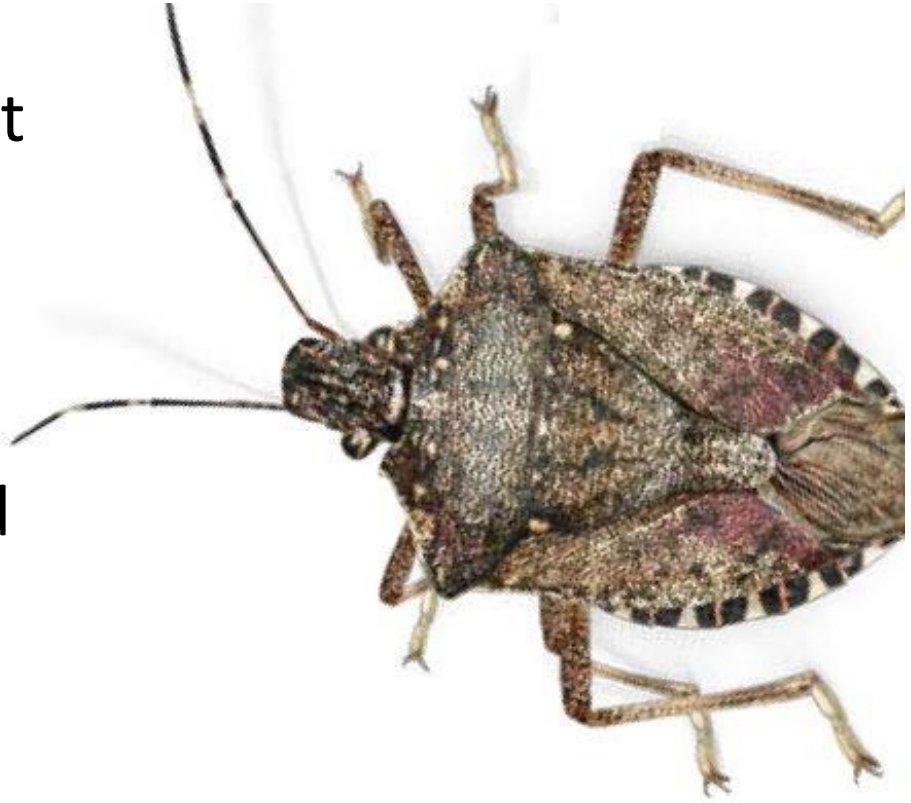
BMSB Situation Update

KiwiNet Aug 2018

Matt Dyck and Lisa Gibbison

Brown Marmorated Stink Bug 101

- Significant biosecurity threat – very high risk
- Major pest of kiwifruit.
- Pierces fruit, resulting in fruit drop or subsequent rot
- Losses up to 30% on heavily impacted blocks
- Impacts both green and gold cultivars



Chemical control unsuitable

- Requires regular and repeat applications of broad spectrum insecticides
- BMSB recover within a week
- Broad spectrum insecticides result in secondary pest outbreaks
- No effective control products available for New Zealand kiwifruit growers
- BMSB control requires application at high rates resulting in residues that not meet both local and export market MRL’s for kiwifruit

Spot the pest






BMSB

YSSB

BMSB CAMPAIGN ANALYSIS

KEEP NEW ZEALAND
STINK BUG FREE

Scale

The Brown Marmorated Stink Bug is a pest that infests homes, ruins gardens, and stinks when crushed. It could also destroy our fruit and vegetable industries. It's not in New Zealand yet, and we want to keep it that way. If you see one, don't kill it. Catch it, take a photo, and call us.

For more information: mpi.govt.nz/stinkbug

CATCH IT SNAP IT REPORT IT

EXOTIC PEST & DISEASE HOTLINE **0800 80 99 66**

Horticulture Avocado Vegetables TomatoesNZ

ONE STINK BUG COULD RUIN IT
FOR ALL OF US

The Brown Marmorated Stink Bug would damage a piece of fruit, but the damage to our horticulture industries would be much bigger. An incursion could ruin fruit, wine and vegetable production and have a major impact on everyone involved in the industry. Keep an eye out, and if you see one, don't kill it. Catch it, take a photo, and call 0800 80 99 66.

