intentional planting, and overgrazing.

**Life History/Ecology:** Reed canarygrass is a cool season perennial grass that reproduces vegetatively by rhizomes and through seed production. Seedlings germinate in the spring and grow vertically for five to seven weeks. Vegetative growth peaks in mid-June and declines by mid-August. Reproductive
growth in the shoot tips of the plant occurs in early to mid-April and inflorescence development continues through May. Reed canarygrass flowers from June to July with inflorescences capable of producing approximately 600 seeds each. Seeds may not germinate readily or regularly, and viability is thought to be low. Therefore, established reed canarygrass stands are likely produced from rhizomes and root fragments. Rhizomes and dead stems of reed canarygrass can form a sod layer that can measure over a foot thick.

**History of Introduction:** Reed canarygrass is native to North America, but has also been introduced from Europe for use as a forage and hay crop. The plant was likely first used in agronomic trials in the 1800s. The invasive reed canarygrass is likely a result of agronomic breeding for vigorous growth and drought tolerance. The plant is now found throughout the continental United States. In North Dakota, reed canarygrass is widely distributed throughout the state and is virtually found in every county except for a few counties in the mid-section of the state and in the southwest corner of the state where reed canarygrass has not been included in the county floristic inventories.

**Effects of Invasion:** Reed canarygrass is an aggressive and undesirable species in many lowland areas. Reed canarygrass and the sod layer formed by the plant displaces desirable plant and animal species by forming dense, monotypic stands. These monotypic stands may out-compete most native species, thus altering many wetland ecosystems. Dense stands of reed canarygrass also impede water flow along irrigation systems and can promote silt deposition.

**Control:** Management objectives for reed canarygrass control should involve prevention and controlling the spread of the plants in natural communities. Eliminating or reducing seed production and the vegetative spread of established populations is also important. Infestations should be monitored for several consecutive growing seasons to prevent germination of new plants. Control methods should be combined into an integrated management system for the best long-term control of the plant. Management techniques should be site specific site, determined by land use objectives, extent of reed canarygrass infestations, desired plant community, and effectiveness and limitations of available control measures.

**Mechanical** - Hand pulling reed canarygrass can be effective for small infestations if all rhizomes and root fragments are removed. Hand pulling should be repeated two to three times per year for five years to be effective. Mowing or cutting may be effective if repeated several times throughout the growing season for a five year period. However, some reports suggest mowing alone will not reduce established reed canarygrass infestations. Mowing once or twice per year generally only removes the top growth of the plant and may actually stimulate stem production. Cultivation as a control measure has had variable results. Cultivation may trigger dormant buds to produce new shoots after rhizomes have been disturbed and cut, thus producing a more dense stand of reed canarygrass. However, cultivation practices combined with a flooding regime can reduce reed canarygrass infestations and may promote the growth of desirable plant species. The sod layer of reed canarygrass may be thick and tough, requiring several passes the first cultivation. The area should be tilled several times throughout the growing season to break-up and dry out the rhizome fragments. When winter flooding begins, the entire area should be flooded at least 18 inches deep through late spring the following year. Manipulating water levels alone can be used to control reed canarygrass, although this method can also adversely affect habitat ecology. Burning as a control method has had variable results. Most reports state that burning does not control reed canarygrass. Burning may only kill the top growth of the plant and can actually stimulate stem production unless the burn reaches the entire sod layer. Prescribed burns conducted in May could prevent reed canarygrass from producing seed.
**Chemical** - Several herbicides are available for reed canarygrass control. Glyphosate is the most effective herbicide to control the plant. Glyphosate should be applied in the spring just before reed canarygrass sprouts or during the early heading growth stage. In Washington, glyphosate applied in the late spring followed by summer disking reduced reed canarygrass densities. A follow-up herbicide application the following growing season eliminated plants that germinated and grew from viable rhizomes. However, in Minnesota, studies suggest glyphosate should be applied in late August when plants are storing carbohydrates in the rhizomes. Herbicide that is translocated to the rhizomes will kill the belowground parts of the plant as well as the aboveground parts. Fluazifop-p, sulfometuron, amitrol, and dalapon have also had success in controlling the plant.

Contact your local county extension agent for recommended use rates, locations, and timing.

**Biological** - No biological control agents are available for reed canarygrass control. Grazing may effectively control reed canarygrass. Some reports suggest that reed canarygrass may be a desirable forage crop for cattle; however, palatability may decrease with plant maturity.

**References:**


Reed canarygrass photograph courtesy of Washington State Noxious Weed Control Association.

Inflorescence and infestation photographs courtesy of Mehrhoff, Leslie J./IPANE.

Leaf cross-section courtesy of Purdue University Agronomy Extension.