

# PARASITIC DODDER

## *Cuscuta* spp.

**Family:** *Cuscutaceae* (Dodder).

**Other Scientific Names:** Five species are present in BC: *Cuscuta approximata*, *C. cephalanthi*, *C. epithymum*, *C. pentagona*, and *C. salina*.

**Other Common Names:** Strangleweed.

**Legal Status:** Provincial Noxious.



## Identification

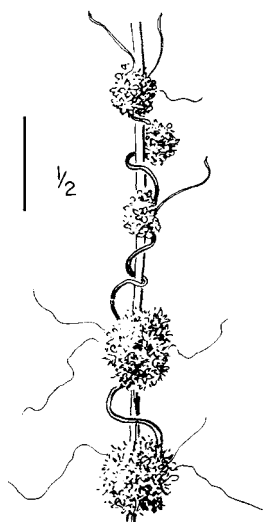
**Growth form:** Parasitic annual forb.

**Flower:** Tiny white or cream flowers, usually clustered.

**Seeds/Fruit:** Seed pods are rounded capsules, containing 1–4 tiny, rough seeds.

**Leaves:** No true leaves or green parts. Leaves are reduced to minute scales.

**Stems:** Slender, thread-like yellow to orange twining stems coil around forbs and shrubs. They adhere to host plants with wart-like suckers.



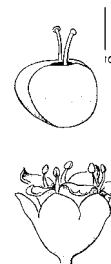
**Roots:** Minimal underground roots until the twining stems contact a host plant, then aerial roots and suckers are produced.

**Seedling:** Germinating stems produce slender stems without seed leaves (cotyledons).

### Similar Species

**Exotics:** Ten species of dodder have been found in Canada, all similar in appearance and effect (Frankton and Mulligan 1970).

**Natives:** Several native dodders are present and are parasitic.



## Impacts

**Agricultural:** Dodders attack many vegetables, forage crops (particularly alfalfa), and ornamentals. Dodders can act as alternate hosts for some viral diseases of vegetables. Legumes in particular are attacked by 3 species in BC (*C. approximata*, *C. epithymum*, and *C. pentagona*). The twining stems also can get tangled in harvesting equipment.

**Ecological:** Dodders can parasitize many native plants from herbs to shrubs. *C. salina* appears to have a close host relation with plants of the goosefoot (particularly *Salicaria*) and sunflower family on saline sites in the Fraser Valley, southern Vancouver Island, and the Gulf Islands.

**Human:** No information available.

## Habitat and Ecology

**General requirements:** Dodders appear well adapted to cultivated situations and succeed with many crops.

**Distribution:** Distributed across Canada and the US. Species are present in all agricultural reporting regions of the province except the Omineca and Peace River regions. Most species are rare except for *C. epithymum* and *C. salina* (Douglas et al. 1998). Most are restricted to low-elevation coastal areas, but *C. approximata* and

*C. epithymum* are found at mid-elevations in dry regions of the Interior.

**Historical:** *C. pentagona* and *C. salina* are native species; all others were introduced from Eurasia.

**Life cycle:** Seeds germinate in the soil and produce slender stems. The stems have a short time to make contact with a host plant before the seedling dies. The dodder twines around the host plant and develops

suckers that penetrate the host, extracting food from it. The dodder loses contact with the soil. Stems of the dodder proliferate, sometimes forming dense mats, then flowers and seed are produced (Frankton and Mulligan 1970).

**Mode of reproduction:** By seed.

**Seed production:** Can produce over 16,000 seeds/plant.

**Seed bank:** Seeds can remain dormant and viable in the soil for over 60 years (BC Ministry of Agriculture, Food and Fisheries. Undated).

**Dispersal:** Seeds fall to the ground but can be harvested and transported with crops such as hay or on ornamentals.

**Hybridization:** No information available.

## Management

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**Biocontrol:** None.

**Mechanical:** Infestations should be cut and burned before seeds ripen. Tillage alone is not effective for dodder.

**Fire:** Burning dodder-infested material will destroy the plant and the seeds.

**Herbicides:** In alfalfa, chlorpropham should be applied after dodder has germinated but before it has attached to the alfalfa plants. Glyphosate can effectively manage dodder without harming alfalfa when applied at very low rates soon after the dodder attaches (BC Ministry of Agriculture, Food and Fisheries 2000). Use of non-selective herbicides is often recommended for roadside and non-crop infestations. 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:** New infestations should be immediately burned or destroyed. Thoroughly clean

equipment, tools, and footwear before leaving infested areas. Do not transport dodder-infested materials to other areas. Hay infested with dodder should not be bought or sold. Inspect new sources of hay on arrival and watch stock and feeding areas for new infestations. If livestock have consumed infested hay, keep them contained in one area until the seed has passed through their digestive systems.

### Integrated Management Summary

Use a combination of cultural management and herbicides as required. Early detection is important and immediate management of new infestations is essential.

## References

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BC Ministry of Agriculture, Food and Fisheries. 2000. Weed Alert—Parasitic Dodder.

Douglas, G. W., D. Meidinger, and J. Pojar. 1998. *Illustrated Flora of British Columbia*. Vol. 2: *Dicotyledons (Balsaminaceae through Cuscutaceae)*. Province of British Columbia.

Frankton, C., and G. A. Mulligan. 1970. *Weeds of Canada*. Publication 948. Ottawa: Canada Department of Agriculture.

