

Samurai wasp EPA application

LEANNE STEWART – HORTNZ

STUART DAVIS – LEADERBRAND PRODUCE



Horticulture in New Zealand



The New Zealand horticulture industry:

- Over 5,000 commercial fruit and vegetable growers
- Valued at over \$5 billion including \$3.3 billion in exports
- Employs over 60,000 people
- Provides critical regional development opportunities

Horticulture New Zealand

- HortNZ is a industry-good organisation working for its members – horticulture growers
- Undertake activities that enable, promote and advocate for growers
- HortNZ provides pan-industry biosecurity services to growers to help prevent pests and diseases entering New Zealand



Images: supplied

BMSB threatens the success of the horticulture sector – our growth industry



Images: supplied



Social impacts for growers: uncertainty and stress



“My biggest challenge ever”

“It’s like you don’t know if you’re going to get a pay check at the end of the year”

“We’re now deciding whether to push out our orchards”

“They’re really crushing our fruit growers”

“I’ve been working with insect pests on vegetables and field crops for over 40 years and this is the absolute worst pest I’ve ever experienced – we’re in big trouble”



Image: supplied

Case study: Georgian hazelnuts

- Formal identification in 2016 but present prior to 2015
- Georgia is one of the top five hazelnut producing countries
- Government assisted chemical treatment
- Significant social impact

“Hazelnuts are our only source of income. We never sell it all at once, we leave some for a ‘rainy day’. In winter, when we need it, we sell 100-200 kilograms and we buy medicines or other things for the family. Now we have nothing. Everything that the stink bug got into has been spoiled.”

(source: <https://jam-news.net/?p=61766>)



Images: Wikimedia

Conclusions



Why Samurai wasp?

- Another tool to maximise the chance of BMSB eradication/management
- Self-sustaining and targeted control of BMSB populations
- An alternative to chemical control so growers can continue to reap the environmental, economic, social and market access benefits of low or no insecticide use.

Position

HortNZ supports the application to allow the importation and release of samurai wasp in the event of an incursion of BMSB in New Zealand

Industry case study



LeaderBrand has actively supported the development of the application from its inception

- LeaderBrand's potential exposure to BMSB damage is large:
 - Wine grapes > 200 ha, crop value >\$3m p.a
 - 'kernel' forms of corn > 300 ha, crop value >\$1m p.a. (= process sweet corn, seed maize, popcorn)
 - squash? >1000 ha, crop value >\$7m p.a.
 - other host crops? (broccoli, asparagus, silverbeet)
- LeaderBrand's specific concern is the BMSB threat to 'whole cob' uses of sweet corn

Case study: Gisborne sweet corn



- Whole cob' uses:
 - fresh market
 - pouch pack
- ~300 ha p.a., all hand-harvested
- >\$5m p.a. crop value
- ~\$3m p.a. value added
- 120 staff x 12-14 weeks = >40 FTE's
- Flow-on effects:
 - factory viability
 - post-harvest, logistics & marketing



Case study: Gisborne sweet corn



BMSB similarities to Green vegetable bug (GVB):

- Similar damage to kernels
- Similar economic damage threshold
- Insecticide control unreliable and compromises market requirements
- Both can cause total crop losses: processing < fresh market < pouch pack



Case study: Gisborne sweet corn



- Additional issue with BMSB is likely higher populations
 - wider host range
 - no current biological control agent in NZ
- Every tool will be needed to suppress populations to manageable levels

