Landcare Notes

Boxthorn

Keith Turnbull Research Institute, Frankston

April 1998
LC0186
ISSN 1329-833X

Common Names

Boxthorn, African boxthorn

Botanical Name

Lycium ferocissimum Miers

Status

Boxthorn is a Regionally Prohibited Weed in the North East Region and Regionally Controlled elsewhere in Victoria. Land owners in areas where boxthorn is Regionally Prohibited must eradicate or control it on their land. Landholders in areas where boxthorn is Regionally Controlled must take all reasonable steps to control it and prevent its spread on their land and the roadsides which adjoin their land.

Origin and Distribution

Boxthorn is native to the southern coast of Africa. It was probably grown initially in Australia as a hedge plant. Boxthorn can be found growing on most soil types but prefers light soils, particularly dry creek beds, neglected areas, pastures and roadsides. The most troublesome infestations occur in northern Victoria.

Description

An erect, spiny shrub to 5 m with spreading, drooping branches; reproducing by seed.

Stems - Erect, light-brown when young; mature stems brown to grey bearing stout spines. Smaller spines occur on and terminate the numerous branchlets.

Leaves - Bright green, smooth, fleshy, oval, 3.5 x 2 cm, shortly stalked and occurring in clusters. In some areas, plants are deciduous in winter with new leaves being produced in spring.

Flowers - 1 cm diameter, fragrant, white with purple markings in the throat, five petals; occurring singly or in pairs on short side shoots. Flowering can occur throughout the year, but most flowers are produced during summer.

Fruit - Green when young, orange-red when mature, globular, drooping, smooth and shiny, about 1 cm in diameter. Each fruit contains numerous flattened seeds.

Seeds - Light-brown or yellow, oval shaped and flattened with raised dots on the surface.

Roots - Branched taproot, deep and extensive.

Figure 1. Boxthorn.

Properties

Boxthorn is capable of competing with and eliminating considerable areas of pasture, reducing the productivity of grazing areas. In the past many landholders grew boxthorn hedges to form effective barriers to stock. The presence of stout spines severely restricts the movement of stock and provides safe harbour for rabbits. Boxthorn is suspected of being slightly poisonous to stock and humans.

The fruit of boxthorn is reported to be a breeding site for fruit fly, dried fruit beetles, tomato fly and the common house fly. There are also reports of the fruit being taken by native reptiles and birds and in some areas it may be an important food source for these animals. Small native animals may also use boxthorn for shelter or nesting sites.

State Government Victoria
Department of Natural Resources and Environment

Victoria The Place To Be

Dispersal

Birds, particularly blackbirds, and foxes feed on the fruits of boxthorn and are mainly responsible for seed dispersal. Spread can also occur with the movement of contaminated agricultural produce, gravel and mud, but these means are of minor importance.

Control

Priorities for controlling different infestations must be worked out when planning a boxthorn management program. The integration of a number of appropriate techniques is likely to give the best long term results.

Where nature conservation values are important, local native plants which should be re-established in areas where boxthorn control is undertaken. In such areas, a progressive or staged control program on boxthorn would assist in the maintenance of wildlife values. Boxthorn hedges should be removed and replaced with non-invasive species.

Manual Control

Physical removal by tractor, front end loader or chainsaw, followed by burning or mulching is most effective. Dead plants remain spiky for many years and continue to be a problem for stock and tyres if not burnt.

Cultivation

After the mechanical removal of plants, the area should be ploughed deeply to bring the roots up for raking and burning. Alternatively, to prevent regrowth from pieces of broken roots and cut stumps, all exposed surfaces should be treated with appropriate herbicides. Follow-up cultivation will kill boxthorn seedlings.

Pasture Management

The establishment of vigorous pasture will help prevent re-infestation.

Chemical Control

Under Victorian legislation there are controls on various aspects of the uses of agricultural chemicals. Some particular uses are prohibited and some require permits. Users of certain agricultural chemicals are required to obtain an Agricultural Chemical User Permit (ACUP) or work under the direct supervision of an ACUP holder. Additional restrictions on the use of some herbicides apply to particular geographic areas known as Chemical Control Areas (CCA).

It is the responsibility of chemical users to familiarise themselves with these controls. See Agriculture Note:* Agricultural chemical user permits (ACUP) and chemical control areas(CCA) *for further information.

Restrictions on use in CCAs apply to the chemicals marked with a hatch (#).

Contact the Regional Chemical Standards Officer of the Department of Natural Resources and Environment if further advice is required.

You should read the product label and follow all label instructions carefully before using any herbicide.

Use a product containing one of the following active constituents or combinations of active constituents that is registered for use in Victoria to control boxthorn in the particular situation in which you need to use chemical control, eg. in pastures. Consult the product label for detailed information.

- 2,4-D DIETHANOLAMINE SALT#
- 2,4-D DIMETHYLAMINE SALT#
- 2,4-D ISOPROPYLAMINE SALT#
- GLYPHOSATE ISOPROPYLAMINE SALT#
- GLYPHOSATE MONO AMMONIUM SALT#

This list of chemicals is based on information supplied to the Department of Natural Resources and Environment by the National Registration Authority for Agricultural and Veterinary Chemicals (NRA). The State of Victoria through the Department of Natural Resources and Environment has not assessed or checked the accuracy of the information supplied to it from the NRA as that responsibility rests with the NRA.

Repeated application of herbicides over several years may be necessary to control boxthorn.

Reference

Parsons, W.T. and Cuthbertson, E.G. (1992) *Noxious Weeds of Australia.* Melbourne, Inkata Press.

Acknowledgements

Prepared by Ross Williamson, 1997, updated by Ian Faithfull, April 1998. Active constituents information supplied by Chemical Standards Branch December 1997.