

# orchardgrass

## *Dactylis glomerata* L.

Synonyms: *Dactylis altaica* Besser, *D. glomerata* ssp. *altaica* (Besser) Domin, *D. glomerata* var. *altaica* (Besser) Keng, *D. glomerata* ssp. *sinensis* A. Camus, *D. glomerata* ssp. *himalayensis* Domin

Other common names: cocksfoot, orchard grass

Family: Poaceae

**Invasiveness Rank:** 53 The invasiveness rank is calculated based on a species' ecological impacts, biological attributes, distribution, and response to control measures. The ranks are scaled from 0 to 100, with 0 representing a plant that poses no threat to native ecosystems and 100 representing a plant that poses a major threat to native ecosystems.

### Description

Orchardgrass is a strongly tufted, perennial grass that usually grows between 46 and 91 cm tall. Leaf blades are flat, up to 13 mm wide, hairless, and usually scabrous. Ligules are 3 to 9½ mm long and somewhat hairy. Panicles are 2½ to 10 cm long and compound. They consist of dense, one-sided, congested clusters. The branches are stiffly ascending to erect or spreading. Spikelets are three- to five-flowered, 6 to 13 mm long, and strongly compressed. Lemmas have soft awn tips that can be up to 1 mm long (Hultén 1968, Welsh 1974).



Panicle of *Dactylis glomerata* L. Photo by L. Landry.

*Similar species:* Orchardgrass can be confused with reed canarygrass (*Phalaris arundinacea*). Unlike orchardgrass, reed canarygrass has one-flowered spikelets. It usually has wider leaves and narrower, more pointed inflorescences. Reed canarygrass usually grows in wetter habitats than does orchardgrass.

### Ecological Impact

*Impact on community composition, structure, and interactions:* Dense stands of orchardgrass may suppress the growth of native shrubs (Anderson and Brooks 1975). Orchardgrass is moderately nutritious and highly palatable to browsing animals. It also provides food and cover for a number of small mammals, birds, and insects (Sullivan 1992).

*Impact on ecosystem processes:* Orchardgrass is susceptible to replacement by native species and does not usually persist longer than one or two decades (Sullivan 1992).

### Biology and Invasive Potential

*Reproductive potential:* Orchardgrass reproduces sexually by seeds and vegetatively by tillering (Beddows 1957).

*Role of disturbance in establishment:* Orchardgrass is usually associated with human disturbances (Williamson and Harrison 2002), but it is also known to invade undisturbed coastal prairie grasslands (Corbin et al. 2004).

*Potential for long-distance dispersal:* Most seeds fall directly to the soil beneath the parent plant. Some seeds attach to animals and are transported long distances (Beddows 1957).

*Potential to be spread by human activity:* Orchardgrass is widely used as a forage crop and is recommended as a part of a seed mix for erosion control and pasture rehabilitation (Anderson and Brooks 1975, McLean and Clark 1980). It is a common commercial seed contaminant (Bush et al. 2005).

*Germination requirements:* Most seeds do not have innate dormancy and can germinate in the fall after they mature. Adequate soil moisture is the most critical

factor for germination. Germination can occur in light or darkness (Sullivan 1992). Seeds germinate mainly in the top 5 to 7½ cm of soil (Chippindale and Milton 1934).

**Growth requirements:** Orchardgrass is best adapted to well-drained, rich or moderately fertile soils with adequate moisture and pH between 5.8 and 7.5. It can tolerate pH as high as 8.5. Optimal growth is achieved when daytime temperatures are between 18°C and 22°C. (Baker and Jung 1968). Orchardgrass does not grow well on saline soils or areas with high water tables, but it is tolerant of shade (Bush et al. 2005). It requires 120 frost free days for successful growth and reproduction. This species can withstand winter temperature as low as -42°C (USDA, NRCS 2006).

**Congeneric weeds:** No other *Dactylis* species are known to occur as non-native weeds in North America.

### Legal Listings

- Has not been declared noxious
- Listed noxious in Alaska
- Listed noxious by other states (NJ, VA)
- Federal noxious weed
- Listed noxious in Canada or other countries

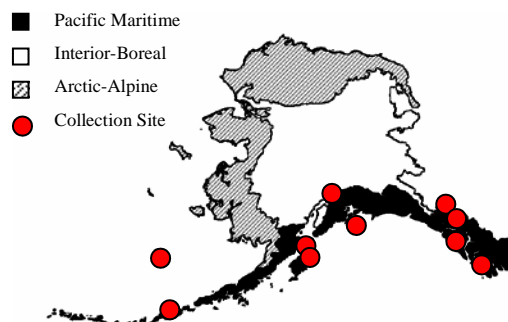
### Distribution and abundance

Orchardgrass is a weed of waste areas, fields, yards, and roadsides in coastal Alaska (Hultén 1968, Welsh 1974).

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**Native and current distribution:** Orchardgrass is native to Europe. It is common throughout temperate Asia and North America. It has been introduced to South America, Australia, and New Zealand, and it can be found in arctic regions (Hultén 1968, Tolmachev et al. 1995). Orchardgrass has been documented from the Pacific Maritime ecogeographic region of Alaska (Hultén 1968, AKEPIC 2010, UAM 2010).



Distribution of orchardgrass in Alaska

### Management

Mechanical methods do not effectively control orchardgrass. Infestations can be controlled by numerous available herbicides (Rutledge and McLendon 1996).

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