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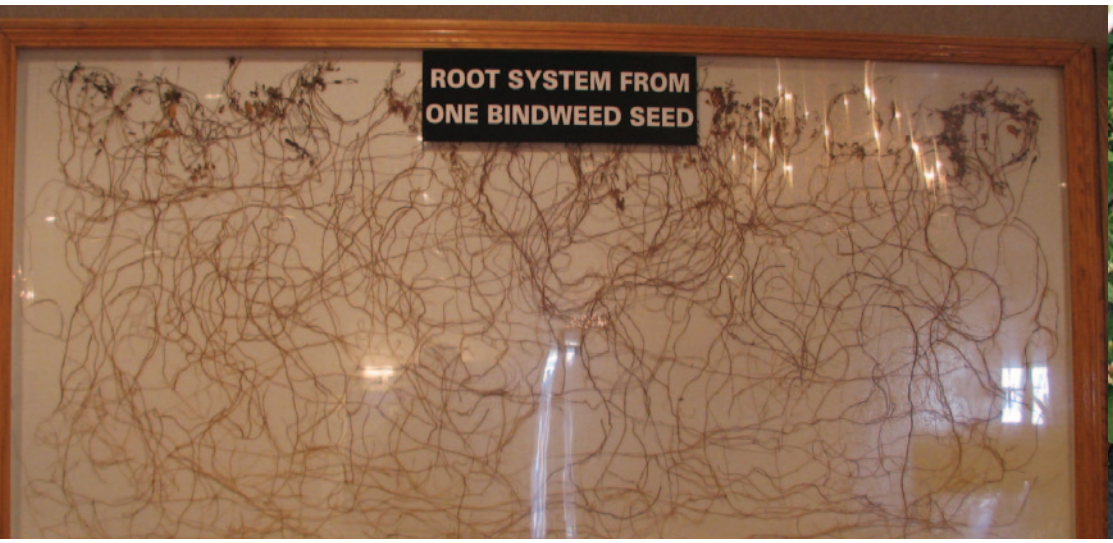
# Field Bindweed

*Convolvulus arvensis* (Aka wild/perennial morning glory)

**Provincial Designation:** Noxious

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## Overview:

Field bindweed is a long-lived perennial vine that re-sprouts each year from its very extensive root system. Young plants develop a deep taproot, and then lateral roots which can extend 60m or more. Most of the root mass occupies the top 30 to 40 cm of the soil. It reproduces both by seed and vegetatively – new stems arise from buds on lateral roots. Typically vines climb and out-shade other plants. It can form dense mats in agricultural situations, smothering the crop and clogging harvesting machinery.

Two very similar plants in the same family can be misidentified as field bindweed. The ornamental morning glory (*Ipomoea* spp.) has a variety of flower colors, a thicker stem and heart-shaped leaves. Hedge bindweed (*Calystegia sepium*), a somewhat rare, native, creeping rooted perennial has larger foliage, no hairs on the leaves, and no bracts below the flower.

## Habitat:

Field bindweed has a broad range of habitat tolerances; dry to moist (not wet) soils, is drought tolerant, and does well in clay type soils. It is not shade tolerant so it must climb to receive sunlight

## Identification:

**Stems:** Are twisted, twining, and grow to 3 m or more in length. They can be climbing or prostrate and form dense mats.

**Leaves:** Are arrowhead shaped, borne on long petioles, and alternate. The twisted stems make leaves appear spiral. Leaves may be smooth or finely hairy, and the shape and size can be variable.

**Flowers:** Are funnel shaped, about 2.5 cm wide, can be white or pink, and are borne singly or in pairs on long stalks in originating in the leaf axils. Small bracts occur 1 to 2 cm below the flower.

**Seeds:** Capsules are oval, 5-7 mm long and contain a small number of 3 to 5 mm, brownish grey seeds. Seeds develop quickly after pollination and buried seed can remain viable for tens of years.

## Prevention:

Field bindweed requires disturbance to establish therefore it is a serious weed of crops, and seed or root fragments can be transported in soil. In non-crop situations, maintain a healthy, competitive plant cover. The long seed viability makes established infestations very difficult to eradicate.

## Control:

**Grazing:** Field bindweed is not palatable, but may be consumed in severely overgrazed pastures. Hay contaminated with large amounts of field bindweed can cause colic in horses. Invasive plants should never be considered as forage.

**Cultivation:** Only effective when repeated regularly, multiple times throughout the growing season for a few successive years. Equipment must be cleaned of all plant fragments and soil. Mulches or black plastic can be effective but will also take a few years' effort.

**Mechanical:** Mowing is not effective. Repeated hand-pulling may control small infestations of young plants. It's very difficult to get all of the roots on mature plants.

**Chemical:** 2,4-D, Dicamba, Glufosinate ammonium, Glyphosate, Hexazinone, Imazapyr, MCPA, Picloram and Triclopyr are registered for use on field bindweed. 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.

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# Field Bindweed (Continued)

**Biological:** A European survey indicates that 140 species of insects, three mites and three fungi are associated with *C. arvensis*, however a few introductions of arthropod biocontrol agents into Canada or USA (e.g. *Aceria malherbae* (Bold and Sobhian, 1993)) have so far been disappointing. Canadian work has shown that *Phomopsis convolvulus* has some potential as a mycoherbicide for control of *C. arvensis* (Ormeno-Nunez et al., 1988; Vogelsgang et al., 1998; Morin et al., 1989).[1]


**REFERENCES**

**1** http://www.cabi.org/isc/?compid=5&dsid=15101&loadmodule=datasheet&page=481&site=144