

To: Environmental Protection Authority
bifenthrinconsultation@epa.govt.nz

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Submission on: Proposed restrictions for the synthetic pyrethroid bifenthrin

From: New Zealand Kiwifruit Growers Incorporated

New Zealand Kiwifruit Growers Incorporated

New Zealand Kiwifruit Growers Incorporated (NZKGI) advocates on behalf of around 2,800 kiwifruit growers by representing their commercial and political interests in industry and government decision making.

Our vision is for New Zealand kiwifruit growers to be the most successful and future-ready producers in the world, and we work to create the conditions that enable growers to achieve this.

We work collaboratively with growers, kiwifruit and wider horticulture industry organisations, and government agencies to address industry challenges, influence policy outcomes, and support the long-term success of the industry.

We are committed to upholding the industry's social licence by promoting responsible practices, ensuring compliance, and engaging with the community to address concerns proactively.

We are funded by levies under the Commodity Levies Act 1990.

A snapshot of the kiwifruit industry

- 197 million trays, equal to about 700 million kilograms of New Zealand-grown kiwifruit were sold in 2024/25 season, totalling \$3.6 billion. More than 90% of that is exported.
 - There are about 3,200 kiwifruit orchards on 15,000 hectares of land across Northland, Auckland, Waikato, Bay of Plenty, Poverty Bay, Hawke's Bay, Whanganui, and Tasman districts.
 - Māori growers produce around 10% of kiwifruit.
 - The kiwifruit industry provides about 20,000 jobs to New Zealanders and migrants in peak harvest.
 - **All kiwifruit growers and orchard contractors must be GLOBALG.A.P (Good Agricultural Practice) certified.**
 - **All Zespri kiwifruit growers are audited annually before harvest for compliance with GLOBALG.A.P. requirements.**
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Executive summary

New Zealand Kiwifruit Growers Incorporated (NZKGI) welcomes the opportunity to submit on the Environmental Protection Authority's proposed restrictions for the synthetic pyrethroid bifenthrin.

We acknowledge the environmental concerns associated with bifenthrin, particularly its potential effects on aquatic environments and non-target organisms if not used appropriately. Protecting the environment is fundamental to the long-term sustainability of the New Zealand kiwifruit industry, and growers recognise the importance of continuously improving practices that reduce environmental risk. The industry supports robust stewardship, responsible agrichemical use, and science-based regulation that protects both environmental and economic outcomes.

The kiwifruit industry has invested significantly in integrated pest management and actively encourages growers to adopt non-chemical and lower-risk approaches to pest management wherever practical. Growers are encouraged to use a range of management tools including shelter design, border and gully management, strategic mowing, and other cultural controls that reduce pest pressure and improve orchard resilience.

The industry has further reinforced these approaches through grower education, annual audit programmes, complaints process, and resources such as NZKGI's Principles of Shelter guidance.

However, bifenthrin remains an important tool in the pest management kete. It is not used as a routine treatment. Zespri spray data (refer to Zespri's submission) demonstrates that growers already use bifenthrin sparingly and strategically, with approximately 25% of growers using it in any given season, typically as a single application. Many orchards only require its use once every several years when pest pressure reaches a level that cannot be adequately managed through other means.

NZKGI supports strengthening stewardship and risk-management measures where necessary. However, removing access to wide-dispersive uses of bifenthrin would remove an important pest management tool before a suitable replacement exists. We suggest adopting controls that are aligned with those already in place for Hi-Cane. This would support growers' understanding, simplify implementation, and encourage compliance.

The kiwifruit industry's approach to pest management

The New Zealand kiwifruit industry is built on producing premium fruit that meets demanding export market requirements. Success depends not only on productivity, but also on maintaining high environmental standards, food safety standards, and consumer confidence. Growers are increasingly adopting integrated pest management approaches that combine cultural, biological, and chemical controls to minimise environmental impacts while maintaining fruit quality.

Effective pest management remains critical to the industry's success. Even relatively minor levels of fruit contamination or marking can significantly affect grower returns, export quality, and market access. Growers therefore require access to a range of management tools that can be adapted to differing orchard conditions and varying pest pressures.

Passionvine Hopper remains a significant challenge

Passionvine Hopper (*Scolypopa australis*) remains one of the most significant pests affecting New Zealand kiwifruit production.

PVH feeds on plant sap and excretes large amounts of honeydew. This honeydew supports the growth of sooty mould fungi which stains fruit, rendering it ineligible for export. Large PHV loads in orchards can cause upwards of 20% rejection rates of fruit. This reduces productivity on orchard, revenue, and increases processing costs.