For more information: mpi.govt.nz/stinkbug

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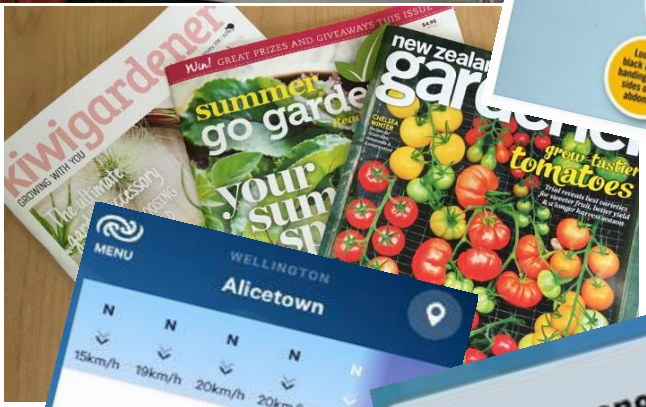
STINK BUG FREE
EXOTIC PEST & DISEASE HOTLINE 0800 80 99 66


Kiwifruit Vine Health - KVH
19 February
This little critter is doing everything possible to get here - we need to do all we can to stop it in its tracks and keep it out.
The BMSB is a pest that could easily destroy our fruit and vegetable industries, ruin gardens and infest homes.
Know what to look for, keep your eyes peeled, and if you spot anything unusual at all catch it, take a photo, and report it immediately.... See more
Look for black & white banding on the sides of the abdomen
Look for black & white banding on the antennae


KEEP NEW ZEALAND
STINK BUG FREE


CATCH IT
SNAP IT
REPORT IT

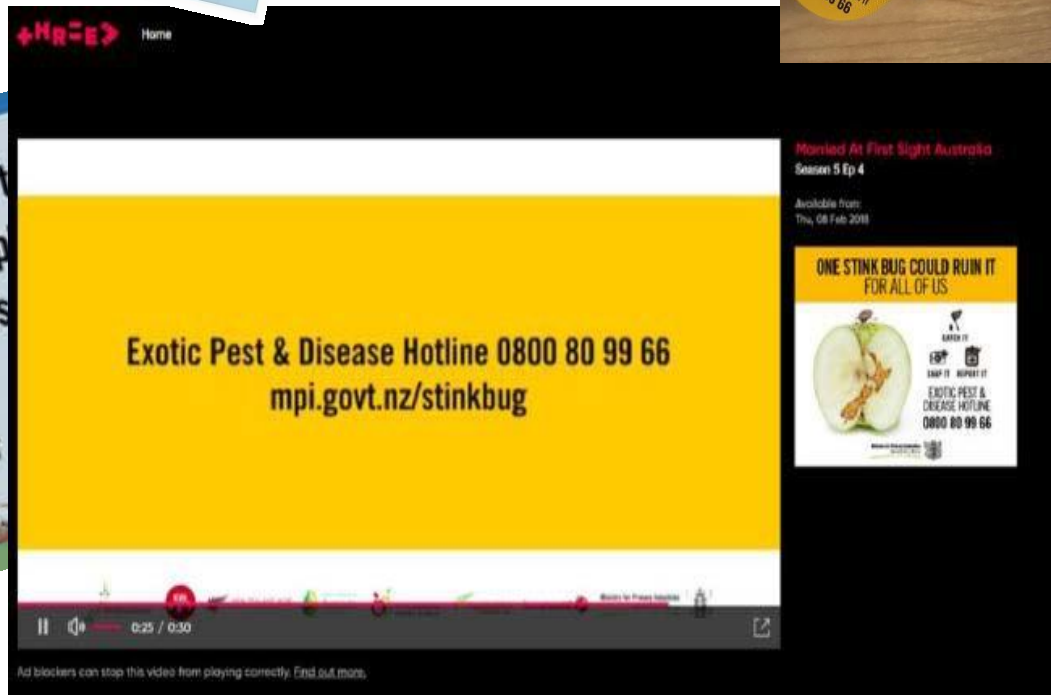

THIS STINKS
0800 80 99 66


kiwigardener
GROWING WITH YOU
WIN! GREAT PRIZES AND GIVEAWAYS THIS ISSUE
summer go garde
your sum
new zealand garde
grow tastier tomatoes

