**GORSE CONTROL ASSISTANCE**

The Wooragee Landcare Group was successful in securing funding to support of the control and management of the noxious weed Gorse. The Victorian Gorse Taskforce Grant was aimed at assisting the Woolshed Area by providing assistance in the identification and management options available. This grant also enables the group to offer rebates to Landcare Group members for expenses incurred in the management of Gorse.

Gorse can be found growing in a wide range of soil types but ideally prefers low fertility, acidic soils. Infestations are generally located along roadsides, creek banks, neglected areas and marginal forests. Gorse competes with young trees and shrubs and hinders the growth of native understorey species. A long-term effect of the plant’s presence is that the soil becomes more acidic and loses nutrients.

Gorse is a major agriculture weed, invading all pasture types and significantly reducing grazing capacity. It has the ability to exclude all other plants and greatly hinders access to stock and waterways. Gorse is highly unpalatable to cattle and sheep and provides significant haven for rabbits, foxes, feral cats and mice.

Another major issue with Gorse is its highly flammable and creates a significant fire hazard. Given the current climatic conditions and fire fuel loads in this area controlling this weed is extremely important.

Through this grant Wooragee Landcare is able to offer support, information, education and facilitation of a control program designed for your property where they can fund up to 50% of necessary control methods.

The Wooragee Landcare is asking for any Landholders who would like assistance with their Gorse control to contact Cathryn Mahon.

If you require any further information or wish to be a part of this program please contact Cathryn Mahon on 0499 004 924 or email at cathryn@southerncrossvermin.com
Nest Box Checking for Threatened Species

Mar 21/22       Apr 18/19       May 16/17

Volunteers have a lot of fun seeing who’s at home in our 381 nest boxes.
And seeing the animals so close up is a very rewarding experience.
Ray Thomas: (03) 57 611 515  ray@regenthoneyeater.org.au

Project funding 2015 and beyond

With the ever-changing grants programs it can make it difficult to know when and where we might be able to gain funding to undertake things group members would like to do.

One of the ways to help groups is to be prepared for when grants open through pre-planning projects so they are ready to submit when opportunities arise. It is then just a matter of confirming participants through a quick ‘Expression of Interest’ process.

As your Local Landcare Facilitator part of my role is to assist the group to plan projects for the future. Today funding applications require a lot more detail about where projects are going to be run and some require project sites to be mapped and submitted with applications.

If you are thinking about doing revegetation, gully fencing for erosion control/stock exclusion or any other on-grounds work that might require funding, please contact me. I cannot promise we will be able to find funds, but if I don’t know about it, I cannot help! My position is currently funded through to June 2015, and between now and May 2015 I am available to support groups planning future projects.

The Mid-Ovens Landcare Consortium would also like your suggestions on community projects that have wider implications than just on-ground works by landholders. Do you have a great idea that could bring your community together to look at environments/sustainable farming or living practices? This might include information sessions, field days, public land areas and trial sites.

If you have an idea for a project you would like to see run in the area please contact me on 0428 211 008 or email (preferred) alandi.durling@landcarevic.net.au do discuss it further.
Heliotrope toxicity in sheep and cattle

Note Number: AG0396

Introduction

*Heliotropium europaeum* is often referred to as potato weed, blue weed, or common or wild heliotrope. It was introduced into Australia in the 19th century and has established in all states of mainland Australia, apart from the Northern Territory.

Heliotrope is a summer sowing annual herb that thrives on disturbed, bare or open, cultivated ground. It has branched stems, grows up to 300 mm high and is covered with coarse white hairs. The leaves, which are grey-green in colour and oval shaped, are arranged alternately on the stems and has small white flowers.

Seeds germinate in the warm, moist conditions after each late spring or summer rain, and growth is prolific where seedlings are not shaded and there is no competition from perennial plants. Fallow ground is ideal; hence it is more of a problem in wheat/sheep areas than pastoral areas. Heliotrope has enormous seeding potential and the seeds are viable for many years.

This plant contains poisons or toxins known as pyrrolizidine alkaloids. The toxins are present at all stages of growth and in all parts of the plant, including the seed.

Nature of the problem

All animals are susceptible to poisoning. The most susceptible are monogastric species such as pigs, poultry, horses and humans. Poisoning in these species is usually caused by the consumption of cereal grains contaminated by heliotrope seed.

Ruminants including sheep and cattle are less susceptible because some of the alkaloids are destroyed by microbes in the rumen. However, because sheep are the dominant species grazed in areas where heliotrope growth is most prolific, they are the most commonly affected species in Australia.

The disease is usually chronic in nature with signs of sickness and death often delayed for weeks, months or years after the consumption of the heliotrope has ceased.

When heliotrope is eaten, the absorbed pyrrolizidine alkaloids form secondary compounds that remain in the liver producing ongoing damage. Liver damage also increases progressively with additional intakes of heliotrope.

