

GREEN FOXTAIL

Setaria viridis (L.) Beauv.

Family: *Poaceae* (Grass).

Other Scientific Names: None.

Other Common Names: Green bristlegrass, pigeongrass, wild millet.

Legal Status: Regional Noxious: Peace River.



Identification

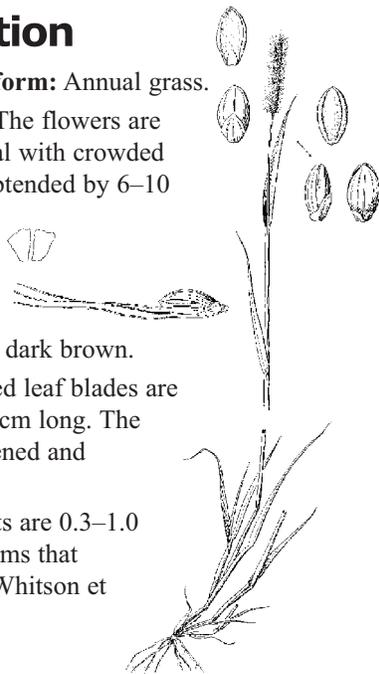
Growth form: Annual grass.

Flower: The flowers are cylindrical with crowded spikelets that are subtended by 6–10 long, yellowish bristles (Whitson et al. 1996).

Seeds/Fruit: Seeds are oval, greenish to dark brown.

Leaves: The flattened leaf blades are usually less than 15 cm long. The leaf sheath is roughened and hairless.

Stems: Mature plants are 0.3–1.0 m tall, with erect stems that branch at the base (Whitson et al. 1996).



Roots: Short, fibrous roots.

Seedling: Leaf blades are hairless, as is the leaf sheath, except for short hairs along margins. The leaf lacks auricles and has a hair-like ligule (Carey et al. 1993).

Similar Species

Exotics: Green foxtail can be distinguished from yellow foxtail (*Setaria glauca*) by the lack of long, twisting hairs on the upper surface of the leaf blade near the base. Green foxtail can be distinguished from bur bristlegrass (*Setaria verticillata*) by the presence of long hairs on the axis of the flowers (rachis) and by the forward-facing barbs of the bristles.

Natives: None known.

Impacts

Agricultural: A nuisance in cultivated fields and irrigated valleys, the plant can be a serious problem in spring-seeded alfalfa, small grain, and row crops (Whitson et al. 1996). Green foxtail can cause yield reductions, cleaning costs, and expensive control costs,

and it is also reported to have allelopathic effects on cabbage seedlings (Douglas et al. 1985).

Ecological: No information available.

Human: No information available.

Habitat and Ecology

General requirements: Green foxtail is commonly found in field crops (especially corn), vegetables, lawns, gardens, and disturbed habitats along roadsides and streams. It is adapted to moist, medium- to coarse-textured soils.

Distribution: Found throughout BC and common throughout North America. It is present in all agricultural reporting regions and considered a major concern in the Peace River district.

Historical: Introduced from Eurasia.

Life cycle: A summer annual that overwinters as a seed on or below the soil surface. It generally emerges in early spring following periods of high rainfall. Flowering occurs from July to September, depending on geographic location, and seeds can mature within 2 weeks of flowering. Seeds readily fall from the flower structures when mature (Douglas et al. 1985).

Mode of reproduction: By seed.

Seed production: Typically produces 5,000–12,000 seeds/plant; however, the number of seeds/plant is highly dependent upon the size of the plant, and some plants may produce up to 34,000 seeds.

Seed bank: Seeds can remain viable for up to 6 years (Douglas et al. 1985).

Dispersal: Seeds may be distributed by human activity, animals, birds, and water (Douglas et al. 1985).

Hybridization: No information available.

Management

Biocontrol: None.

Mechanical: In natural areas, green foxtail could be mowed to eliminate seed production. However, since seeds already in the soil may remain viable for 6 years, repeated treatments are necessary to deplete the seed bank.

Fire: No information available.

Herbicides: On rangeland, glyphosate has been effective when green foxtail is 5–10 cm tall. (Douglas et al. 1985). Numerous herbicides are registered for control in various crop commodities. Consult the most recent edition of BC Ministry of Agriculture, Food and Fisheries Crop Production Guides for specific recommendations. **Before applying herbicides, read the label for full use and precautionary instructions.**

Cultural/Preventive: Prevent new infestations by minimizing disturbance, eliminating seed production and dispersal, and maintaining vigorous perennial native communities. Clean machinery, vehicles, and equipment. Manage grazing or other land uses to maintain vigorous perennial communities.

Integrated Management Summary

Focus control methods toward eliminating seed production until the soil seed bank is depleted. Cut, pull, or treat plants with herbicide before seed-set, and repeat treatments as necessary.

References

Carey, J. B., J. J. Kells, and K. A. Renner. 1993. Common weed seedlings of Michigan. Department of Crop and Soil Sciences, Michigan State University Extension. Bulletin E-1363.

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Forcella, F., and K. R. Banken. 1996. Relationships among green foxtail (*Setaria viridis*) seedling development, growing degree days, and time of nicosulfuron application. *Weed Technology* 10: 60–67.

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