MENU
WELLINGTON
Alicetown
N
15km/h
19km/h
20km/h
20km/h
48 HOUR FORECAST

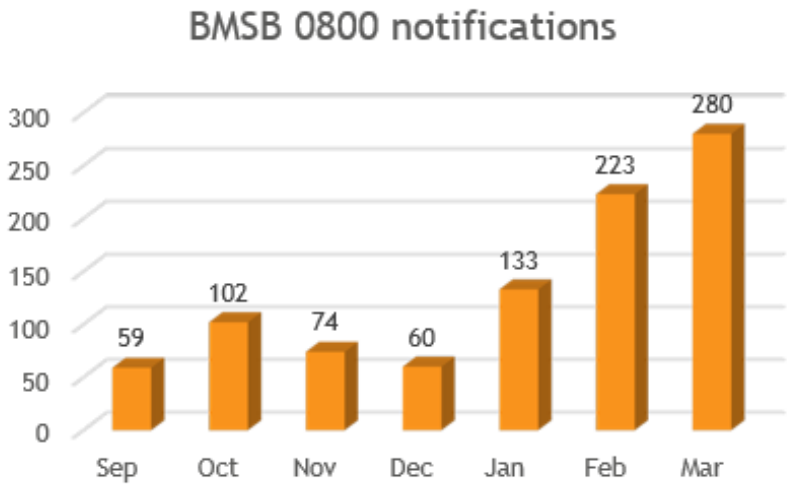

KEEP NEW ZEALAND
STINK BUG FREE


If you see one, don't
Catch it, take a p
and call us
CATCH IT
SNAP IT


Home
Exotic Pest & Disease Hotline 0800 80 99 66
mpi.govt.nz/stinkbug
0:25 / 0:30
Ad blockers can stop this video from playing correctly. Find out more.
Married At First Sight Australia
Season 5 Ep 4
Available from:
Thu, 08 Feb 2018
ONE STINK BUG COULD RUIN IT
FOR ALL OF US
CATCH IT
SNAP IT
REPORT IT
EXOTIC PEST & DISEASE HOTLINE
0800 80 99 66

What worked ……

- 931 calls to the 0800 hotline (more than double last year).
- Website ads generated the most calls to the 0800 hotline.
- Over 6.5m online impressions/views.
- Metservice app by far the most seen ad.
- 30,500+ visitors to the BMSB page on MPI website (12.5K more than last year).
- Ruud Kleinpaste posts and videos were the most effective social media tools.
- Strong news media interest in BMSB, especially around the turned away ships and Samurai Wasp.



Call source	No. of calls
Airport Advertising	21
Website advertisement	238
Magazine advertising	76
Gardening Centre posters or stickers	43
Social Media Post/Ad	42
Print/Online/TV news story	75
YouTube video	9
TVNZ or TV3 onDemand video advertisement	37
Accommodation poster/sticker (for travel industry)	5
Poster at orchard/pack house	9
Poster at transitional facility	5
Gardening mag e-newsletter	26
Industry champions video (e.g. Wine video)	2
Other	146
Not Sure- can't remember/unrecorded	197
Total	**931**

