



Information for Submitters – APP203542

Have your say on an application submitted under section 34 of the HSNO Act (1996)

Introduction

Horehound Biocontrol Group has submitted an application to the Environmental Protection Authority (EPA) seeking approval under the Hazardous Substances and New Organisms Act (HSNO Act) to import and release two moths, *Wheeleria spilodactylus* and *Chamaesphecia mysiniiformis*, as biological control agents for the weed horehound (*Marrubium vulgare*). The application will be processed by the EPA through a publicly notified pathway.

This document provides information to help you understand the application, the HSNO Act process for considering the application, and how you can participate in that process.

What is the application for?

The background and aims of the application include a truncated summary taken from the application form.

Background and aims of introducing *Wheeleria spilodactylus* and *Chamaesphecia mysiniiformis* in New Zealand

Horehound (*Marrubium vulgare*) is a small, woody herb belonging to the mint family. It is related to sage, mint, thyme, and a range of other herb species. Extracts of horehound have commonly been used in cough remedies, and it is thought to have other medicinal benefits. It was probably introduced to New Zealand for medicinal purposes and was recorded in the wild as early as 1867. Horehound is associated with dry environments and is abundant in Canterbury and Otago.

Horehound is used by herbalists as a medical herb. Studies have shown that *Marrubium vulgare* leaves contain marrubiin, an alkaloid that imparts medicinal properties to the plant. In addition, the plant is reported to possess hypoglycaemic, hyperglycaemic, and antihypertensive qualities. It has been said to be an analgesic, an antioxidant, an anti-ulcer agent, an antispasmodic, to have antifungal and antimicrobial properties, and to reduce cholesterol, protect against cardiovascular disease, stimulate the immune system, and treat tumours. The plant has also been studied for dementia-preventing properties and was shown to have an abortifacient effect (causing abortion) in rats.

Horehound establishes easily in disturbed sites, from which it encroaches into adjacent farmland, displacing desirable forage. It also produces burrs that mat wool, devaluing the fleece of sheep and causing distress in lambs. It establishes strongly in hill- and high-country lucerne forage crops and is exceptionally hard to

control. Not only does horehound reduce the productivity of lucerne, but herbicide treatments are highly detrimental to the survival and regeneration of lucerne. Farmers report that horehound is spreading at an alarming rate into lucerne crops and other pasture types in hill- and high-country farms. Overall, horehound is a serious threat to the viability of some farming enterprises. A recent survey conservatively estimated the cost of horehound to dryland farming in New Zealand at \$6.85 million per annum.

A viable solution is biological control, which involves introducing natural enemies in order to control a weed such as horehound. Introduced natural enemies become permanently established in the environment, and their effects on a target weed persist from year to year. This means these natural enemies must be safe if such a weed management tactic is to be environmentally acceptable. Horehound plume moth (*Wheeleria spilodactylus*) and horehound clearwing moth (*Chamaesphecia mysiniiformis*) have been released in Australia. The larvae of the plume moth feed on horehound leaves, and the larvae of the clearwing moth feed in the roots. Approval to introduce the two moths to Australia was obtained following detailed research to determine the range of plants these species could live on in the wild. Both moths have very narrow host ranges in their native Europe, and this was confirmed in the experiments. These conclusions can also be applied in New Zealand. A degree of horehound control has now been achieved in Australia, and no adverse effects have been reported.

The key potential positive and negative effects will be evaluated and reviewed in the EPA Staff Assessment Report that is expected to be released on 8 August 2018.

Where to find the application

The application can be found on the EPA website (www.epa.govt.nz).

You can also contact the applicant directly if you have questions about the information in the application. Richard Hill can be contacted by email (Hillr@landcareresearch.co.nz) or phone (0211 376 919).

You can contact the EPA if you have any questions about the application process, making submissions, or the hearing process. The application leader is Aubanie Raynal, who can be contacted by email (aubanie.raynal@epa.govt.nz).

The application process

The application process is set out in the HSNO Act, including timeframes within which steps of the process must occur. The main steps are set out below.

| Stage of process | Date |
|---|--|
| Application formally submitted to EPA | 15 May 2018 |
| Public submission period | 29 May to 11 July 2018 |
| EPA Staff Assessment Report release | Expected 8 August 2018 |
| Public hearing (open to the public, applicant and submitters can present), if a hearing is held | Expected to take place on or before 22 August 2018 |
| Consideration of application (not open to the public) | Expected to take place on or before 22 August 2018 |
| Decision released | Prior to 3 October 2018 |

Who considers the application?

