

Innovation Vineyard Project Report

MARLBOROUGH
GRAPE
GROWERS
COOPERATIVE

**Farlands**
co-operative

Title: Biosecurity Field Workshop

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Abstract

In February 2019, New Zealand Winegrowers' Marlborough representatives shared with Field Day guests. Ed Massey and Sophie Badland opened attendees' eyes to potential pest and disease threats that the New Zealand grape growing industry faced.

Their discussion centred around the capability of each attendee to influence biosecurity through their own educated awareness and decision making.

Introduction

Biosecurity for New Zealand Winegrowers has three key objectives. New Zealand Winegrowers (2018);

1. Members' capability to influence biosecurity decision making and activities across the scope of the system is maximised
2. Members' awareness of biosecurity risks and mitigations is maximised
3. Members' participation in biosecurity activities is maximised

Two potential insect pests were discussed.

1. Harlequin ladybird - *Harmonia axyridis*. This insect is considered an invasive species in many countries. It is now present in Marlborough.
2. Brown Marmorated Stink Bug – *Halyomorpha halys*. This insect is NOT present in New Zealand, and we do not want to have it! It is currently an agricultural pest found in Asia; China, Japan and Korea. Overseas, it is known to attack and feed on grapes.

Materials and Methods

Field discussion with attendees.

Dead, preserved, bottled examples of the Harlequin ladybird, and Marmorated Stink Bug were passed around the gathering, along with other material; identification and action response material.

Results

References made available at the field day and on the NZWine website;

- Harlequin ladybird fact sheet (2016) - <file:///C:/Users/Owner/Downloads/harlequin-ladybird-fact-sheet-2016.pdf>
- Identifying Harlequin ladybird - [file:///C:/Users/Owner/Downloads/identifying-harlequin-ladybird_002%20\(1\).pdf](file:///C:/Users/Owner/Downloads/identifying-harlequin-ladybird_002%20(1).pdf)
- Winegrowers beware the Harlequin ladybird is likely near (2019). [file:///C:/Users/Owner/Downloads/wine-growers-beware-the-harlequin-ladybird-is-likely-near%20\(1\).pdf](file:///C:/Users/Owner/Downloads/wine-growers-beware-the-harlequin-ladybird-is-likely-near%20(1).pdf)

- Ministry of Primary Industries. (2014). Brown Marmorated Stink Bug. <https://www.nzwine.com/media/4588/2014-brown-marmorated-stink-bug-bmsb-general.pdf>
- Massey, E. (n.d.). Brown marmorated stink bug: can biocontrol help stop the stink in your wine? <https://www.nzwine.com/media/5803/how-to-stop-the-stink-in-your-wine-biocontrol.pdf>

Discussion and Conclusion

Harlequin Ladybird.

As referenced in the document, *Winegrowers beware the Harlequin Ladybird is likely near (2019)*, the NZ Government has stopped monitoring now for this species. Since first being identified in Auckland



FIGURE 1 VARIOUS COLOURATIONS OF THE HARLEQUIN LADYBIRD. KIRKEBY (2019).

in 2016, it is now wide spread throughout the country, and well established in Marlborough.

The concern for the wine industry is the potential wine taint that could occur if the ladybird is harvested in number with the grape crop.

So far, the Harlequin Ladybird has not been found in numbers on vines; it tends to harbour in numbers in sheltered places like sheds, meter boxes, vineyard machinery or the like.

MPI's Biosecurity know that the Harlequin is here to stay – we will not eradicate it.

Verbal recommendation from Ed Massey is that if the pest is found massing in number in confined sheltered spaces, contain the population with an appropriate insecticide. Fly spray also does a great job.

If you have a concern, talk with Biosecurity and your viticulturist.

Brown Marmorated Stink Bug.

The Brown marmorated stink bug (BMSB) has a legal status as an unwanted organism. Ministry of Primary Industries (2014).

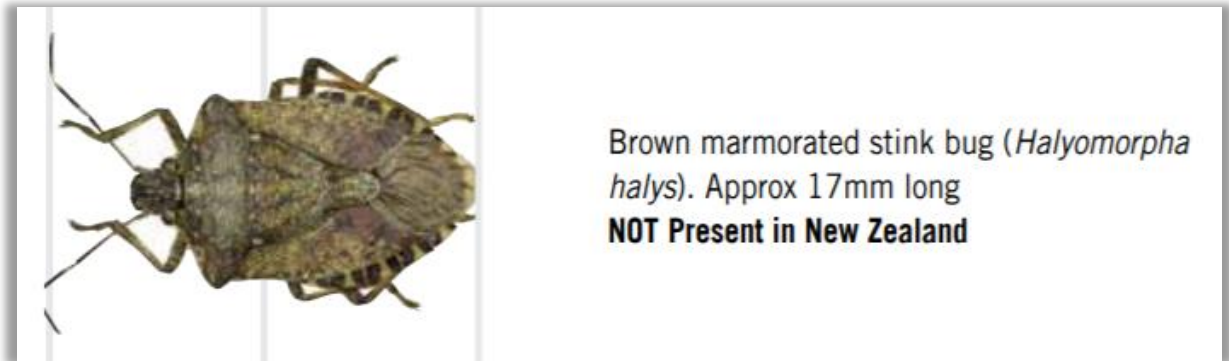


FIGURE 2. BMSB. KEY DISTINGUISHING FEATURES; 1. SIZE: 14-17MM LONG, 2. WHITE BAND ON THE ANTENNAE, 3. ALTERATE BLACK AND WHITE MARKINGS ON THE ABDOMEN.

MPI say that this organism when mature, will feed on fruit, while its juveniles will also feed on leaves and stems. The BMSB can cause significant damage to fruit, and of course could lead to increased botrytis pressure, and taints to wine.

BMSB is not a concern for public health, but if disturbed, or crushed, it will give off a characteristic, unpleasant odour.

If you suspect finding this pest, catch it and call MPI on 0800 80 99 66. Get photographs.

References

Kirkeby, L. (2019). *Winegrowers beware the harlequin ladybird is likely near.* [Image]. Retrieved from [file:///C:/Users/Owner/Downloads/wine-growers-beware-the-harlequin-ladybird-is-likely-near%20\(1\).pdf](file:///C:/Users/Owner/Downloads/wine-growers-beware-the-harlequin-ladybird-is-likely-near%20(1).pdf)

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New Zealand Winegrowers (2018). *New Zealand Winegrowers biosecurity strategy.* <https://www.nzwine.com/media/8471/biosecurity-strategy-2018final.pdf>