

Rip It, Rip It Out!

Control of Buckthorn on Golf Courses

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Rhamnus cathartica, Rhamnus frangula, Frangula alnus Common Buckthorn, European Buckthorn, Ornamental Buckthorn, Glossy Buckthorn or Columnar Buckthorn. No matter what the name is, if you have this highly invasive plant, action must be taken to eliminate current population and reduce its spread. Either through chemical application or the physical removal of each plant, this pest must go.

Imported from Europe in the mid 1800's because of its ability to shear nicely into a hedge, Buckthorn is now regarded as a noxious weed that, if given the opportunity, will take over both wetlands and woodlands. Shrubs, which quickly grow into trees, Buckthorn produce flowers in late May to June that are tiny, inconspicuous and light green in color. Female plants produce large quantities of black fruits. Unfortunately, if you have buckthorn on your property, the spread of this plant is very difficult to control. The berries produced are very attractive to birds as a food source. Once in their system the fruits create a laxative effect and pass quickly, spreading the plant rapidly. Rather than control the birds, it is much easier to control the trees!

Chemical Controls

In a woods environment, well out of play, and thus while dead standing or as a stump that will not likely effect traffic, it is easy to use chemical control methods. There are three effective eradication methods that do not require the removal of the plant. Foliar, basal bark and cut stump chemical treatments can do significant damage to the Buckthorn population.

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Either Roundup or Accord can be used and it is most effective upon small plants and seedlings due to the necessity of complete coverage. Be very careful with any of the glyphosate products as they are non-selective and will kill non-target plants as well as the intended shrub.

Another chemical control program is the application of herbicide to the trunks of undesirable plants. Although not completely necessary, faster kill can be achieved by girdling the bottom two feet of the tree prior to treatment. Triclopyr is then applied heavily upon the roughed up cambium where it is translocated into the plant for effective mortality.

And finally, Buckthorn can be stump cut and treated with herbicide. Using either a lopping shear or saw, the plant is cut to a few inches above the ground. The stump is

then treated with an herbicide, using a paint-brush, a wick applicator or a low volume spray nozzle with wand. Be sure and treat the whole exposed trunk as latent buds which are often just under the bark may resprout with vigor if left

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untreated. Again, chemical treatments can include Glyphosate and also Tryclopyr products. It is recommended NOT to use Picloram and 2,4D mixtures (Tordon) due to its high toxicity (low LD 50), ability to leach readily in the soil and persistence in the environment.

Several factors should be considered when treating with chemicals. Buckthorn typically grows out of spring treatments. It is best to apply chemicals late in the season when the plants are storing energy by transporting sugars to the roots. Also, Buckthorn retains its glossy green leaves well after all other plants have dropped theirs in the fall thus they are easy to identify. And it has been observed that cut stumps treated when temperatures are greater than 20 degrees suffer excellent mortality.

While chemical treatments can be effective, dead or dying plants in a golf course setting may be undesirable. Also, tag stumps can present a very dangerous hazard to golfers who stray from the fine turf areas in search of wayward balls. Another effective means of Buckthorn control is to physically remove the whole plant.

Grunting and Ripping

Perhaps the most time consuming yet environmentally friendly method of Buckthorn control is the physical or mechanical removal of this very shallow rooted plant.

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Whether by hand, a mechanical wrench or tractor with chain and rippin' clips, physical removal of the shrub with roots intact is a very effective method of Buckthorn control.

Small plants, below a half-inch in diameter, can be hand pulled from the ground with a bit of effort. A sharp spade, or pitchfork can also be used to sever or loosen roots around larger plants before pulling. Several wrenches are available on the market for pulling plants as well.

The tools typically utilize a steel clamp for grasping the trunk and a long steel handle. Acting as a lever, the handle is pulled back, the clamp grasps the trunk, wrenching the plant from the ground. As the tools can remove plants up to 2 1/2 inches in diameter, strong bodies are important, in fact, a necessity! Two models available are the Root Talon (www.lampdesign.com) and the Weed Wrench (www.canonbal.org/weed.html).

For bigger trees, up to four inches in diameter, Rippin' Clips can be used. These "C" shaped devices were invented at North Oaks Golf Club for the use on stubborn Buckthorn stumps.

Bob Wappula, mechanic at NOGC, cut "C" shaped clips in a variety of sizes, up to 10 inches square, out of 1/2 inch

sheet steel. The open end of each clip is a different size from three to six inches in order to allow a trunk to be slipped inside. At the top of the "C" is a bolthole for attachment to a chain, and on the bottom of the "C" inside the clip, teeth are ground into the steel for better grip.

At the removal site, the buckthorn plant is cut down to roughly three feet above the ground. The clip is slipped around the base of the trunk and the chain hooked up to a tractor bucket or hydraulic lift. Before engaging the tractor, sever the tree roots with a spade shovel. Upward pressure is then applied, the "C" cinches about the trunk and the tree is removed.

While very labor intensive, mechanical removal does produce a very clean finished product, safe and stump free. If time and labor is a factor, keep in mind that Buckthorn is a dioecious plant. That is, there are both male plants and female plants. Only the female Buckthorn will produce berries. Thus if your property is big, it may be best to start by removing only the berry producing plants and then go back when more resources are available.

Regardless of the method used for Buckthorn eradication, it is important to begin a program. Start small and grow. Get your membership involved through communication. Improve your existing prairie and woodland properties by removing and limiting Buckthorn. Just rip it, rip it out.

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