The application is considered by a sub-committee of the EPA's HSNO Committee. The HSNO Committee consists of eight members, appointed by the EPA Board, with delegated decision-making powers to consider certain applications made under the HSNO Act.

The Decision-making Committee for this application has not yet been appointed.

The role of EPA staff

EPA staff support the Decision-making Committee, and administer the consideration process including the submissions and hearing.

EPA staff also provide advice to the Decision-making Committee. Following the close of submissions, EPA staff will complete a full assessment of the matters to be considered, using the information in the application, from submitters and other readily available sources. This Staff Assessment Report will be published on the EPA website and will assist the Decision-making Committee with the consideration of the application.

Information the Decision-making Committee will take into account

Sources of information for the Decision-making Committee include, but are not limited to:

- the application form and supporting documents
- submissions
- EPA Staff Assessment Report
- information presented at a public hearing (if a hearing is held).

All written reports, submissions, the application, and decision will be available on the EPA website as they become available.

The statutory criteria for considering this application

In considering the application, the Decision-making Committee must take into account a range of matters set out in the HSNO Act.

Undesirable self-sustaining populations

The Decision-making Committee is required to consider the potential for *Wheeleria spilodactylus* and *Chamaesphecia mysiniiformis* to establish an undesirable self-sustaining population and the potential for eradication of undesirable populations of the two moths.

The Decision-making Committee is interested in any information about a situation where a population of *Wheeleria spilodactylus* and *Chamaesphecia mysiniiformis* might be considered undesirable.

Minimum standards

The HSNO Act sets out minimum standards that must be met in order for a new organism to be released. This means that *Wheeleria spilodactylus* and *Chamaesphecia mysiniiformis* cannot be approved for release if they are likely to:

- cause any significant displacement of any native species within its natural habitat
- cause any significant deterioration of natural habitats
- cause any significant adverse effects on human health and safety
- cause any significant adverse effect to New Zealand's inherent genetic diversity
- cause disease, be parasitic, or become a vector for human, animal, or plant disease, unless the purpose of that importation or release is to import or release an organism to cause disease, be parasitic, or a vector for disease.

The Decision-making Committee is interested in any information about whether *Wheeleria spilodactylus* and *Chamaesphecia mysiniiformis* meet the minimum standards.

Adverse and beneficial effects

The Decision-making Committee is required to weigh the potential beneficial (positive) effects against the potential adverse effects of releasing *Wheeleria spilodactylus* and *Chamaesphecia mysiniiformis* into the New Zealand environment.

If the adverse effects outweigh the beneficial effects, the organisms cannot be released.

The Decision-making Committee is interested in any information about benefits or adverse effects that could result from the release of *Wheeleria spilodactylus* and *Chamaesphecia mysiniiformis*, in particular, any effects on the environment, human health and safety, the market economy, Māori culture and traditions, and society and communities.

You can participate in the process

Make a submission

Any person can make a submission on this application, provided it is submitted within the submission period (**29 May to 11 July 2018**). In a submission you can provide information, make comments and raise issues. In this way, you contribute to the EPA decision-making process on this application.

Further information on the purpose of submissions is available from the EPA website using the link below:

<https://www.epa.govt.nz/public-consultations/>

In your submission, you can also request a hearing if you would like to speak to your views in person before the Decision-making Committee. Further information on what to expect at a hearing can be found in the link below:

<https://www.epa.govt.nz/public-consultations/what-to-expect-at-a-hearing/>

The EPA website provides guidance and steps on how to make a submission. This is preferably done via the EPA submission form online, but may be sent as a letter or e-mail to the EPA. This information and the submission form can be accessed from the EPA website using the link below:

<https://www.epa.govt.nz/public-consultations/how-to-make-a-submission/>

Participate in the public hearing

A hearing may be held to enable submitters to speak to the Decision-making Committee about their submissions.

You are entitled to bring witnesses who may speak to your submission at a hearing. If you choose this option, you should provide the EPA with a list of the witnesses, their areas of expertise, and the elements of the submission or application they will talk to.

If you choose to speak at a hearing, you are entitled to speak in one of the three official languages of New Zealand: English, Māori, or New Zealand Sign Language. Please advise the application lead **at least two weeks prior to the hearing start date if you wish to speak to your submission in Māori or New Zealand Sign Language** in order for the EPA to organise for an interpreter. The application lead, Aubanie Raynal, can be contacted by e-mail (Aubanie.Raynal@epa.govt.nz).

Both the applicant and submitter(s) need to provide the EPA with copies of any information they intend to present at the hearing at least two weeks prior to the hearing.