BUCKTHORN

COMMON BUCKTHORN

Common buckthorn was first brought to Minnesota from Europe in the mid-1800s as a very popular hedging material. Shortly after its introduction here, it was found to be quite invasive in natural areas. The nursery industry stopped selling it in the 1930s, but many buckthorn hedges may still be found in older neighborhoods throughout Minnesota.

Common buckthorn leaves are egg shaped, pointed at the tip, smooth, dark, glossy and finely toothed. Each leaf contains 3-5 pair of curved leaf veins and leaves typically stay green late into fall. Branches of this plant have buds and leaves are opposite with twigs that often end in sharp stout thorns. The plant has brown bark showing elongate silvery corky projections. A cut branch exposes the plants yellow sapwood and orange heartwood. Common buckthorn produces large, round, berry-like clusters of black fruit that typically ripens in August and September.

GLOSSY BUCKTHORN

Glossy buckthorn, also from Europe, has been sold by the nursery trade in two different forms. The cultivar *Columnaris* has a narrow and tall form; the cultivar *Aspenifolia* spreads up to 10 feet and has narrow leaves that give it a ferny texture. This buckthorn aggressively invades wetlands including acidic bogs, fens and sedge meadows.

Gloss buckthorn is a tall understory shrub or tree that can grow up to 18 feet high. This plant has a loosely branched crown, often times having multiple stems at the base. Glossy buckthorn leaves are oval, smooth, dark, glossy, with toothless edges. There are 8-9 pair of leaf veins on each leaf and leaves stay green late into fall. Its branches have buds and leaves that are alternating with no thorn at the tip of the twig. The plant has brown bark showing elongate silvery corky projections. A cut branch exposes the plants yellow sapwood and orange heartwood. The plant has small clusters of berrylike fruit that ripen progressively from a distinctive redbrown to a dark purple in August and September.

WHY IS BUCKTHORN A PROBLEM?

Buckthorn out-competes native plants for nutrients, light, and moisture. It degrades wildlife habitat and threatens the future of forests, wetlands, prairies, and other natural habitats. Buckthorn contributes erosion by shading out other plants that grow on the forest floor. It serves as host to other pests, such as crown rust fungus and soybean aphid. The plant forms an impenetrable layer of vegetation and lacks "natural controls" like insects or disease that would curb its growth.

CONTROLLING SEEDLINGS OR SMALL BUCKTHORN PLANTS

For individual plants

If less than 3/8 inch in diameter, remove by hand. Small seedlings can be pulled and will not re-sprout. If greater than 3/8 inch, use a hand tool that pulls the shrub out, such as a "Weed Wrench" or "Root Talon". The "Weed Wrench" comes in four different sizes and will remove buckthorn stems up to 2.5 inches in diameter. Removing by hand is easier if the soil is moist.

If pulling individual plants is impractical

Spray foliage of short buckthorn or seedlings with a herbicide. Glyphosate (one brand name is Roundup) will kill all actively growing vegetation on which it is sprayed. Triclopyr will kill broadleaf plants and will not harm grasses when applied properly.

CONTROLLING LARGE BUCKTHORN

Buckthorn plants that are two inches in diameter or larger, are best controlled by cutting the stem at the soil surface and then cover or treat the stump to prevent re-sprouting. This can be effectively done with hand tools (for a few plants), chain saws or brush cutters. If only cutting a few stumps they can be covered with a tin can or black plastic to prevent re-sprouting. Otherwise, stumps should be treated immediately after cutting (within 2 hours) with a herbicide containing Triclopyr (such as Ortho Brush-B-Gon or Garlon 3A or 4) or Glyphosate (Roundup) to prevent re-sprouting.

The best time to cut and chemically treat the stumps is in late summer and throughout the fall. Herbicides can be applied to cut stumps with a paint-brush, wick applicator or a low volume sprayer. When using water-soluble herbicide products like Ortho Brush-B-Gon, Garlon 3A, or any of the Glyphosate products, treat only the cut surface. When using oil-based products like Garlon 4, treat the cut surface and the remaining bark to the ground line. In cases where more than a few plants are treated, add an indicator dye (available where pesticides are sold) to the herbicide to mark cut stumps you have sprayed. Colored flags can also help mark cut stumps. When buckthorn is cut, the stumps are easily covered and lost under cut brush.

For basal stem treatment, a method that applies chemical through the bark, low volume spray applications can be made with Garlon 4 and similar oil-based products. This application method uses Triclopyr ester mixed with an oil diluent (i.e. Bark Oil Blue, kerosene or diesel oil) applied directly to the bark of buckthorn from the root collar up about 12-18 inches. This treatment works best on stems less than 2-3 inches in diameter. An ultra low volume spray wand should be used to minimize herbicide use and reduce the potential for non-target injury. Buckthorn treated in this fashion can be left standing or cut at a later date.

Note: Buckthorn seeds in the soil can remain viable for up to five years. Follow-up control of seedlings that emerge after initial control efforts is important on all sites. With no follow-up control, buckthorn will come back. Fire offers a long-term management option in grassland or savanna cover-types. Burning will need to be done every two to three years. If burning is not an option, a follow up treatment of the seedlings (pulling or spraying) is needed.

After buckthorn control, many sites may require replanting of desirable tree, shrub, and herbaceous species.

CHEMICALS FOR THE HOMEOWNER THAT CAN BE PURCHASED A MENARDS, FLEET FARM, HOME DEPOT AND OTHER HOME IMPROVEMENT STORES

FOR VEGETATION:

Round Up, Round Up Pro Rodeo, Trimec and brand names that state vegetation killer. The brand names are Gordons, Ortho and Monsanto. Vegetation products will NOT work on woody brush or stumps.

FOR BRUSH AND WOODY PLANTS:

There are 3 major brand names – Gordons, Ortho and Monsanto. The product would be labeled with the brand name and its use, such as Gordons Brush Killer or Ortho Brush Killer, Ortho Weed B Gone.