Partnerships help

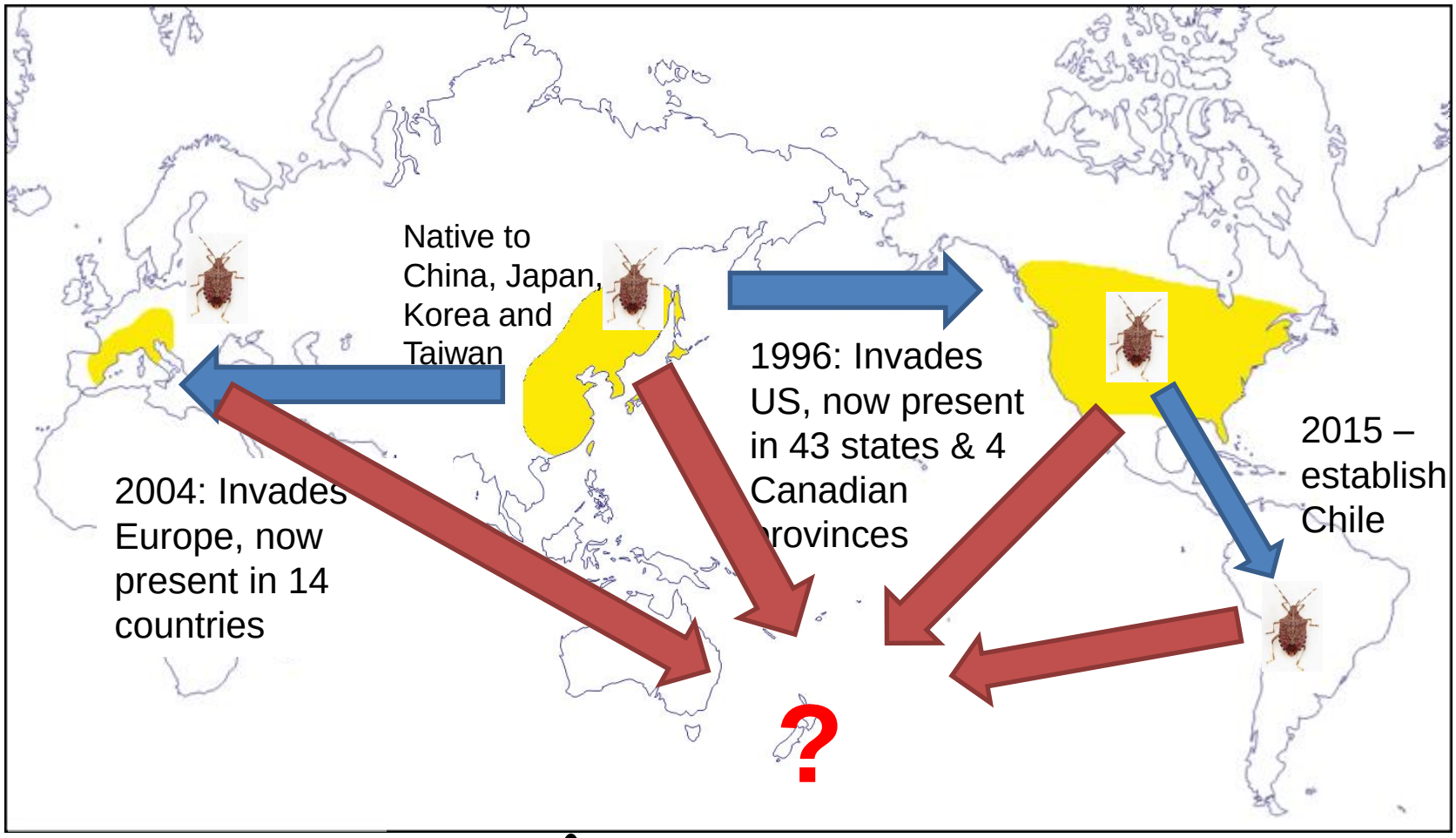
- New collateral (posters, fliers, and stickers) distributed to packhouses, transitional facilities, and vehicle importers across New Zealand.
- Collateral distributed to all members of NZ Plant Producers Incorporated, including nurseries and all Mitre 10 outlets.
- Collateral distributed through PGG Wrightson and Fruitfed suppliers.
- Partnership with Hospitality NZ and other tourism associations to communicate BMSB threat. Hospitality NZ detailed in newsletters and social media.
- Partnership with Allied Pickfords transport – BMSB messages on trucks and in warehouses/depots.
- Partnerships with BOPRC and Port of Tauranga.
- Created BMSB champion video for NZ Wine (featuring Villa Maria) for use at conferences and social media.