Sooty mould is associated with numerous fungal species that are widespread within orchard environments, making direct control of the mould itself extremely difficult. The practical solution is preventing honeydew production through effective management of PVH populations.

PVH already costs the industry an estimated \$77 million annually through reduced fruit quality and associated losses.¹

The industry prioritises integrated pest management

The industry's preferred approach to PVH management is to reduce pest pressure through integrated pest management (IPM) rather than relying solely on chemical control. Research (McKenna, 2025) identified several tools that contribute to managing PVH populations, including:

- Shelter design and management
- Border vegetation management
- Gully management and replanting
- Strategic mowing
- Pyrethrum-based programmes.

These practices can reduce pest pressure, improve orchard resilience, support beneficial species, and minimise reliance on agrichemicals.

While these tools are valuable and are encouraged, they are not always sufficient on their own.

¹ McKenna, C. (2025, May). CP22043 Integrated pest management for passionvine hopper: Final project report. Plant & Food Research

Bifenthrin remains an important tool in the kete

Research indicates that pyrethroids such as bifenthrin remain among the most effective tools available for managing PVH populations. Dormant applications of bifenthrin with penetrant, and spring applications of bifenthrin, have demonstrated high levels of efficacy against PVH eggs.

The research found that a single targeted application is generally sufficient and that repeated applications provide limited additional benefit.

This is significant because bifenthrin is most effective when used strategically to suppress PVH populations before they become established, and before honeydew contamination occurs. Bifenthrin is generally used as a targeted intervention where other management measures do not adequately control pest pressure, rather than being relied upon as a routine growing-season spray.

There is currently no alternative chemistry available that provides comparable efficacy against PVH. Until such alternatives become available, bifenthrin remains an important component of the IPM kete.

Existing controls already significantly limit bifenthrin use

The maximum residue limit (MRL) for bifenthrin on New Zealand kiwifruit is 0.01 mg/kg, effectively requiring no detectable residue at harvest. This provides a constraint on the use of bifenthrin.

Applications made after flowering are likely to result in detectable residues. Its use is effectively restricted to the pre-flowering period, typically during late spring. Bifenthrin is therefore not used as an in-season pest control tool but as an early-season, targeted intervention.

This narrow application window further reinforces the industry's strategic use of bifenthrin. We also note that this timing broadly aligns with the application period for hydrogen cyanamide (Hi-Cane).

Industry stewardship and responsible use

The continued availability of bifenthrin must also be considered alongside the extensive stewardship systems that already operate within the New Zealand kiwifruit industry. Our industry systems include:

- All kiwifruit growers supplying Zespri are audited annually before harvest against GLOBALG.A.P. requirements. These audits assess compliance with internationally recognised standards covering environmental protection, agrichemical management, food safety, worker welfare, and record keeping.
- Complaints process for concerns raised from the community about spraying practices. All complaints are referred to Zespri to investigate and take any necessary enforcement action where non-compliance has been substantiated. Enforcement tools include formal warnings, revocation of approved contractor status, non-acceptance of fruit (i.e. loss of income to the grower), fines per tray of kiwifruit.
- The industry also promotes best-practice spray application through education, monitoring, spray planning requirements, and orchard guidance. An example of a communication to growers is attached.

- NZKGI published the Principles of Shelter² guidance in 2025. The Principles of Shelter strongly recommends all growers commit to having effective shelter for their orchards, recognising how it and where it makes sense for their orchard.

These systems are designed to minimise social, health and safety and environmental risks while ensuring growers have access to the tools needed to protect crop quality and maintain export competitiveness.

Biosecurity preparedness and long-term management of brown marmorated stink bug

We support the retention of bifenthrin for biosecurity response activities. However, if widespread use is removed, there is a risk that manufacturers may no longer find the New Zealand market commercially viable, potentially reducing product availability even where regulatory provisions allow its use for biosecurity responses. This could create challenges in accessing bifenthrin when it is urgently needed to respond to a new pest incursion.

We also note that biosecurity responses do not always result in eradication. If an exotic pest becomes established despite response efforts, growers require access to effective long-term management tools. This is particularly relevant for pests such as brown marmorated stink bug (BMSB), where ongoing control may be necessary to protect production and market access.

