

Common Buckthorn (*Rhamnus cathartica*)

DESCRIPTION:

Common Buckthorn is perhaps the most damaging exotic species in the Midwest. Found in woodlands, abandoned pastures, back lots and hedgerows, it can invade prairies and woodlands eliminate most other plants in these habitats. It was introduced from Europe for landscaping use, such as hedgerows, for which its dense, spiny structure is well suited. These shrubs or small trees grow rapidly; a stand can develop with just a few years of neglect. Buckthorn produce dense shade and releases a poisonous chemical called Emodin into the soil which harms or kills other plants. Buckthorn produce berries prolifically, which are spread widely by birds and other wildlife. The berries are of little nutritional value because they have a severe laxative effect, depriving the creature that eats them of nutrition and water. Additionally, buckthorn is the sole overwintering host of the soybean aphid and is also an alternative host of crown rust of oats. Common buckthorn should be eliminated wherever it is found.

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Highly
Invasive

IDENTIFICATION:

Buckthorn can reach up to 30' tall. The dark smooth bark has a metallic sheen and flakes with age. Scraping off outer bark reveals a bright orange inner bark on most, but not all individuals. Twigs often end in sharp, stout thorns. Leaves are ovular, pointed at the tip, smooth, dark, glossy and finely-serrated with embossed veins. A key characteristic is that these leaves stay green through fall and into early winter. Black berries appear on the female plants in fall; the male plants bear no fruit. Native plums or cherries can be mistaken for buckthorn because of the similar bark and leaves, but lack the orange inner bark found in most buckthorns. Dogwoods have leaves with a smooth margin.



CONTROL METHODS:

Organic: Initial cutting should be done in late-May or early-June when the buckthorn have fully leafed-out and the plant's energy reserves are at their lowest. The stumps will resprout. Re-cut new sprouts every 2-3 weeks, until the plant dies, which can take up to 2 years. Alternatively, the "buckthorn baggie" method, tying a black plastic bag, or a weighted bucket over the stump that blocks light to new growth. This method has a roughly 50% success rate.

Saplings (less than 1/4" in diameter) can be hand pulled in loose or moist soils. Larger individuals may be removed with the aid of a Weed Wrench. But consider the effects of soil disturbance and erosion when uprooting plants, especially on slopes. Regular prescribed fire will prevent the establishment of this species and help control seedlings.

Chemical: The most effective control method is to cut each stem close to the ground and treat the stump with concentrated herbicide at the rate recommended on the product label. Glyphosate (Round-Up®, etc.) is effective. In winter or early-spring a solution of triclopyr (Garlon® 4, etc.) in mineral oil may be more effective, but has a higher potential to kill neighboring plants. It is best to apply the herbicide to the cut stumps immediately after cutting so as not to lose track of them. Basal bark treatment with triclopyr in oil is also effective. Always read herbicide labels carefully before use and always apply according to the instruction on the product label.

NATIVE ALTERNATIVES:

In borders and hedgerows use wild plum (*Prunus americana*), gray dogwood (*Cornus racemosa*), and nannyberry viburnum (*Viburnum lentago*), all excellent replacements that look similar to buckthorn. For specimen trees to replicate open grown buckthorn use pagoda dogwood (*Cornus alternifolia*) for shade and hawthorns (*Crataegus* spp.) or serviceberry (*Amelanchier* spp.) for sunny places. All these shrubs and trees provide showy spring flowers, attractive fall foliage and berries which feed songbirds.