What we learnt ……

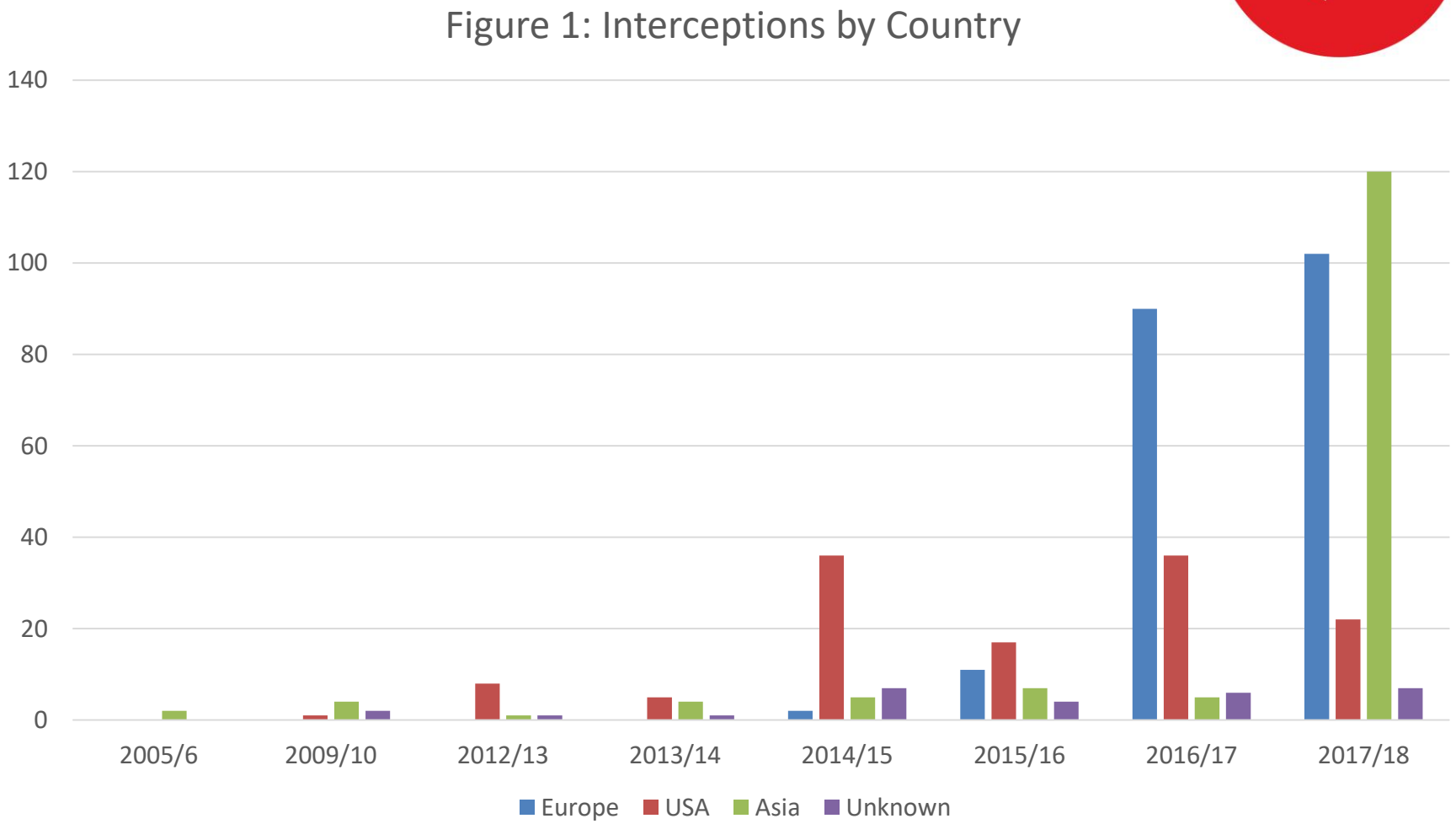
- Expanding our target audiences to the wider public and mainstream media advertising has worked – we've had many more calls.
- Online advertising leads people to websites and calling the 0800 number. Making videos is better for general awareness and we're seeing that people are watching videos right to the end when they are less than a minute long.
- Offline advertising, like posters and ads in magazines, is still working. We see people going direct to the BMSB webpage or through Google.
- For three years gardeners have been a focus. Reminders now all that is needed. Keep concentrating on the wider public.
- News stories are effective and increase calls. We should keep producing them.
- Continue to use digital media – it's working, has a wide reach, and is good value for money.
- MPI need to improve how they record call sources. The 'other' and 'not sure' categories are high and currently unexplainable.
- Consider potential new spokesperson to keep things fresh.

