

Ravenna Grass: Options for Control

Ravenna Grass (*Saccharum ravennae*), a **class-B designate** noxious weed in Franklin County, WA., is of the Poaceae (Grass) family. Other scientific names can be *Tripidium ravennae*, *Andropogon ravennae*, *Erianthus elephanthinus*, *Erianthus ravennae*, and *Ripidium ravennae*. Other common names include Italian sugarcane, plume grass, giant cane and hardy pampas grass. Class A weeds are non-native species with a limited distribution. Preventing new infestations and eradicating existing infestations is the highest priority. Eradication is required by law.

Ravenna grass originated in North Africa, Asia and Europe. Ravenna grass is named after the town of Ravenna, Italy. It is a newly emerging invasive species which has been in the horticultural trade since at least 1921. It is a tall bunch-grass, prized by gardeners for its dramatic display sustained throughout all four seasons. It is readily available from nurseries. Ravenna grass is a problem in many parts of the country, including California, the Grand Canyon and many states in the U.S. including those as far east as Pennsylvania, the District of Columbia and Florida. It was re-



cently noted to have escaped in Washington State along the Columbia and Yakima rivers, the Yakima delta, in marshy and seasonal wet areas, waste areas, and along ditches and gravel roadsides in Benton, Yakima and in Franklin County. Ravenna grass can thrive in moist and harsh soils, gravel and rocky areas, riparian zones, wetlands and floodplains. It is relatively cold tolerant and can withstand regular freezes.

Ravenna grass is a perennial bunchgrass with long flowering cane-like stalks that can reach heights of 6-12 feet with a basal area several feet in diameter. It usually grows in clumps and develops a diffuse root system. Its leaves are weakly serrated with hairy bases and a thick white vein on the underside. The bottom of the leaf has a prominent white vein running the length. The leaves are bilaterally serrated and the leaves and stems have fine hairs. The flower heads are pale, silvery, feathery plumes at the tips of tall flower stalks that appear in late summer and early fall. Each plant can support multiple seed heads that produce thousands of seeds. The seeds are light-weight and usually dispersed with the wind.

Ravenna grass is in bloom and producing seed from late summer to early fall.



Each plant can produce thousands of seeds, which are then dispersed in the wind.



Flowering stem with red coloring and hair at leaf bases.

Key identifying traits

- **The leaf** has a prominent white vein running the length. The leaves are bilaterally serrated and the leaves and stems have fine hairs.
- **Flower heads** are pale, silvery, feathery plumes at the tips of tall flower stalks that appear in late summer and early fall.
- **Ravenna seeds** appear to be linked in continuous chain-like strands.
- **Stems** have a red coloring and hair at the leaf bases and along stems.

The red coloring on flowering stems is an identifying trait.



One plant can produce numerous flowering stems.

Biology and ecology

- **Perennial** bunchgrass with six-foot tall blades surrounding towering bamboo-like canes which may exceed 10-12 feet in height.
- **One Ravenna grass plant** can cover an area over five feet in circumference.
- **One plant can produce thousands of seeds**, during **one** growing season. Seeds are dispersed with wind.
- **Stems** are reddish, hairy on the stalks and ligules, and bamboo-like in appearance.
- **Flowers** are pale silvery to brown (late season) that appear late summer and early fall.



The topside of a mature leaf with a white mid-vein along the length of the leaf.

Control Measures

- **Biological:** No known bio-control at this time.
- **Cultivation:** The most effective method of removal is physically removing the plant and root system by pulling or digging it out. It is important to get as much of the root mass as possible to prevent re-sprouting. To prevent re-establishment, move plants to a dry area away from water. Physical removal of young clumps before they reach reproductive size is recommended.
 - Snipping off and containing the seed plumes will reduce seed spread and re-infestation the following season. This may need to be done multiple times every summer/fall as new stalks emerge.
- **Mowing:** Ineffective due to the size and amount of biomass of a mature plant.
- **Burning:** Not expected to be an effective management technique, given the stubborn nature of Ravenna grass, although this has not been thoroughly examined. The large biomass of Ravenna grass has created wildfire concerns in a number of states.
- **Chemical:** Chemical control through foliar spot application of non-selective herbicides has been successful. Glyphosate, or a glyphosate at a 5% solution and Imazapyr at a 1% solution have been effective in controlling Ravenna grass.
 - **Always read the label instructions** before applying any herbicides for proper rate and timing. Use chemicals that are compatible with your goals.

Ravenna grass is highly competitive with the ability to rapidly colonize, displacing native plants. Ravenna grass establishes itself with little disturbance required, putting intact plant communities at risk. It has been found growing in cracks in the asphalt, cracks along concrete walls, rocky hillsides, grassy banks, seasonally wet and marshy areas, irrigation ditches and gravel roadsides. It can form impenetrable monocultures, growing out from beneath other vegetation before outcompeting the native plant community. Established stands may bring fire into riparian zones and anchor soils normally subject to shifting. Ravenna grass can also act as a physical barrier to stream flow. Ravenna quickly establishes in disturbed areas, and is especially competitive in riparian areas. Ravenna grass provides little wildlife habitat.

Clipping and bagging seed heads is important to control spread. The seed heads can be confused with other common grasses such as bushy beardgrass (*Andropogon glomeratus*), satin tail (*Imperata brevifolia*) and phragmites (*Phragmites australis*). Close examination reveals ravenna seeds appear to be linked in continuous chain-like strands while the seed heads of the other grasses appear to be diffuse and loose.



Escaped plants growing inside ditches.



States in which Ravenna grass has escaped into disturbed and natural areas.

For more information see our website @ <http://www.fcweedboard.com>

Photos and information courtesy of : USDA plants database, Washington State Noxious Weed Control Board's written findings; photo's courtesy of : Robin Kusske, FCNWCB, Washington State Noxious Weed Control Board, and Benton County NWCB.

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