Photosensitisation is the result of an excessive sensitivity to sunlight caused by an accumulation of phylloerythrin in the blood. This chemical is a breakdown product of chlorophyll, the pigment present in green plants. Normally phylloerythrin is removed from the body in bile, produced in the liver. Liver damage due to heliotrope poisoning retards the rate of excretion of phylloerythrin, causing a build-up of this compound in the blood and tissues (including the skin) when the intake of green plants is high. The interaction of phylloerythrin and sunlight results in skin damage resembling severe sunburn. In sheep this occurs on the non-wooled areas, and in cattle is most apparent on white-skinned areas.

In addition to the direct effects of heliotrope, there are secondary effects including pregnancy toxaemia, copper poisoning and ammonia poisoning.

Pregnancy toxaemia occurs when sheep within the last six weeks of pregnancy are unable to provide sufficient energy for the developing foetus (often twins). As the provision of energy is a function of the liver, those ewes with chronic liver damage are more likely to develop pregnancy toxaemia. This condition has been a major cause of ewe deaths in the Mallee.
Heliotrope toxicity in sheep and cattle

Copper poisoning causes sudden death, with jaundice, when the sheep are stressed. Liver damage caused by heliotrope leads to an abnormally high uptake of copper by the liver, especially when sheep are grazed on clovers or medics which have a high copper content. Under stressful conditions (e.g. transport, yarding, lactation, malnutrition) the stored copper may be released suddenly from the liver. This causes massive destruction of red blood cells that result in jaundice, red-brown discoloration in the urine (red-water) and, often death.

Ammonia poisoning causes the sudden death (without loss of condition) of sheep grazing pastures that have high protein content such as lush clover or medic. Normally the ammonia produced in the rumen from dietary protein is converted in the liver to urea and excreted in the urine. The capacity of the liver to do this is reduced by heliotrope damage, and as ammonia is toxic in large amounts, death can result.

Heliotrope toxicity in sheep

Heliotrope poisoning problems are more common in British breeds and crossbreeds than Merinos. Merinos tend to avoid the plant when other feed is available, whereas British breeds and crossbreeds will eat it more readily and sometimes preferentially.

In general, symptoms are not seen until exposure to heliotrope has occurred over more than one season. The death rate increases with age. In a survey conducted in the Victorian Mallee, about half of the total annual sheep losses were attributed to heliotrope poisoning.

Many affected sheep can live without obvious sickness, or symptoms and death can occur. Severe poisoning episodes are common, characterised either by some sheep losing weight and dying over a period of time, often while they are grazing lush medic or clover pastures, or by the sudden onset of deaths associated with some stressful event such as lambing, mustering or shearing. In the latter case, deaths usually follow one or two days of depression and separation from the mob, with jaundice (yellowing of the fat), but no loss of condition. Photosensitisation (reddening or scabs on the ears, muzzle or other wool-free areas) is common if affected sheep are grazing green pasture.

Heliotrope toxicity in cattle

Cattle are more susceptible to the toxic effects of heliotrope than are sheep and deaths can occur within 10 days of commencing to eat heliotrope. Usually however, deaths are spread over several months, with affected cattle showing depression, reduced appetite, loss of condition, diarrhoea, restlessness and persistent aimless walking. As with sheep, cattle can suffer low lethal effects from heliotrope poisoning and the resulting chronic liver damage can be responsible for serious production losses.

Cattle will avoid eating heliotrope when other feed is available, but introduced cattle are more likely to graze it.

Diagnosis

Where heliotrope poisoning is suspected, confirmation should be obtained through a veterinary surgeon or animal health adviser who will perform a post-mortem examination and test appropriate samples. Other diseases can cause similar symptoms. For example, pyrrolizidine alkaloids occur in plants other than heliotrope. In the Riverina of New South Wales, *Echium plantagineum* (Paterson’s Curse, or Salvation Jane) is one such plant that is often abundant in pastures. More losses in cattle in these areas are attributed to this plant than to heliotrope because it is more palatable. In sheep, also, the possibility of involvement of plants other than heliotrope should be considered. Similar symptoms can result from other causes of liver damage, such as poisoning by Caltrop (*Tribulus terrestris*) or Lesser Loosestrife (*Lythrum hyssopifolia*), or in other diseases.
Happy New Year to everyone interested in gardening. What lovely rains we have had this week! A most welcome New Year present from the weatherman.

**What is happening in our garden this month?** We are currently picking tomatoes, basil, beans, beetroot, capsicums, cucumbers, garlic, leeks, onions (red and white), potatoes, peaches, pecharaines and plums. The zucchini and squash are a little late this year as we were late planting the seeds. The raspberries, strawberries and loganberries are now finished but the mulberries will be ripening very soon! The oranges and tangelos are coming to the end but the first of the apples will be ready this week.

**What to plant this month?** Plant seeds of basil, beans, beetroot, broccoli, Brussel sprouts, cabbage, carrot, cauliflower, celery, Chinese cabbage (and other Asian greens), Coriander, Kale, lettuce and other salad greens, radishes, silverbeet, spinach, spring onions and turnips.

