

CROWNVETCH

Coronilla varia L.

plant symbol = COVA2

Contributed by: USDA NRCS Plant Materials Program



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Uses

Erosion control: Crownvetch is a useful but overused erosion control plant. Its spreading growth habit, and strong root system provide soil holding ability and ground cover. The dark green foliage and profuse flower have aesthetic value. It is a good plant for road bank stabilization in areas where rocky conditions predominate, but on steep slopes in the East, it may conceal the problem, since rill and gully erosion can occur under the crownvetch canopy in these areas. Crown vetch has been successfully used with switchgrass on dry sites in the East, forming an understory but providing nitrogen. Rapid soil organic matter improvement has occurred with this species combination, which stabilizes soil better than crownvetch used alone; in general, however, crownvetch dominates other plants and tends toward a monoculture.

Livestock: Crownvetch produces palatable high quality forage for all classes of livestock either as hay or pasture. There is little or no bloat hazard in grazing crownvetch.

Wildlife: Crownvetch provides good forage for deer and elk. Deer have been known to paw through snow to forage on crownvetch in the winter. It provides good cover for ground-nesting birds and is used by rabbits for both food and cover.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status (e.g. threatened or endangered species, state noxious status, and wetland indicator values).

Weediness

This plant may become weedy or invasive in some regions or habitats and may displace desirable vegetation if not properly managed. Please consult with your local NRCS Field Office, Cooperative Extension Service office, or state natural resource or agriculture department regarding its status and use. Weed information is also available from the PLANTS Web site at plants.usda.gov.

Description

Coronilla varia L., crownvetch, is a herbaceous, perennial legume introduced from the Mediterranean region. Leaves are dark green and pinnately compound, usually with 15 ovate-oblong leaflets. It has coarse, strongly branched stems that are 2 to 6 feet long and upright to trailing. Crownvetch has a multi-branched root system and spreads by strong fleshy rhizomes. Flowers are pinkish-white to deep pink in long-stalked clusters. Seed pods are segmented, pointed, borne in crown-like clusters. It is not a true vetch and does not have tendrils for climbing. It normally grows to a height of 1½ to 2 feet.

Adaptation and Distribution

Crownvetch has a broad adaptation to soil texture, but does not persist where soil fines (passing 200 mesh) are less than 15 percent. It does well on sand, gravely-rocky soils, loams, and clays. It will grow on low fertility sites and on acid soils with a pH of 5.0 to 5.5. It is not very tolerant of salt and alkali. Crownvetch requires good moisture, at least for part of the growing season. Established crownvetch will withstand long periods of drought. It should be used in areas with 18 inches or more annual precipitation or where supplemental irrigation is provided. Crownvetch is cold-tolerant, however young seedlings will winter kill, so plants should be well established before fall.

Crownvetch is distributed throughout the majority of the United States. For a current distribution map, please consult the Plant Profile page for this species on the PLANTS Website.

Establishment

Correct acidity to a pH of 5.5 or higher and where possible, scarify the soil 2 to 4 inches deep. Apply fertilizer according to soil tests. Apply seed uniformly, cover seed up to 1/2 inch deep, mulch with 1-1/2 tons of straw per acre. For best results, seeds should be inoculated with the appropriate legume bacteria before sowing.

In mix plantings, use 15 to 20 pounds of crownvetch with either tall fescue or ryegrass at 30 pounds per acre. These grasses provides quick growth and protect the site while the slower growing legume is getting established. Seeding in the spring is best. Do not seed after mid-summer. Sites ready for seeding in late summer or fall can be seeded to grass and mulched, and the crownvetch over-seeded the following spring. Sites too steep or stony to use mechanical equipment usually can be seeded without site preparation if "frost seeded". Soil conditions must have a favorable soil reaction of pH 5.5 and be of moderate fertility. Broadcast seed in late winter while there is still frost action in the soil. Frost heaving will work seed into the soil. A seeding rate of 15 to 20 pounds of crownvetch with a grass usually is adequate.

Management

Normally, crownvetch will not make sufficient growth for use the first year, but should be clipped for weed control. Remove first hay harvest about 10 to 14 days after first flowers appear. Leave a six inch stubble as new growth will come from buds on the stems. The second harvest will come about 8 to 9 weeks later. Drying the hay may be more of a problem than with other legumes. Artificial means should be utilized. Begin grazing about the same time as cutting for hay. Recovery may be more rapid after grazing than after hay cutting as livestock will eat the leaves and let the long stems remain. New growth will initiate from the many buds on the stems. Rotate grazing and re-graze after 10 to 14 inches of growth is made. Mature crownvetch is a little more palatable than most other legumes, therefore it can be stockpiled to take advantage of other forages. Nutritional value decreases with maturity.

Cultivars, Improved, and Selected Materials (and area of origin)

'Chemung', 'Emerald' (USSR), and 'Penngift'. Seeds are available from most commercial seed suppliers.

Control

Please contact your local agricultural extension specialist or county weed specialist to learn what works best in your area and how to use it safely. Always read label and safety instructions for each control method. Trade names and control measures appear in this document only to provide specific information. USDA, NRCS does not guarantee or warranty the products and control methods named, and other products may be equally effective.

Prepared By & Species Coordinator: USDA NRCS Plant Materials Program

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For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS <<http://plants.usda.gov>> and Plant Materials Program Web sites <<http://Plant-Materials.nrcs.usda.gov>>.

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