BMSB RISK

BMSB invading North America and Europe



Risk is increasing

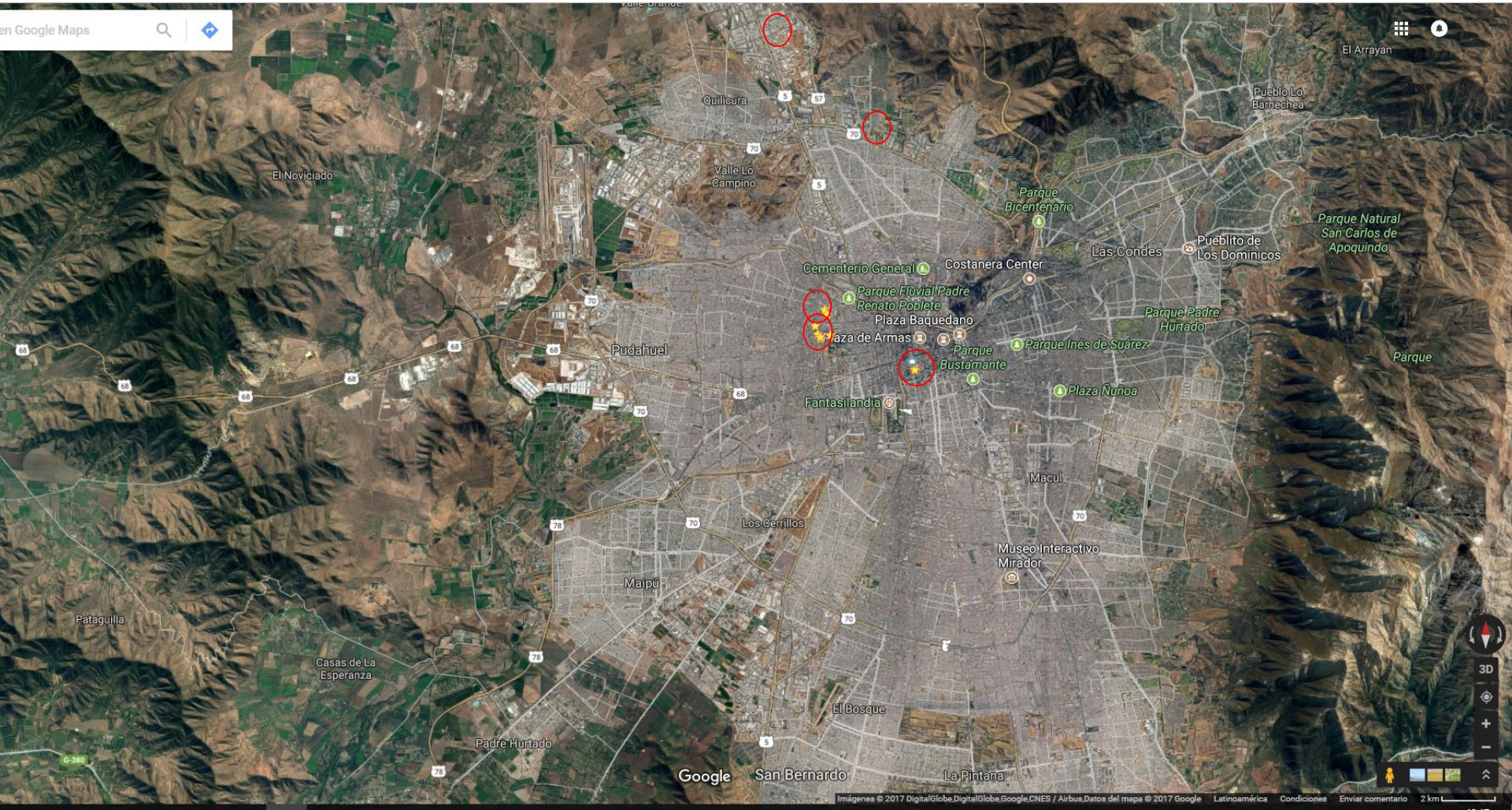


KVH
KIWIFRUITVINEHEALTH

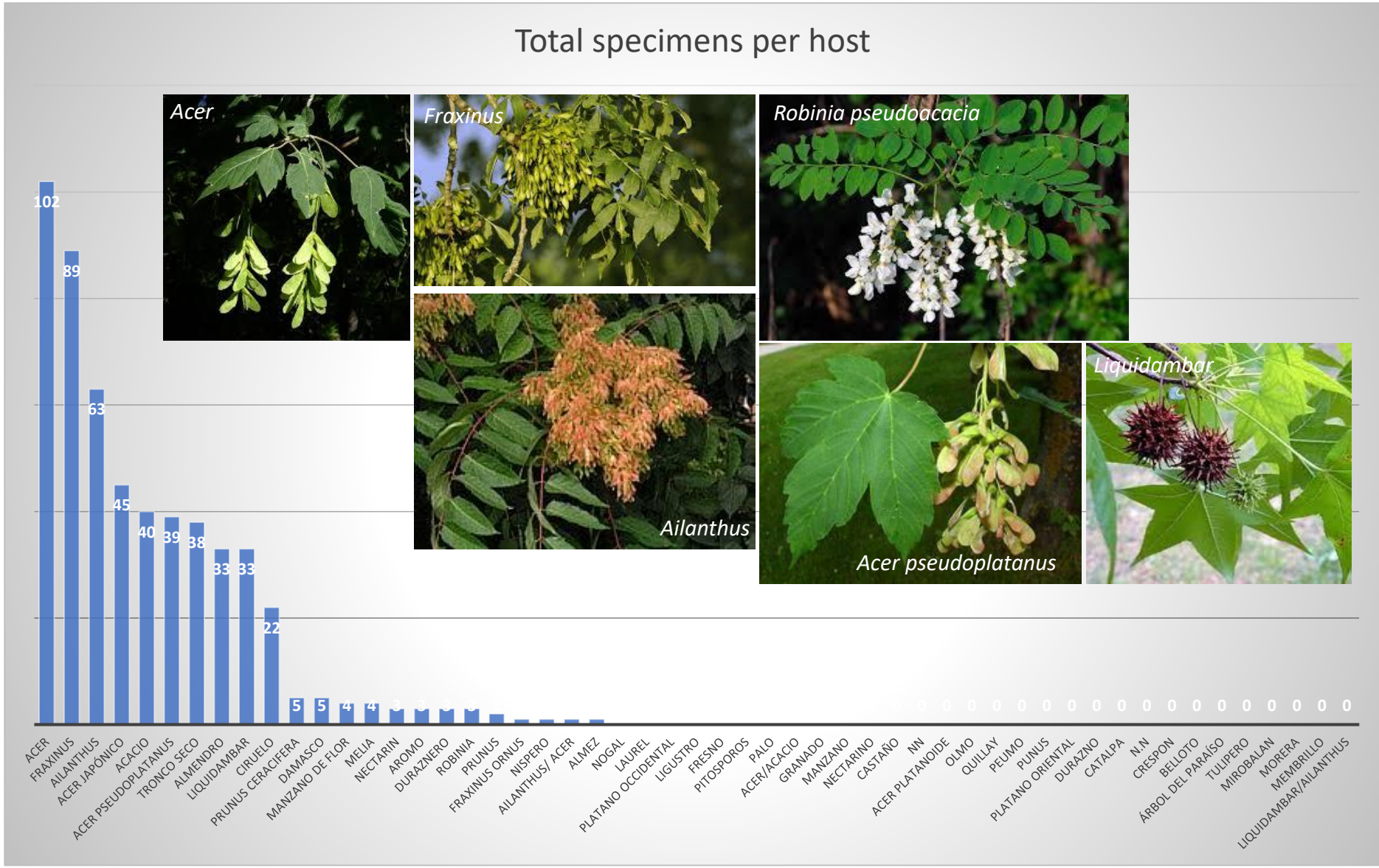
Chile update

Halyomorpha halys found in greater Santiago

Overview of greater Santiago and the nearest agricultural areas.



Detections in Santiago



Europe

- “Epidemic” in western Georgia
- Hazelnut main income source for local population
- BMSB impact has halved production

PREPARING FOR THE THREAT

Samurai Wasp update

- Decision expected mid Aug
- 69 submissions, most in support
- Kiwifruit industry well represented
- Potential impact to endemics most contentious issue
- Release planning underway

Potential response to BMSB

Initial detection confirmed BMSB and an investigation is underway.

A breeding population is found:

surveillance protocols rolled out to delimit BMSB and organism management takes place. All available tools, including Samurai wasps, are used.

Multiple breeding locations:

eradication, containment or slow the spread, depending on scenario, are the objective. All tools, including Samurai wasps, are used.

Long-term management: eradication with current tools no longer considered feasible as BMSB is too widespread.

Measures include insecticides, cultural control, and Samurai wasp

Samurai wasp potentially used for BMSB management

No other BMSB found = risk mitigated

Success = eradication

Success = eradication, slow the spread, or containment.

Success = minimizing effects of BMSB where cost effective

BMSB READINESS PLAN

PART A – Ready for a NZ Incursion

"BMSB found in NZ"

GIA & THE WIDER RESPONSE

