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Hi-tech traps on trial in fruit fly surveillance programme

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Biosecurity New Zealandâ??s National Fruit Fly Surveillance programme is trialling 60 state-of-the-art traps, with the aim to bolster the detection of an exotic fruit fly.

"We have a world-class biosecurity system, but the growth in global trade and travel increases the opportunity for fruit flies to enter the country,â?• says Biosecurity New Zealand director of diagnostic & surveillance services Veronica Herrera.

"Exotic fruit fly incursions could significantly impact New Zealandâ??s horticulture industry, so early detection is critical."

The fruit fly surveillance programme runs from September to July each year to coincide with the heightened risk of fruit flies entering New Zealand. More than 7,800 traps are currently stationed across the country.

Biosecurity New Zealand has found the Queensland fruit fly half a dozen times in surveillance traps and has successfully eradicated it each time.

This season, 60 additional RapidAIM traps have been deployed across 11 Auckland suburbs to target the Queensland fruit fly (QFF). The hi-tech traps are on trial by the Australian company RapidAIM. Sensors in the traps evaluate the behaviour of insects entering the unit. An algorithm then predicts whether it is a QFF. If detected, an alert identifies the trap location, enabling a field officer to collect the sample within 48 hours.

"The chief benefit of the RapidAIM system is the possibility of an immediate notification of a suspect QFF,â? Herrera says.

"Biosecurity New Zealand began working with RapidAIM in 2020 to see if the traps were compatible with the New Zealand environment and cellular network. The wider introduction of the traps will be dependent on the success of trials and is some years off. In the meantime, work is ongoing to develop sensors that could detect all economically important exotic fruit flies. Â

The brown marmorated stink bug (BMSB) surveillance programme also got underway this month. Like exotic fruit flies, BMSB also poses a threat to the New Zealand horticulture industry. Â

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