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Safeguarding Arrangements Scheme

Why is BMSB a biosecurity risk?

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Brown marmorated stink bug (*Halyomorpha halys*, BMSB) is an invasive pest that has spread from its native range in East Asia to form established populations in North America, South America and Europe. In recent years, it has continued to spread throughout the United States and Europe; the numbers of BMSB arriving at the Australian border has substantially increased and new pathways have become at-risk.

During autumn (northern hemisphere), decreasing temperature and day length trigger BMSB adults to gather in large numbers prior to entering overwintering sites. In their native range in Asia, BMSB are reported to naturally overwinter on the ground in leaf litter, inside tree holes and under tree bark. However, BMSB are also attracted to and use human-made structures in both native and invaded regions in Asia, USA and Europe.

Structures near suitable habitat such as forests, orchards and fields are the most likely to be heavily infested, suggesting that BMSB adults do not typically move far to find overwintering sites. They prefer cool, dry, dark spaces and will often enter buildings through doors, windows, cracks, vents, and other openings. BMSB can penetrate mesh as small as 9mm wide by 5mm high.

Adult BMSB are strong fliers in temperatures above 20 degrees Celsius with the dispersal capacity for the majority of BMSB likely to be several kilometres. Therefore, BMSB arriving in Australia during the warmer months of the risk season have the potential to emerge and disperse to seek food sources, mate, and establish in suitable locations.

BMSB is a plant-feeding insect and is naturally found on a large number of host plants. Both nymphs and adults feed by inserting their mouth parts into plant tissues, sucking out fluid or lacerated tissue. Feeding can occur on leaves, shoots, stems, and bark but BMSB exhibit a preference for fruit and seeds. The damage to fruits directly impacts a wide range of crops.

Incidents of BMSB at the Australian border are consistent with the recorded aggregation biology of BMSB. All goods where large infestations of BMSB have been found share the common features of having internal gaps or spaces in or between the goods, and of having been stored outdoors or under limited shelter prior to export to Australia.

BMSB infestations can occur at different points along the supply chain, for example after the goods have left the site of manufacture/processing and before it is loaded onto a vessel for export.

The department has conducted a pest risk analysis to assess the biosecurity risk to Australia of BMSB entering as a hitchhiker on inanimate goods from countries with established BMSB populations. This risk analysis is available on the department's website <https://www.agriculture.gov.au/biosecurity/risk-analysis/plant/brown-marmorated-stink-bug>.

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Acknowledgement of Country

We acknowledge the Traditional Custodians of Australia and their continuing connection to land and sea, waters, environment and community. We pay our respects to the Traditional Custodians of the lands we live and work on, their culture, and their Elders past and present.