BMSB is recognised by Kiwifruit Vine Health (KVH) as one of the most significant biosecurity threats facing the New Zealand kiwifruit industry. It is highly polyphagous, feeding on more than 300 host plant species, and New Zealand's climate is considered suitable for its establishment. International experience demonstrates that, once established, BMSB is difficult to eradicate.

The potential consequences for the kiwifruit industry are significant. Overseas experience indicates that BMSB can cause fruit losses of 10–30%, with losses exceeding 30% in heavily affected orchards³.

There is limited New Zealand-specific economic analysis on the potential costs of a BMSB incursion should it breach New Zealand's borders and become established. The New Zealand Institute of Economic Research (2017, submitted as supporting evidence in APP203336 Samurai wasp) estimated that a BMSB incursion could reduce GDP from the horticulture industry by around \$4 billion over 15 years.

However, we consider the \$4 billion estimate now conservative. Kiwifruit and horticulture exports have exceeded earlier forecasts. Appendix 1 provides a snapshot of 2017 forecast kiwifruit and horticulture export values compared with actual export values over the same period.

Appendix 1 shows that, from 2018 to 2021, actual kiwifruit export values were approximately \$1.4 billion higher than forecasted between 2018-2021. All of horticulture (including kiwifruit) export values were approximately \$1.1 billion higher than forecasted. This indicates that the sector grew more strongly than anticipated in the period immediately following the NZIER analysis, reinforcing our view that the estimated \$4 billion GDP impact is likely conservative when assessed against current export values.

² New Zealand Kiwifruit Growers Incorporated. (2025). *Principles of Shelter [Guidance]*. Retrieved from <https://www.nzkgi.org.nz/wp-content/uploads/2025/06/Principles-of-shelter-FINAL.pdf>

³ Kiwifruit Vine Health, & Zespri. (2020). *Impacts of BMSB on kiwifruit*. Retrieved from <https://kvh.org.nz/vdb/document/105223>

The seriousness of this threat is reflected in the considerable investment already being made by industry and government in border exclusion, surveillance, readiness, and response activities. APP203336 was approved, providing another tool to mitigate the risk of BMSB and its potential impact on export values. However, the Samurai wasp is a complementary tool and does not replace the need to retain access to effective chemical controls where they are required for response or long-term management.

Bifenthrin is one of the few effective control options available for BMSB and is widely regarded as a critical management tool internationally. In the absence of equally effective alternatives, retaining access to bifenthrin is important not only for biosecurity preparedness but also for the long-term management of any established BMSB populations. Without access to this tool, growers would face substantial challenges managing the pest, increasing the risk of significant production losses and economic impacts across the sector.

Accordingly, the value of bifenthrin should be considered not only in the context of current pest management needs, but also as part of New Zealand's broader biosecurity preparedness and resilience framework.

Recommended regulatory approach

NZKGI recognises that bifenthrin presents environmental risks that must be appropriately managed. We support measures that reduce spray drift, protect waterways and sensitive habitats, strengthen stewardship, and encourage best-practice application

Until another chemistry or management tool can provide comparable efficacy against PVH, bifenthrin remains an important tool for protecting fruit quality, grower returns, export earnings, and biosecurity preparedness.

We encourage the EPA to implement strengthened controls to mitigate environmental risks while maintaining access to an important production and biosecurity tool when it is needed. We suggest adopting controls that are aligned with those already in place for Hi-Cane. This would support growers' understanding, simplify implementation, and encourage compliance.

Contact details

Chloe Trim, Senior Policy Advisor, NZKGI

E: chloe.trim@nzkgi.org.nz

Attachment: KiwiGreen Fact Sheet – Passionvine Hopper

Appendix 1: Comparison of forecast and actual kiwifruit and all of horticulture export values, 2018–2021 (\$ millions)⁴

	Kiwifruit forecast	Kiwifruit actual	Kiwifruit difference	Hort forecast	Hort actual	Hort difference
2018	1,790	1,861	71	5,400	5,392	-8
2019	1,930	2,302	372	5,800	6,134	334
2020	2,050	2,534	484	6,010	6,555	545
2021	2,220	2,705	458	6,360	6,583	223
Net difference			1,412			1,094*

*All of horticulture is less than kiwifruit because other product groups within the horticulture industry fell short of the forecasts.

⁴ Ministry for Primary Industries. *Situation and Outlook for Primary Industries (SOPI) June 2017 and June 2022*. Retrieved from <https://www.mpi.govt.nz/resources-and-forms/economic-intelligence/situation-and-outlook-for-primary-industries/sopi-reports>