- GIA provides for joint decision making and cost sharing between government and industries, for readiness and response.
- KVH represents kiwifruit and kiwiberry sectors as part of GIA.
- A BMSB Operational Agreement is in place – this sets out, amongst other things, how decision making and costs are shared for both readiness and response between MPI, KVH and other industries affected by BMSB.

WHAT HAPPENS IF WE HAVE A BMSB INCURSION? FIRST 72 HOUR PLAN

This documents activities immediately following confirmation of a BMSB find. Key elements include:

Key stakeholders are notified early
- MPI notify KVH and other GIA partners
- KVH notify industry stakeholders by email/phone calls

Response Governance forms
- GIA "Response Governance Board" forms (KVH is a member)
- Kiwifruit Industry Governance Forms (KVH Board for routine responses)

Deployment of resources
- KVH liaises with MPI & AQ to identify industry resources needed
- Resources deployed via KiwiNet (operations and specialist roles)

Daily updates
- MPI daily stakeholder calls & emails
- KVH updates to industry through routine channels (e.g., special bulletins, teleconference etc.)

KEY RESPONSE ELEMENTS FOR THE KIWIFRUIT INDUSTRY

Movement controls (MPI/ KVH)

MPI likely to implement a response zone of 2-3 km. Any movement controls are likely to be seasonal to reflect the biology of the pest, with plant material considered a risk good in summer, and inanimate objects in autumn and winter. Key activities for kiwifruit industry include;
- safe storage of objects such as harvest bins to prevent transporting the pest
- inspection of risk goods entering and leaving sites
- education campaigns to raise awareness.