**The to-do list**

- Keep the vegie patch free of weeds; these compete for valuable water and may also harbour insect pests.
- Pick cucumbers and zucchinis before they get too big and woody. Also keep button squash picked daily.
- Lift and store garlic once all the leaves have yellowed and dried.
- Harvest onions as they mature and hang them in a cool, dry shed.
- Water tomatoes deeply and regularly to reduce the risk of blossom end rot. An application of lime will also assist in preventing this frustrating disease.
- Pinch out the growing tips of runner beans when they reach the top of their support. Also pinch off the growing tips of pumpkin vines once flowering has commenced to improve pumpkin size.
- Tidy up summer flowering strawberries that have finished fruiting. Cut off old leaves and unwanted runners, remove weeds and re-mulch with more pine needles.
- Look for pear and cherry slug on leaves of hawthorns, plums, pears, cherries and quinces. Try hosing off, or spray with pyrethrum or carbaryl. Fine wood ash works well on smaller areas.
- Thin out beetroot, carrot, lettuce and parsnip seedlings
- Hand-pollinate flowering pumpkins, zucchinis etc. if fruit is not setting: dust pollen from male flowers (smaller) into the centre of female flowers.
- Check stone fruit for brown rot. Very critical after these recent rains. Remove and destroy any affected fruit immediately.
- Thin apples now and protect the remaining fruit with bird netting. The thinning’s and windfalls from your apple tree can be used to make apple cider vinegar. (See box)

**Making Apple Cider Vinegar**

1. Collect 2kg apples
2. Dissolve 1 cup sugar in 3 ½ litres unchlorinated water
3. Don’t wash the apples, the wild yeast needed for the fermentation is on the skin. Chop the apples into a bucket – pips, stem and all. Discard any bad bits, bird poo, millipedes etc.
4. Add the water and dissolved sugar.
5. Cover with a clean towel. Fermentation should take place in a couple of days at room temperature. Dunk apples every day for 10 days.
6. Strain through towels into bottles. Leave uncorked and the liquid should turn to vinegar in about 2 weeks, with sediment on the bottom and scum on the top.

I use this vinegar to add to the mash I give to my hens each evening.
Netting your fruit trees:

At our place, we find that all fruit trees must be covered with netting if we are to harvest any fruit. The parrots here have recently started eating the apples on a variety which does not ripen until late May! Nets can be placed over your tree using a frame made of poly pipe. This is an excellent way to net trees as the netting is kept away from the tree, making access to the fruit for birds even harder. However, this is a fairly expensive exercise and we find that draping the netting directly over the tree works well, using the following steps.

1. Trees need to be kept pruned to a manageable height and size to allow netting.
2. The soft, new growth at the top of the tree needs to be tied together to form a support for the net, This works better than pruning them off as they can now act to hold the net up and cannot grow up through the net, making later removal difficult.
3. Drape your netting over the tree, securing any joins and/or holes.
4. Next gather the lower part of the net and tie it into the trunk of the tree so that the netting is not left dragging on the ground. This will prevent access by birds from under the tree as well as preventing ground dwellers from becoming entangled in the netting.

Happy gardening Mary Prowse

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Heliotrope toxicity in sheep and cattle

Prevention

The feeding of a high energy - low protein grain diet (e.g. barley, wheat or oats, but not peas or lupins) and a reduction in stress, will minimise problems with pregnancy toxaemia and ammonia poisoning. Consideration should be given to culling flocks or mobs in which exposure to heliotrope and losses have been high, as the maintenance of a suitable diet for long periods will be difficult and costly.

Minimise the exposure of stock, especially valuable stock, to heliotrope -dominant grazing. Sheep are often used to graze fallows or stubbles as an aid to weed control. The risk associated with this practice should be appreciated.

Use minimum tillage cultivation and stubble retention. Both will reduce the amount of heliotrope that grows.

Grow lucerne or other perennials. Heliotrope seedlings are very susceptible to shading and competition. In the Riverina, dense stands of lucerne (21 to 77 plants per square metre) have been shown to completely control heliotrope.

Combined weed control and livestock management. Seedlings less than 70 mm high can be controlled with non-selective herbicides, but larger plants are quite resistant to herbicides. Also, repeated applications of herbicide are necessary to control later germinations, limiting the usefulness of this method. Sheep of low value and low susceptibility are commonly used to clean up the sprayed weeds.

Where cattle are to be grazed, heliotrope should not be dominant in the pasture.

For further advice on agronomic practices to control heliotrope contact your local agronomist or agricultural advisor.

Source: www.depi.vic.gov.au
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Do you have an interesting story, website or advertisement you would like to place in the Wooragee Landcare Newsletter?

**IMPORTANT NOTICE**

Due to the rising costs of printing and postage the Wooragee Landcare Community Newsletter will be sent 4 times a year to all Non-Landcare members in Wooragee and Woolshed that currently receive the newsletter via the post.

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