



*Lock and Load
Buckthorn...You're Dead!!!*

By Dr. John Lloyd

The shrub buckthorn (*Rhamnus cathartica*), was introduced into the United States as an ornamental plant from Europe, where it is used as a hedge and as a border plant.

Unfortunately, in North America it has choked out understory plants in native forests and has become a major issue in edge rows where it creates an almost impenetrable barrier with its angular branches and thorn-like branchlets.

Buckthorn is common on the outside of roughs in golf courses and can grow in any wild areas where birds may perch and release seeds. While little whips can be managed through mowing and routine applications of herbicides, prob-

lems can occur when edges are not maintained and the plants are allowed to become established. Once the shrubs become woody, they will out-compete native vegetation and begin encroaching into the rough.



Due to the density of their canopies they will affect sightlines and can impact play in the rough.

When buckthorn becomes a barrier to play, the primary option is to bring in

the chainsaws and herbicide concentrates to clear the impacted area and treat the stumps to reduce the chance for re-germination from the roots. However, this effort is usually only temporarily successful due the seed bank that has been left in the soil. Seeds can germinate up to five years after they have been dropped from

the shrub into the soil and can return in a much higher density than before the initial treatment.

Buckthorn management is a long term commitment. The key to successful buckthorn management is early intervention and annual treatments based on a long term management plan, where acceptable outcomes and techniques can be merged with budgetary and staff limitations.

Over time, the seed bank will be depleted, as long as birds are re-infesting the area. The standard methods of management require mechanical removal and stump

treatments with glyphosate or triclopyr. Spray applications can also be effective, but aren't recommended where buckthorn is adjacent to other trees and desirable plants, or where drift into water ways may be an issue.



We are currently testing a buckthorn remediation system that uses a tool called the EZ-Ject Lance. The lance contains herbicide in 22 caliber shells that are stabbed into the base of the

buckthorn plant. The sap from the plant activates the herbicide and it is translocated throughout the buckthorn. In previous research death of treated plants occurs within one season and trunk and root re-sprouting appears to be minimal. A key

benefit of the system is that there is no risk of drift, or the possibility of impacting adjacent plants with the herbicides.

We are working with Heritage Shade Tree Consultant, Inc. and Greenlife Supply, Inc. in the Twin Cities to evaluate the effectiveness of this system for the control and long-term management of buckthorn. Demonstration projects have been developed with collaborating communities in the metro, but we would like to work with superintendents with buckthorn problems to examine its use and its effectiveness for management of buckthorn and

other undesirable woody species on golf courses.

Collaborators will be provided with equipment, supplies and training on how to use the system and will be supported on treatment and evaluations that will be required for proper scientific validation. In addition collaborators will be allowed to purchase the equipment at a greatly reduced cost at the end of the study.

Interested superintendents should contact Manuel Jordán with Heritage Shade Tree Consultants at manuel@heritageshade-tree.com or 763-717-9366



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