Reducing post-harvest impacts

Key considerations for post-harvest in the event of an incursion are largely limited to the possibility of business disruption due to movement controls if there is a find adjacent to a facility. There is a possibility of loss of throughput for those facilities in a movement control zone or controlled area that must be considered.
The recommendation to industry to address the above issues and reduce impacts for post-harvest operators is to think about their risk and insurance coverage. There may also an opportunity to develop protocols to reduce our risk around movement controls and make those recommendations to MPI before an incursion.

Trade implications and agrichemicals (Zespri)

In the event of an incursion, MPI is required to notify trade partners. Any market access implications will likely be confined to mostly smaller Zespri markets where the species is not yet established. It is likely that Zespri's normal phytosanitary inspection process will be sufficient to ensure the fruit is free of this pest.
An incursion would likely result in an intensive spray programme to attempt eradication, with all vegetation, shelter belts, buildings and structures in the immediate area sprayed with either Permethrin (270g ai/Ha), or Bifenthrin (224 ai/ Ha).
Use of agrichemicals at these rates will exceed MRLs and the fruit will be unable to be harvested. Extensive testing of surrounding orchards for potential spray drift would need to occur to ensure we have confidence in our ability to meet MRL's. Sampling programme would need to be more intensive than current residue programme.

COMMUNICATIONS

Response communications led by MPI and KVH. Kiwifruit Industry Communications Group Protocol developed (KVH, Zespri, NZKGI).

Key messages for industry after confirmation of find
- BMSB has never settled in New Zealand but has spread to the United States and Europe from Asia. They are hard to kill and breed quickly. They could cause considerable damage to many horticultural crops and infest homes.
- The [people] who made the report to MPI/KVH have done exactly the right thing and we applaud them for making such a prompt notification. Early notifications are critical as they give us the best chance of successfully responding to protect New Zealand.

What you can do:
- Know what BMSB looks like and inspect your property. If you think you've seen one of the bugs catch it if possible, take a photo, and phone MPI immediately on 0800 80 99 66.
- It is vital that anyone cleaning or moving machinery and tools check for the bug.
- We all have a role to play as a biosecurity team of 4.7 million people. Biosecurity is everyone's business.
- We have put more information about what to look for and what to do if you find this pest online at [website].

ADDRESSING KNOWLEDGE GAPS

BMSB Council and National Readiness Programme
- BMSB Council established to drive collective readiness work programme under the OA (e.g., biocontrol) - KVH is a member.
- A readiness strategy and work programme are being developed.

Kiwifruit/Kiwiberry industry readiness
- Industry-specific projects are implemented to improve readiness for an incursion.
- KVH leads this, in collaboration with Zespri, NZKGI and NZKBG.
- A 'Biosecurity Steering Group' drives relevant science projects with funding from KVH and Zespri.

Significant research investment

- New Zealand
- Offshore
- Industry specific
- And many more…

Ministry for Primary Industries
Manatū Ahu Matua

New Zealand Government

B3 Science Solutions for BETTER BORDER BIOSECURITY
www.b3nz.org

Stop BMSB

KVH KIWIFRUITVINEHEALTH

Zespri Kiwifruit

NC STATE UNIVERSITY
OSU Oregon State
UNIVERSITY OF MARYLAND
WASHINGTON STATE UNIVERSITY
Northeastern IPM Center
Cornell University
RUTGERS UNIVERSITY
THE OHIO STATE UNIVERSITY
UNIVERSITY OF MINNESOTA
VirginiaTech
MICHIGAN STATE UNIVERSITY
PennState
University of Kentucky
UNIVERSITY OF GEORGIA
UCDAVIS
Berkeley
UtahStateUniversity
UCRIVERSIDE

BMSB Council projects

1. Life history in New Zealand
2. Response plans
3. BMSB behaviour in New Zealand
4. Samurai wasp application
5. Samurai wasp post application logistics
6. Public awareness

Biosecurity through Partnership

Government Industry Agreement for Biosecurity Readiness and Response

Kiwifruit industry projects

1. Sorting damaged fruit
2. Quantifying on-orchard damage – China
3. Parasitoid abundance in kiwifruit – China
4. Lifecycle in Italian kiwifruit
5. Suitability of kiwifruit as a host for all life stages of BMSB – Georgia, USA
6. Do trap crops reduce impact to kiwifruit orchards – Italy

Plus many more such as Plant and Food Research core funded projects.

Esempio di due aziende nel faentino

Az. Agr. Nonni

Esempio di due aziende nel faentino

Az. Agr. Farolfi

Thanks for all your reports!


KVH
KIWIFRUITVINEHEALTH