

Weed Research Report

Green Cestrum
Cestrum parqui

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Photographs showing affected site



Photographs showing Green Cestrum (*Cestrum parqui*) growing in timbered area



Weed Studied

Green Cestrum (*Cestrum parqui*) is a part of the Solanaceae Family. It is a relative to the tomato, potato and tobacco families

Other common names for Green Cestrum are Green Poison Berry and Chilean Cestrum. Sometimes it is mistakenly called Deadly Nightshade.

Photographs showing flowers and berries of Green Cestrum (*Cestrum parqui*)



Photographs showing base of Green Cestrum (*Cestrum parqui*)



Problems and Significance of Weed

Green Cestrum was an introduced plant for gardens from South America; it grows to approximately three (3) metres tall and is a perennial plant. The leaves when crushed have a very bad odour, but of a night time it gives off a pleasant smell. The yellow-green flowers grow in bunches at the end of the branches. The fruit is purple-black and are oval in shape.

Green Cestrum is toxic to cattle, sheep, horses, pigs and poultry; in some cases it can also be toxic to humans. Cattle production is our main enterprise on the property and with cattle selling for over \$1000 per head at this present time, Green Cestrum poses a great financial loss. Parquine and Solasonine, which are alkaloids, have been identified for causing the toxic effects. It is not known why it does not kill birds but it causes acute kidney and internal bleeding in poultry, causing death within 24 hours to 3 days depending on how much was consumed. The cattle suffer from loss of appetite and also internal bleeding; once again duration from consumption of weed to death depends on how much was eaten.

To stop stock from grazing on the leaves and berries of the Green Cestrum, the safest way to protect the stock is to fence the affected areas off whilst removal of the plants is being undertaken. This then adds cost to the general running of the property and also loss of grazing from protected areas.

It is thought the weeds were spread from the Castlereagh River 10km to the east of "Murrumbong". The spread of this plant came mainly from birds eating the berries and then flying off and excreting the seeds in cool shady areas, which is mainly why the plants grow under trees and not out in the open. Green Cestrum will also grow from under ground roots.

Green Cestrum is a declared noxious weed under the Noxious Weeds Act 1993 in certain areas of New South Wales and must be controlled in these areas. It is the responsibility of the property owner to control Green Cestrum, if it is not; landholders can be served a notice and may end up with court action.

Strategy of Management of Weed

There are three main types of control used in the eradication of Green Cestrum. These are chemical control, physical removal and mechanical control.

Mechanical Control – This is done using a tractor with a bucket or blade. This method is our least favoured because of the brittle nature of the stems and branches of the plants. This also poses the problem of leaving roots behind and also the possibility of causing damage to the native trees growing in the affected area.

Physical removal - Physical removal is only suited to the smaller plants, as you have to make sure you remove all of the root system and this plant can regrow from any roots left under ground. This strategy works best in wet conditions making the ground softer to dig up plants.

Chemical Control - Our favoured method of control is chemical control. There are many different chemicals that can be used, but after trial and error the most suited chemicals for our situation is Grazon, Tordon and Glyphosate.

Grazon DS (Triclopyr + Picloram) - it is applied as a full coverage foliar spray. It is mixed at 500ml of chemical to 100L of water. It is best used on actively growing bushes. Any regrowth is then sprayed when the plants reach a height of approximately 1 metre.

Tordon 75 D (Picloram + 2,4-D) - it is applied as a full coverage foliar spray. This is applied to actively growing plants in full leaf. It is applied at a rate of 650ml to 100L of water.

Roundup (Glyphosate) – is applied by the process of opening the bark up on the Green cestrum and painting undiluted glyphosate to the area. We use this method only on bushes directly next to native growing trees to protect them from any possible chemical drift.

Graslan pellets (Tebuthiuron) – which we have previously used. It is extremely good at killing the weed, but are also very good at killing the trees that the weeds are growing underneath.

Graslan pellets are applied by hand to the base of the weed and are then water triggered by rain. As the chemical is then absorbed into the ground, this is where tree roots are at danger of being poisoned.

Merits of Strategy

Our preferred chemical of use is *Grazon* as there is a nil withholding period for grazing in case there is any chemical drift outside the affected area at the time of spraying, also *Grazon* does not have a deadly effect on trees that the weeds grow under.

This can be a problem with other chemicals that kill the Green Cestrum because they have a withholding period in some cases of up six (6) months, which prevents us from selling any stock that may have grazed on grasses contaminated by chemical drift outside the affected area.

When spraying we use all best management practices to ensure the safety of the person applying the chemical, this means wearing rubber gloves, facemasks, protective clothing and eye protection.

To protect the stock and natural grasses and trees, spraying is only carried out on days that have favourable weather conditions - little wind and no humidity, which can cause chemical drift.

Hopefully within a five (5) year period the Green Cestrum has been eradicated from the affected area. This will then allow us to open up the fenced off area and once again be able to use it again for grazing, without the worry of stock poisoning occurring.

The success of this program not only relies on us continually maintaining our own land, but also on the landholders around us who also have the same problem. To date all surrounding landholders and ourselves have been working together to control and eradicate this weed.

Once this has been achieved this will take the pressure off having to patrol all timbered areas weekly for signs of new infestations of the weed, allowing more time to be put into other areas of operation on the property.

Bibliography

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