

Reed canarygrass

Phalaris arundinacea L.

Synonyms: *Phalaroides arundinacea* (L.) Raesch.

Other common names: canary grass

Family: Poaceae

Description

Reed canarygrass is a robust, cool-season, sod-forming perennial that produces culms from creeping rhizomes, the culms grow ½ to 5 feet high. Leaf blades are flat, 2 to 6 inches long and ¼ to ½ inch wide. Flowers are arranged in dense, branched panicles. Immature panicles are compact and resemble spikes, but open and become slightly spreading at anthesis (Whitson et al. 2000). This taxon is morphologically variable, and more than ten varieties have been described.



Reed canarygrass is unique having a single flower per spikelet and a more open, branched inflorescence (rather than a narrow spike as in timothy grass).

Ecological Impact

Impact on community composition, structure, and interactions: This grass forms dense, persistent, monotypic stands in wetlands; these stands exclude and displace other plants. In Montana, reed canarygrass poses a threat to the endangered aquatic plant *Howellia aquatilis*. Invasive populations of reed canarygrass are believed to be the result of crosses between cultivated varieties and native North American strains (Merigliano and Lesica 1998). Reed canarygrass grows too densely to provide adequate cover for small mammals and waterfowl. When in flower, it may cause hay fever and allergies.

Impact on ecosystem process: It promotes silt deposition and the consequent constriction of waterways and irrigation canals. Reed canarygrass may alter soil hydrology.

Biology and Invasive Potential

Reproductive potential: Reed canarygrass reproduces from seed and vegetatively from creeping rhizomes.

Role of disturbance in establishment: Invasion is promoted by disturbances such as ditching of wetlands and stream channelization, overgrazing, intentional planting, and alteration of water levels.

Potential for long-distance dispersal: Seeds have no adaptations for long-distance dispersal. Both rhizome fragments and seeds may wash downstream along streams and rivers.

Potential to be spread by human activity: Reed canarygrass has been planted widely for forage and erosion control.

Germination requirements: Seeds germinate more readily immediately following maturation. This species germinated well in experimental conditions after soaking in water at 50° C. Mechanical damage, increased light, and oxygen also successfully broke seed dormancy (Vose 1962).

Growth requirements: Reed canarygrass is adapted to fine and medium textured soils, pH 5.5-8. It is highly

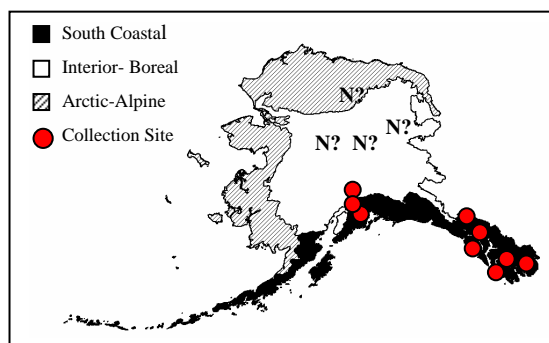
anaerobic tolerant, shade intolerant, and does not require cold-stratification for germination. It is fire tolerant, withstands temperatures to -38°F, and requires 120 frost-free days for growth and reproduction. This species has dense porous summer vegetation, and no coppice potential (USDA 2002). *Listing:* *Phalaris arundinacea* is a Noxious weed in Washington (Class C), Invasive weed in Nebraska, Tennessee, Wisconsin. It is a notorious global weed.

Distribution and Abundance

In the United States, the first agronomic trials probably began in the 1830s and it is now widespread in North America. Reed canarygrass is common in stream banks, margins of springs, and wet meadows, in central, south-central, and southeastern Alaska, southern Yukon, and northern British Columbia. It has ability to invade and dominate sedge meadows and wet prairies, may also pose a serious threat to upland oak savannas (Henderson 1991).

Native and current distribution: There is no consensus on its native status in North America (Merigliano and Lesica 1998) Hultén (1968) states, it is native to Europe, but some authors view it as native to Asia and North America as well (Welsh 1974). The present-day range extends throughout the Old and New Worlds, where it is found primarily in northern latitudes. Some populations of reed canarygrass are

possibly native to Alaska. Four sites that may harbor native forms are from hot springs of interior Alaska (Big Windy, Kanuti, Kilo, and Manley Hot Springs; “N?” in figure).



Distribution of reed canarygrass in Alaska.

Management

Mechanical control methods may be feasible, however, the strategy may be too labor intensive and require a long-term time commitment. No herbicides are selective enough to be used in wetlands without the potential for injuring native species. Plants reestablish quickly from seeds after control methods are used. No biological control methods are known that are feasible for use in natural areas.

References:

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