

Crown Vetch



Background, Life History

Crown vetch (*Coronilla varia*) is a perennial herbaceous plant in the pea/legume family. Native to the Mediterranean region of Europe, southwest Asia and northern Africa, it was initially brought into the United States for erosion control during the 1950s. After its introduction, additional uses included livestock forage, green fertilizer and ornamental ground cover. Planted widely throughout the United States, crown vetch is now naturalized in all but four states.

Planting of crown vetch continues today primarily along roadsides and other rights of way to stabilize banks and prevent erosion. Found most frequently within disturbed areas, it also commonly populates open fields, waste grounds and gravel bars along streams. Crown vetch tolerates a variety of environmental conditions and grows in dry to moist soils. However, it prefers open, sunny areas and is intolerant of full shade.

Creeping stems, growing 2 to 6 feet long, result in large clumps of crown vetch. Leaves are compound, consisting of 15 to 25 (always odd numbered) oblong leaflets 1 to 2 inches long. Pea-like, pinkish-white flowers occur in clusters at the end of long stalks and bloom from May through August. The flowers develop into long, narrow, flattened pods containing slender seeds. Crown vetch seeds prolifically, with a persistent seed bank remaining viable for up to 15 years. Spreading vegetatively, rhizomes can reach lengths of 10 feet, rapidly expanding stands of crown vetch.

Impacts

Readily escaping from its original planting, crown vetch aggressively invades natural communities, including native prairies, glades, savannas, woodland edges, stream banks and gravel bars. Crown vetch produces large quantities of seed and spreads vigorously by rhizomes, eventually forming large monocultures. Dense stands of crown vetch displace native vegetation by shading out native plants.





Dave Powell, USDA Forest Service, Bugwood.org

Pinkish-white flowers occur in umbels, grouped at the end of long stems, and are typical of the legume family, with two lips.



Chris Evans, River to River CWMA, Bugwood.org

Spreading plants grow numerous compound leaves, which consist of odd numbered, oblong leaflets, with 15 to 25 leaflets per leaf.



James H. Miller, USDA Forest Service, Bugwood.org

Primarily planted for erosion control, crown vetch commonly grows along roadsides and other rights of way, where it then escapes into surrounding habitat.

Control

Small populations of crown vetch can be carefully pulled or dug from the ground. The entire plant, including all pieces of the stems, roots and rhizomes need to be removed, which can be labor intensive and time consuming. Repeated mowing and prescribed burning in late spring can be an effective control measure. A second mowing in late August corresponding to a second leaf-out can improve control.

In larger infestations, manual and mechanical treatments may not be enough to completely remove well-established plants. An integrated management approach combining these techniques with herbicide application is needed. Removing accumulated plant litter through prescribed burning or mowing will expose new growth and provide more effective results following herbicide application.

A systemic foliar-applied herbicide should be used in early spring when crown vetch is actively growing. The composition of surrounding non-target vegetation can help determine herbicide selection. In areas where crown vetch is primarily growing with native grasses, a broadleaf specific herbicide can be used. Herbicide solutions of 2 percent triclopyr, 25 percent clopyralid, or 2,4-D are effective. Clopyralid focuses further by controlling legumes but not affecting grasses and the majority of other plant families. In areas where non-target plants are not a primary

concern, glyphosate, a non-selective herbicide, can be applied as a 1 to 2 percent solution.

Repeated herbicide applications over several years will be needed to effectively control surviving plants and new seedlings. Continued monitoring will also be needed, as seeds remain viable in the soil for up to 15 years.

Alternative Native Plants

- Round headed bushclover (*Lespedeza capitata*)
- Purple prairie clover (*Dalea purpurea*)
- Goat's rue (*Tephrosia virginiana*)
- Partridge pea (*Chamaecrista fasciculata*)

Identifying Crown Vetch

- Creeping, spreading growth habit
- Compound leaves with 15 to 25 oblong leaflets per leaf
- Pinkish-white flowers occurring in clusters from May to August

For Additional Information

- imapinvasives.org/GIST/ESA/esapages/documnts/corovar.pdf
- mdc.mo.gov/node/5449
- www.dcnr.state.pa.us/forestry/invasivetutorial/crown_vetch_M_C.htm

mdc.mo.gov

For more information or to report a population, contact your local Missouri Department of Conservation office, e-mail WildlifeDivision@mdc.mo.gov, or write:

Crown Vetch
Missouri Department of Conservation
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