



Environmental  
Protection Authority  
Te Mana Rauhi Taiao

# Summary of Staff Assessment Report

**APP203336: An application to seek pre-approval to release *Trissolcus japonicus* as a biological control agent for brown marmorated stink bug should it arrive in New Zealand**

JUNE 2018

# 2

## The application

- The Brown Marmorated Stink Bug Council lodged an application with the EPA on 26 March 2018 seeking pre-approval to release *Trissolcus japonicus* as a biocontrol agent for brown marmorated stink bug (BMSB) should it arrive in New Zealand.
- The application was publicly notified. The EPA received 69 submissions: 65 submitters supported the application, two submitters neither supported nor opposed the application and two opposed the application. Eighteen submitters indicated they wish to be heard.

# 3

## Risk assessment

- *Trissolcus japonicus* as a tool in an eradication response.
- Conditional release.
- We assessed the risks and benefits to the environment, market economy, people and communities and to Māori and their relationship with the environment.

## Benefits assessment

- We considered the benefits from *Trissolcus* to the market economy, environment and people and communities.
- BMSB and its effects to plant production industries.
- Economic analysis.
- Costs include reduced yields across a range of horticulture crops; reducing exports and domestic sales; increased agrichemical use; higher labour costs to monitor and treat BMSB; lower export prices due to concerns about chemical residues.
- The use of *Trissolcus* in an eradication response could protect vulnerable horticulture regions, as well as conservation estate, from becoming infested with BMSB. That could eliminate or minimise the costs involved to control BMSB in those environments.
- We concluded that there would be **significant** economic benefits from the use of *T. japonicus*.

# 5

## Benefits assessment

- The environment: damage from wider agrichemical applications; feeding damage to native plants.
- We considered the use of *Trissolcus* could have important beneficial effects on the environment by contributing towards or eliminating collateral damage to other organisms from chemical control or feeding by BMSB. We concluded these effects to be **low**.
- People and communities: nuisance factor, allergen production, losses in amenity values due to damages to ornamental plants, decrease in household incomes.
- We concluded benefits to be **low to medium**.

# 6

## Potential adverse effects

- Adverse effects on the environment: direct effects and indirect effects
- Host range experiments, field surveys and chemical ecology: the staff assessment report summarises experimental work conducted in New Zealand, USA and China.
- We found there would be **negligible** adverse effects from the use of *Trissolcus* as part of an eradication strategy on beneficial stink bugs.
- We further concluded that any adverse effects on endemic stink bugs would be **low**.

# 7

## Potential adverse effects

- Adverse indirect effects on the environment.
- Cross-breeding, hyperparasitism, competition for shared resources.
- We assessed these areas in the staff assessment report and noted that although indirect effects may occur, they would have **negligible** effects.

# 8

## Conclusions regarding the benefits and risks

- The benefits to the market economy are significant, the benefits to the environment are low and benefits to people and communities are low to medium.
- We assessed the adverse effects to the environment as negligible, but assessed effects on endemic stink bugs as low.
- We considered where *Trissolcus* would establish an undesirable population and potential for eradication of the biocontrol agent if a population becomes undesirable.
- We took the proposed controls into consideration.
- We conclude the beneficial effects outweigh the adverse effects.

## Minimum standards

- We assessed the conditional release of *Trissolcus japonicus* against the minimum standards in the HSNO Act.
- We considered the controls that will be imposed, whether the controls are likely to be effective in meeting the objective of the controls and the ease by which the organism could be recovered and eradicated if it formed a self-sustaining population.
- We considered that *Trissolcus* meets the minimum standards.

## Relationship of Māori to the Environment

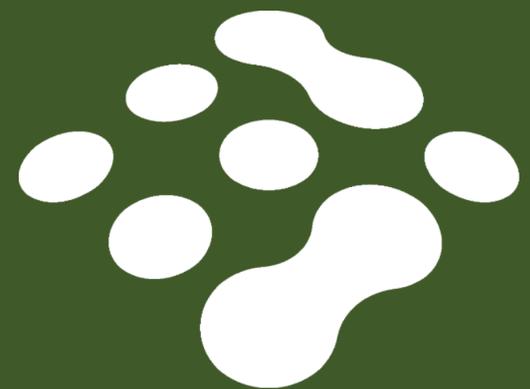
- Kaupapa Kura Taiao made a cultural risk assessment of the application and concluded the benefits of *Trissolcus* are likely to outweigh its disbenefits.
- The potential risks to Māori interests would probably be acceptable.
- There are some significant uncertainties and information gaps that remain. The uncertainties are in relation to potential impacts on culturally significant species and wider ecosystem effects.
- The application is not inconsistent with Māori cultural beliefs and environmental frameworks.

## Proposed controls

- The EPA proposes a set of controls to manage the use of *Trissolcus*.
- The controls stipulate when *Trissolcus* may be released; the duration of an approval; who may use the approval; notification of the use of the approval.
- Provisions to review.

## Recommendation

- Our assessment has found that the benefits of conditionally releasing *Trissolcus japonicus* outweigh any identified risks or costs. We also found that *T. japonicus* meets the minimum standards set out in section 36 of the HSNO Act. We therefore recommend that the Decision-making Committee approves the application and grants a conditional release approval with controls.



# Environmental Protection Authority

Te Mana Rauhi Taiao

For more information contact:

**General enquiries**

**Phone +64 4 916 2426 Fax +64 4 914 0433**

**[info@epa.govt.nz](mailto:info@epa.govt.nz)**