

Biosecurity Advice - Update

Pest

Brown marmorated stink bug (BMSB) (*Halyomorpha halys*)

Date

Jan 2019

Location

QLD, WA and Victoria

Key points

- The Brown marmorated stink bug (BMSB) is an exotic pest that could cause major damage to agricultural crops, nursery stock and ornamental plants. It's also a nuisance because it seeks shelter in large numbers, in buildings and equipment during the winter months. It has a foul-smelling odour when crushed or disturbed.
- This bug is a high priority pest which needs to be kept out of Australia. It is well known to stow away in cargo coming out of the northern hemisphere between September and April each year

Current Situation

- There has been a significant number of BMSB detected post-border this season, which runs from September through to April.
- Post-border detections are where the pest has made its way to Australia and been found at a location which is not under biosecurity control. Six post-border detections have been referred to state governments under nationally agreed response arrangements.
- The six detections have occurred across Queensland, Victoria and Western Australia on a variety of imported cargo. Both live and dead bugs have been found.
- The Australian Government Department of Agriculture and Water Resources is working closely with each of the affected state governments. Each detection has seen swift and effective response measures put in place.
- The affected goods are subject to biosecurity control and fumigation, and surveillance is now underway to determine that these bugs have been contained.

Queensland

- In Queensland there have been three separate detections at Lytton, New Chum and Fisherman's Island. BMSB was detected on a variety of imported cargo including machinery that had been imported from China.
- A surveillance and trapping program is in place across all three sites. So far, no further BMSB have been found.

Fremantle Port, Western Australia

- On 28 December 2018, a single live BMSB was found in a trap at Fremantle Port. This trap was one of seven, set as part of BMSB surveillance activities which are conducted by the Department of Agriculture and Water Resources.
- A residual treatment has been applied to a 100 metre buffer zone which includes buildings and vegetation.

- The WA Department of Primary Industries and Regional Development has a 12-week trapping program underway to determine whether the pest has spread. A total of 49 traps have now been deployed with no further detections to date.
- Businesses and residents in North Fremantle should keep an eye out for BMSB. DPIRD has provided information to the public on what to look for, and how to report any suspect sightings.

Victoria

- Agriculture Victoria is responding to BMSB detections at two sites in Victoria. One is in Dandenong South, and the other is at Clayton, both in Melbourne's South East.
- In early January 2019, a Dandenong South warehouse reported sightings of unusual bugs on imported goods from Italy. A single live BMSB was found in a warehouse, and is likely to have arrived inside a consignment of terracotta pots. BMSB was confirmed by diagnostic testing on 8 January.
- The warehouse and goods were fumigated by the Department of Agriculture and Water Resources on 12-13 January, when another live BMSB was detected. On 14 January, Agriculture Victoria found a further live adult male in a trap they had set, approximately 20 metres from the warehouse. Another live adult female was found in a trap just outside the warehouse in a trap on the 18 January.
- Previously, in December 2018, a single male BMSB was detected on a mini-bulldozer at a dealership in Clayton, Victoria.
- A biosecurity officer from the Department of Agriculture and Water Resources detected and caught the bug when conducting a routine inspection. The bulldozer had been imported from the USA.
- On 14 December 2018, another single BMSB was detected near the dealership, in a trap set by Agriculture Victoria.
- There have been no further detections at the Clayton site.
- Agriculture Victoria has commenced a 12-week trapping and surveillance program in a two-kilometre radius around the detection points in Dandenong South and Clayton.
- The detections at these two sites are not related.

Biosecurity and reporting

- Growers and residents in these areas are asked to be particularly vigilant for the bug and monitor their fruit and other host plants for unusual damage.
- The most effective way to detect BMSB is by visually inspecting host plants. They are large bugs that emit a foul odour when disturbed.
- BMSB looks similar to native Australian stink bugs but it is larger. The white bands on its antennae are a distinguishing feature.
- You can see photos and more information about the brown marmorated stink bug at outbreak.gov.au.
- If you think you have spotted what could be a brown marmorated stink bug, contact your department of primary industries or agriculture immediately. You can do this by phoning the Exotic Plant Pest Hotline on 1800 084 881, from anywhere in Australia.

