

## Field Bindweed Management in Gardens and Landscapes

By: Kelly Feehan, Extension Educator

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Field bindweed is one of the most difficult weeds to control in gardens and landscapes. This is the climbing weed with white blooms that grows up and over fences and plants. It is a persistent perennial. No matter how often it is pulled, it keeps returning.

Field bindweed is native to Eurasia and was introduced to the United States as a contaminant in field or garden seed in the late 1800s. While it is listed as a noxious weed in some states, it is not listed as noxious in Nebraska but is on the Nebraska Invasive Species list.

The leaves are arrowhead shaped and up to two inches long. Flowers are trumpet shaped and usually white with some pink. Stems are slender and twining. Unless it is climbing on a plant or structure, the plant grows flat along the ground.

The majority of roots spread outward and remain in the upper foot of soil. Some vertical roots can grow as deep as 20 feet helping bindweed to be extremely drought tolerant and difficult to control with hand-pulling, tillage or herbicides.

Bindweed spreads by roots, rhizomes and seed. One plant can produce up to 550 seeds that can persist in soil for up to 60 years. Rhizomes can penetrate landscape fabrics, plastics and other barriers.

Field bindweed is best managed, note that I do not say controlled, by a combination of preventing seed production, reducing stored food in roots, and with competition for light.

To prevent seed production, plants must be hand-pulled or hoed frequently to avoid blooming. Remove this plant material from the garden. If herbicides are used, apply these to young plants and to established plants prior to blooming.

To reduce stored food in roots, be persistent in removing plants promptly. When green foliage is allowed to grow, leaves are photosynthesizing and adding to food reserves. It is up to gardeners to decide whether to use hand-digging, hoeing, or chemicals every couple of weeks to remove plants.

While landscape fabrics and other mulches like black plastic or cardboard have been effective against bindweed if no light is allowed to reach the soil or plant, it takes three to five years to kill plants beneath mulch and will not affect seed.

Also, barriers placed between soil and plants are not as healthy for plants or soil. They restrict water and oxygen movement into soil and greatly reduce the addition of organic matter to soil which builds soil structure. Plastic and cardboard do not allow water and oxygen through but cardboard will decompose.

Landscape fabrics allow some water and oxygen through. If tried, the edges of the fabric must overlap so bindweed stems can't grow between the sheets and into the light. If holes are made in the fabric for plants, bindweed will grow through these holes.

Herbicide use in perennial gardens and shrub borders is challenging because herbicides also kill desirable plants. When used, bindweed must be spot treated such as applying the chemical to leaves with a paintbrush, or holding a piece of cardboard between the garden plant and bindweed to protect plants when spraying bindweed.

Glyphosate (Roundup) is most commonly recommended for landscape beds and gardens as it has no soil residual. Because of this, repeat applications will be needed. In lawns, the herbicide quinclorac is proving to be effective against bindweed, but this herbicide is not labeled for use in landscape beds or vegetable gardens.