

Bye bye fruit fly

Successful response highlights need for vigilance

Matt Dyck - Kiwifruit Vine Health

In the February/March edition, KVH and Zespri authored an article on the risk of fruit flies and progress to develop cold disinfestation protocols to maintain trade in the event of a significant fruit fly incursion. Since that article, there have been two separate detections of a single male Oriental fruit fly in Auckland, resulting in biosecurity responses, and serving as a reminder of the risk these flies present.



What is Oriental fruit fly?

Oriental fruit fly is one of the most destructive and widespread of all the fruit fly species.

It is found throughout Central and Southeast Asia, some Pacific Islands and Sub-Saharan Africa, and has a wide host range of over 300 fruit and vegetables.

If it were to establish in New Zealand, there would be significant impacts on our horticultural industries and backyard growers.

About the responses

On Friday January 3, while many New Zealanders were at the beach enjoying their summer holiday, KVH was called into action when a male Oriental fruit fly was detected in Papatoetoe in a routine surveillance trap.

The Ministry for Primary Industries (MPI) promptly notified the Fruit Fly Council which agreed to stand up what is known as a level one response, with the objective of determining if there were additional flies present in the area; implementing a controlled area to prevent the movement of fruit (and any associated flies);

enhanced trapping to attract male flies which may be active in the area; and fruit collection and slicing as a survey for any larval stages.

These activities went on for six weeks and with no additional flies found or any evidence of a breeding population, the response was stood down in early February.

Just one week later, as staff were returning to their business-as-usual activities, another single male fruit fly was detected - this time some 30km north in the suburb of Birkdale. The same process was followed with the Fruit Fly Council again standing up

a level one response. After seven weeks of no further finds the response was stood down.

Fruit fly responses are not unexpected. Most countries in the world have at least one species of economically significant fruit fly and they can easily spread between countries as eggs or larvae concealed in a single piece of fruit on a wide range of pathways, including any of New Zealand's 3.3 million international visitors.

For this reason, the New Zealand government has operated a fruit fly surveillance programme since the 1980s, with almost 8000 traps across the



The kiwifruit industry network of KiwiNet members are well trained and prepared to take part in biosecurity responses. Staff from APAC and Punchbowl were based nearby for both Auckland responses and took part in frontline response activities.

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country. These traps are checked every fortnight and can catch a wide range of economically significant fruit fly species but target the three species of greatest concern - Queensland fruit fly; Mediterranean fruit fly; and of course, Oriental fruit fly. This surveillance programme provides us with the opportunity to detect any new arrivals as early as possible and serves to provide our trading partners with confidence that New Zealand remains free of all economically significant fruit flies, a status that provides benefits to fruit exporters.

There have been 13 previous occasions where fruit flies have been detected (since the national surveillance programme began). Most were either species from our Pacific Island neighbours or Queensland fruit fly, which is widely distributed along the eastern coast of Australia.

This year is the first time that Oriental fruit fly has been detected in New Zealand. While it is quite unusual that we have had two responses in such a short space of time, a genetic analysis of the two flies showed they were not related and were two separate arrivals.



Exotic fruit fly traps are regularly checked - even more do during a response.



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Kiwifruit industry personnel assisting the response with fruit collection and sampling.

Industry involvement

Fruit fly responses are not cheap. They require significant resources to undertake the necessary activities in the prescribed timeframes. Under the Government Industry Agreement for Biosecurity Readiness and Response (GIA) these costs are shared between industry and government, with KVH being the kiwifruit industry signatory. However, these response costs are insignificant in comparison to the value they protect. Modelling by Underwood (2023) indicated that the worst-case scenario of a fruit fly incursion in Te Puke could result in impacts for the kiwifruit industry of up to \$700million.

MPI is responsible for delivering fruit fly responses and contract service support

from New Zealand Biosecurity Services Ltd. While this model works well, there are times when additional support from the industry is appreciated.

This is where KiwiNet comes into play, a KVH network, developed to deploy kiwifruit industry resource into biosecurity responses where needed. We have used KiwiNet for several fruit fly responses in the past and hold annual workshops for biosecurity awareness and capability development.

In the 2025 fruit fly responses, the kiwifruit industry contributed over 100 people days to the response, which was mostly to support fruit collection and larval surveys. KVH would like to thank Punchbowl and APAC and all those involved for their support and the

excellent job representing our industry, alongside KVH staff members. We would also like to acknowledge that offers of support were received from other post harvest organisations but only Auckland operations were used in an effort to reduce response costs.

They say never waste a good crisis and you might say never waste the opportunity to learn from a response. In this case, KVH and other GIA partners are pleased at how lessons from past responses have been addressed into current systems and MPI has already begun the process of capturing lessons from the 2025 events, so we are better prepared, for next time the call goes out. ■

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