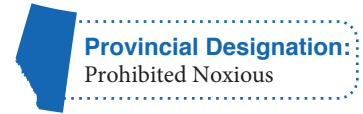




Ventenata

Ventenata dubia (Leers) Coss. & Durieu (aka North African grass, wiregrass)



Provincial Designation:
Prohibited Noxious



Jane Mangold, Montana State University

Jane Mangold, Montana State University

Overview:

Native to southern Europe, northern Africa, and western Asia, *Ventenata* is a winter annual grass and a member of the Poaceae family. It was introduced to the Pacific Northwest in the 1950's,¹ and is becoming more profuse in areas of the United States such as Montana, Idaho, Wyoming and Washington. It is known to be found in British Columbia, though not yet present in Alberta.²

Uniform flowering of *Ventenata* and setting of mature seeds occurs from mid to late July. It can grow up to 45cm tall and is distinguished by the reddish black nodes on the stem, long, slender membranous ligules, bent awns, and straw-colouring when mature.³ Most seeds germinate their first year but can remain viable for 3 years or longer and be dormant in the soil throughout the summer until sufficient soil moisture is attained in the fall; germination can then occur over a range of temperatures from 9-29°C.⁴

Ventenata only reproduces by seed, and each plant can produce 15 to 50 seeds.⁵ Bent, twisted awns on the florets help it attach easily to clothes, shoes, pets, vehicles and livestock for dispersal. Once the seeds fall, these awns also help drive it into the ground.⁵ It is spread easily and found commonly along roadsides, on disturbed land, and is increasingly invading

natural grassland and sagebrush communities.³

This invasive grass is not palatable to livestock at any growth stage due to the silica content. *Ventenata* can outcompete grasses such as alfalfa, timothy hay, and Kentucky bluegrass, reducing forage yield, increasing wildfire risk, and promoting soil erosion with their shallow and short-lived roots.² *Ventenata* displaces native vegetation, changing the plant and insect community.^{5,6}

Habitat:

Ventenata invades perennial grasslands and sagebrush communities, rangelands, hay fields, roadsides, railways, riparian corridors, and other disturbed sites. It typically grows in clay and clay-loam soils that are shallow and rocky.⁵

Identification:

Stems: Long, thin, and wiry. Between May and June, the stems have reddish-black nodes.³

Leaves: Hairless leaves, located primarily on the lower half of the plant. On seedlings, leaves are narrow and may appear rolled in. Has membranous ligules, up to 8mm long.²

Flowers: A pyramid-shaped panicle is approximately 15-20cm long and has 2-5

branches. Each branch has 1-5 spikelets that are 9-15mm long, on a pedicel that can be up to 18mm long. Each spikelet comprises 2-3 florets; lower florets have a short, straight awn, while upper florets have 90° bend to the twisted awns that help drive it into the ground upon maturity.² The plant is green, sometimes with a silvery sheen, but becomes straw-coloured when mature.³

Lookalike species: Annual hairgrass (*Deschampsia danthonioides*) seeds are small and rounded compared to the long and narrow seeds of *Ventenata*, no bend and more often darkened but not black at the nodes. Sand ricegrass (*Eriocoma hymenoides*) has longer spikes and awns and is very branched compared to *Ventenata*. As seedlings, Downy brome (*Bromus tectorum*) and Japanese brome (*B. japonicus*) leaves are more twisted and hairier. At maturity, brome awns are straight, unlike the bent and twisted awns of *Ventenata*. Downy and Japanese brome also have drooping panicles, while *Ventenata* panicles are open and erect.² *Ventenata* germinates about 2 weeks after brome species⁵ and will flower about a month after brome species³ since annual grasses are highly variable depending on precipitation and temperature.

Prevention:

Ventenata (Continued)

In the US, *Ventenata* is spread primarily as a contaminant in Kentucky bluegrass, hay, and annual crops³ as well as through vehicles and OHVs. Prevent seed spread by always using Certified Weed Free Forage and Seed products and GrowMeInstead by checking wildflower seed mixes. Check clothes, boots, pets, and vehicles for seeds and remove before leaving an infested area.

Control:

There are few known methods of control for *Ventenata*. However, seeds remain viable in the soil for up to 3 years,⁴ so intense management followed by vigilant management over four years can successfully control this invasive grass.³

Mechanical: Shallow roots make these plants easy to hand pull. Mowing is only recommended before seed set and before soils dry out.⁵ It is not effective to mow during heading, as seedheads will only get tangled in the swather and contribute to spread.

Cultural: Planting crops that offer pre-seed, pre-emergence, or in-crop selective grass weed control may be effective to outcompete *Ventenata* before it can germinate.² It can also be effective to maintain a healthy stand of perennial vegetation to prevent *Ventenata* invasion.³ Control of leaf litter through prescribed burning may help decrease the benefits leaf litter has on seedling recruitment.⁴

Chemical: Currently there are no herbicides registered in Canada to control *Ventenata*.² In the United States, herbicide application in the fall post-emergence, followed by nitrogen fertilizer applications in the spring and fall of the following year to support germination of perennial grasses has been shown to be an effective management strategy.⁷ As well, pre-emergent herbicides, applied in the summer, prevent germination until the seed viability is exhausted, which has been very effective.⁸ Always check product labels to ensure the herbicide is registered for use on the target plant in Canada by the Pest Management Regulatory Agency. Always read and follow label directions. Consult your local Agricultural Fieldman or Certified Pesticide Dispenser for more information.

Biological: None researched to date.

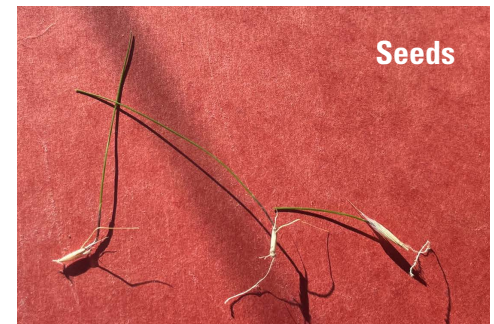


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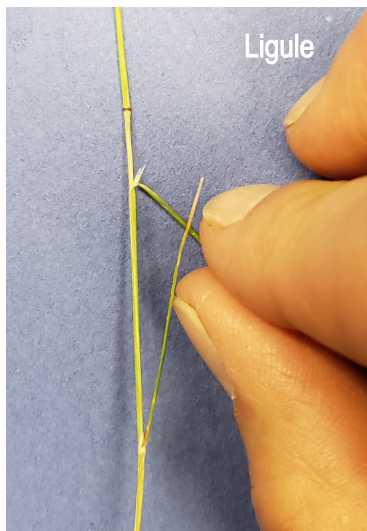
Mature Plant

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Seeds

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Ligule

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Seeds

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- 8 Mangold, JM, Sencenbaugh, L, Harveyem AJ, Rebis, ME and Rew, LJ. Responses of *Ventenata dubia* and other species seven years after herbicide applications to an improved pasture in Montana. *Invasive Plant Science and Management*. 2024;17(3):208-218. doi:10.1017/inp.2024.20