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OUTBREAK OF PAPAYA FRUITFLY IN NORTH QUEENSLAND, AUSTRALIA

The papaya fruit fly, *Batrocera papayas*, has been recorded in the Cairns urban and hinterland areas of Queensland. This represents a significant increase to its geographical range. Prior to this recording, it was restricted to Peninsular and Eastern Malaysia, Indonesia, Thailand, and Papua New Guinea and Queensland during two years and on each occasion the Queensland Department of Primary Industries (QDPI) carried out eradication programmes using a combination of male annihilation and protein bait sprays.

The current outbreak was noticed at the beginning of October 1995 by a farmer who took infested samples of papaya to QDPI. Emerging fruit flies were subsequently identified to be *B. papayae*.

The QDPI has carried out extensive trapping surveys from Cookstown (north of Cairns) to Mareeba (west of Cairns) and to Babinda (south of Cairns). Less intensive trapping is also carried out in other centres along the Queensland coastline and in other states. The main population of papaya fruit flies is centred in Cairns, Mossman (65 km north of Cairns), Kuranda (about 20 km west of Cairns) and Mareeba (40 km west of Cairns). The infested area covers an area of 4,500 square kilometres, some of which is dense tropical rain forest.

B. papayas attacks a very wide range of fruits and vegetables, including pawpaw, carambola (starfruit), guava, avocado, banana, plantain, mango, most citrus types, star apple, soursop, custard apple, breadfruit, tomato, capsicum, chilli, eggplant, cucumber, gourds, *Eugenia spp*, *Syzygium spp*, betel nut, Pacific almond (*Terminalia catappa*), *Vigna spp*, *Ficus spp*, and others. It infests some 210 species of fruits and vegetables in 112 genera and 47 plant families, making it probably one of the most damaging species in the world. Alarmingly, it has demonstrated that it is able to infest fruits such as citrus and pawpaw at the unripe stage.

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Papaya fruit fly has moved from P.NG to Cairns in about two years, thus demonstrating that it is a very virulent and aggressive fruitfly species. Its distribution in Malaysia shows that it can withstand cool conditions at 2000 metres altitude. It therefore may occupy a wide geographic and climatic range in Australia and other Pacific islands unless quarantine is vigilant.

It is attracted to methyl eugenol lure, as are other flies that belong to the dorsalis or oriental fruitfly complex. This male attractant should be used in quarantine surveillance trapping programmes.

The following measures are recommended for Pacific Island countries importing fresh fruits from Australia (particularly Queensland) and from Papua New Guinea:

- Conditions for the import of fresh fruits and vegetables from areas in Australia and PNG that are not declared free from *B. papayae* need to be reviewed urgently.
- Quarantine surveillance, consisting of trapping and targeted fruit and vegetable surveys, be implemented or strengthened immediately, particularly in areas adjacent to PNG.

Source: **Allan Allwood**
Chief Technical Advisor
SPC/AusAID/FAO/UNDP Regional Fruit Fly Project
Fax: (679) 320 088
Tel: (679) 400 'J44