Preventative action being undertaken by government

- The Department of Agriculture and Water Resources is responsible for Australia's biosecurity at our international border and manages the risk of BMSB arriving in Australia.
- Between 1 September 2018 and 30 April 2019, which is the BMSB season, additional import measures are put in place for imported sea cargo. These measures apply to specific goods arriving from certain countries, where we know BMSB is present.
- The 2018-19 season sees measures apply to high risk vessels and goods, from eight countries in Europe and the USA.
- These measures require that:
 - targeted high-risk goods receive mandatory treatment for BMSB.
 - goods identified as a risk will be subject to random on shore inspection.
 - high-risk break-bulk cargo and goods that are not in a six-sided shipping container must be treated off-shore. Only fully containerised cargo has the option of being treated off-shore or on-shore.
 - goods coming from target risk countries must be treated by a provider that is approved by the Department of Agriculture and Water Resources.
 - goods that are subject to a random inspection on arrival - the container's seal must be intact and the goods must be inspected in the presence of a biosecurity officer.
 - heightened surveillance for cargo vessels and additional pre-arrival reporting for vessel operators, who are required to undertake daily checks of their vessels and cargo for biosecurity risks.
 - vessels that are reported to have live BMSB on board may not be able to enter an Australian port or could be directed back out to sea if they are already here.
- When there are BMSB detections, the Department of Agriculture and Water Resources works closely with state and territory governments to manage the risk of the pest establishing a viable population in the environment. There are national response arrangements in place for circumstances where BMSB is detected in goods that are outside the department's border control.
- Government informs and updates potentially affected plant industries on all detections through the Consultative Committee on Emergency Plant Pests. The committee provides a mechanism to share information and respond to emergency plant pest incursions.
- An emergency plant pest is defined under the Emergency Plant Pest Respond Deed which is managed by Plant Health Australia.

Background

- The 2017-18 season saw an increase in BMSB detections, and this trend has continued this season. The increase is due to the spread of the pest in Europe, particularly into Italy.
- During the 2017-18 season there were three post-border detections of BMSB in Australia. Two were in Western Sydney and one in Perth. All were associated with goods that had been imported from Italy.
- The Department of Agriculture and Water Resources worked with the state governments to respond to these incidents. The infested goods and containers were fumigated, and surveillance

has been ongoing around the affected sites. To date, no further BMSB have been detected at these sites.

About the pest

- Brown marmorated stink bug is a significant threat to agriculture due to its wide host range and the damage it can do to vegetable crops and fruit and ornamental trees.
- It is known to feed on more than 300 hosts, including agricultural crops such as nuts, grains, berries, cotton, citrus, soybean, nursery stock and some ornamental and weed plant species.
- While feeding, the bug's saliva causes significant damage to plant tissues.
- The bug is not a risk to human health but it is regarded as a nuisance pest because it seeks sheltered places to overwinter such as inside homes, vehicles, machinery or sheds, often in large numbers.
- BMSB is native to eastern Asia (China, Japan and Taiwan) but was introduced to North America in the mid-1990s and more recently to Europe, where it is rapidly becoming a serious pest.
- Adults range in length between 12-17 mm. They are mottled brown in colour, and have a shield-shaped appearance.
- There are five nymph stages that range in size from less than 3 mm to 12 mm long. The nymphs are orange and black when they first hatch but quickly develop a similar colouration to the adults. The juvenile, or nymphal stages, cause the most damage to plants and crops.
- Eggs are cream to yellow-orange and approximately 1.6 mm long and laid in clusters on the underside of leaves.
- BMSB opportunistically uses cargo containers and freight vehicles to hitchhike across continents and oceans. The bug's ability to hitchhike, fly, and to feed on a wide range of plant hosts, enables it to spread rapidly when it is introduced to new areas.
- It has the ability to survive in cargo for long periods by remaining in a dormant state.
- BMSB can be confused with a number of other brown coloured stinkbugs that are present in Australia. There is a comprehensive identification guide available through the Outbreak website (outbreak.gov.au).