



No. 25

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Queensland Fruit Fly (*Bactrocera tryoni*) found in Rarotonga, Cook Islands

Queensland fruit fly [*Bactrocera tryoni* (Froggatt)] was first detected in Punanganui, Rarotonga, on the 21st November 2001. Punanganui trap site is located approximately 500m from the wharf. The flies were identified initially by the entomologist in Cook Islands as Queensland fruit flies. This identification was verified by Professor Richard Drew of Griffith University, Australia, on 4 December 2001.

As a result of the first find the Ministry of Agriculture set out 10 fruit fly traps in the area around the site of the first find covering a radius of 200m. This was done on the 22nd of November. There was a further detection on 26th November, of another male fly in a trap 100m away from the first find. An alert was put in place and the emergency response plan for fruit flies was activated. The Ministry of Agriculture immediately appointed an emergency committee and on the same day, set out 25 additional Cue-lure traps in a radius of 1km (Zone A). These traps were cleared after 24 hours and this resulted in a further detection of a male fly in the Zone A area. As a result of this, the Ministry of Agriculture extended the quarantine area to a further 2.5 km radius (Zone B) where 38 Cue-lure traps were set.

In addition to the increase in the number of traps, protein bait traps were set out in Zones A and B and fallen fruit was collected from the area and buried. The rainy weather did not allow for protein bait spraying to take place immediately but this was done on the 29th November within Zone A. A heap of rubbish (including deteriorating fruits and fruit peelings) from ships and other vessels, which was located at the wharf area, was the suspect source in which the flies were breeding. The Ministry of Agriculture staff buried this rubbish by covering with up to 30 cm of coastal sand on 30 November 2001. An effective quarantine awareness program has since started as a result of the new introduction. To date, no further Queensland fruit flies have been found in the area. The Ministry of Agriculture in Cook Islands has provided a weekly up-date of the emergency response activities to SPC Fruit Fly Management.

Queensland fruit fly is the most destructive fruit fly species in Australia and is known to occur in New Caledonia, French Polynesia and Pitcairn Islands. This species attacks over 113 species of edible and wild fruits and fleshy vegetables. In French Polynesia, Queensland fruit fly infests avocado, eggplant, carambola, mango, oranges, mandarin, Malay apple, papaya, guava, tomato, cashew, pomelo, soursop, rose apple, star apple, Pacific lychee, passion fruit, tropical almond and other fruit. It is known to be now widespread in all the islands of French Polynesia except for Marquesas and Rapa Islands.

The effectiveness of the quarantine surveillance system in the Cook Islands was demonstrated in this event, which enabled them to respond immediately to the new introduction. The case also demonstrates that it is imperative that Quarantine authorities see that all food rubbish from airlines and ships is incinerated. The suspect source of entry was the pile of rubbish that was off loaded from ships: this rubbish should have been incinerated.



Adult Queensland fruit fly in dorsal (left) and lateral views (right). Photos: Steve Wilson

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Communications of pest and disease incidents of interest to the Pacific region should be sent to: **Plant Protection Service**, Secretariat of the Pacific Community, Private Mail Bag, Suva, Fiji Islands. Tel:(+679) 370733; Fax: (+679)386326; E-mail:pps@spc.int