

Queensland fruit fly monitoring and eradication response to the Bayswater outbreak in the Western Australian Pest Free Area

Maintenance of the Pest Free Area:

- Western Australia (WA) maintains a permanent Queensland fruit fly (*Bactrocera tyroni*, Qfly) monitoring grid of 1,931 sites throughout the Perth metropolitan area. Cuelure is used as the male attractant in the detection traps.
- Traps are hung within the canopy of the tree, 1/2 to 2/3 the distance from the trunk to the outer edge of the foliage and at least 1.5 metres above the ground. The lure and insecticide are replenished every three months.
- During the warmer months (November to May), all traps are inspected on a weekly basis to confirm that Qfly is not present. During the rest of the year the traps are inspected every fortnight.
- Any suspect fruit flies caught in the detection traps are reported immediately via the Department of Primary Industry and Regional Development (DPIRD) MyPestGuide Reporter app.
- If two or more adult male (or non-gravid female) Qfly are detected within a 1 km radius in a 14-day period, 16 additional supplementary cuelure traps are deployed around the detection site and inspected twice a week for a 9-week period.
- The detection of five or more adult male (or non-gravid female) Qfly trapped within a 1 km radius in a 14-day period triggers a response under Australia's National Fruit Fly Management Protocols (ANFFMP) with area freedom suspended for a 15 km radius of the outbreak epicentre (Controlled Movement Zone, CMZ).

Bayswater outbreak:

- On 16 February 2023 a single male adult Qfly was detected in a trap in Bayswater, in the Perth metropolitan area, with a second male detected on 23 February 2023.
- On 27 February 2023 a further four males were detected in three traps located within the same area.
- On 27 February 2023, the Bayswater outbreak of Qfly was declared and eradication activities commenced in accordance with the ANFFMP.
- Thirty-seven adult male Qfly and 2 larvae were detected.
- On 29 September 2023, all corrective actions including chemical control programs, mass trapping and fruit collection in accordance with the ANFFMP were completed.
- Three detections of single male flies in the CMZ extended the trade suspension period.
- Reinstatement of the pest free area (PFA) for Qfly in WA was achieved on 12 March 2024.

Eradication activities:

- Western Australia's *Biosecurity and Agriculture Management Act 2007* provides wide ranging regulatory powers to conduct surveillance and manage an incursion. This includes restriction on the movement of risk items and placing properties under quarantine restrictions to prevent further spread.
- Under regulation 60 of the Biosecurity and Agriculture Management Regulations 2013, a 15 km radius from the epicentre of the Qfly detection was declared to constitute a quarantine area and subject to hygiene activities and host product movement restrictions.
- The 15 km Qfly CMZ comprised the Delimitation Zone (DZ), Corrective Action Zone (CAZ) and Export Assurance Zone (EAZ):
- The quarantine area included 5,537 premises across almost 880 hectares.

- Corrective actions were implemented that included supplementary trapping for Qfly, bait spray program, male annihilation technique, larval searches, stripping and disposal of fruit from infested and adjacent premises, restrictions on the movement of host fruit and communication activities.
- Trade under PFA conditions was suspended for the CMZ with movement restrictions applied to host produce from the CMZ to the PFA.
- Movement of host produce sourced from the CAZ was prohibited unless treated.
- The EAZ encompassed parts of the Swan Valley horticultural production area. This was the first time that a commercial production area in WA had been impacted by an outbreak of Qfly.
- Movement of host produce grown in the EAZ to the PFA was prohibited unless treated and securely packaged in accordance with the ANFFMP. More than 10,200 boxes of table grapes (approximately 95 tons) were post-harvest treated prior to their movement within WA.
- Biosecurity Inspectors conducted visits to markets and roadside stalls to ensure compliance with quarantine requirements.

Treatment:

- Properties within the DZ (635) were visited, inspected, and treated twice per week. Treatments were conducted through the application of Naturalure to hosts or baitable alternatives.
- Properties within the CAZ (5537) were visited, inspected and treated weekly. Baiting using Naturalure commenced on 7 March 2023 and concluded on 29 September 2023.
- Operational staff visited properties within the CAZ more than 87,000 times during the response.
- Hygiene activities included the removal of host fruit from all properties in the vicinity of an infested premises (two IPs were detected through the response).
- Trees on verges and reserves within the CAZ were baited weekly with Naturalure.
- While rain impacted operations throughout the response, additional baiting was undertaken on weekends if required to ensure that treatments were being sustained throughout the CAZ.
- Additional treatments included the placement of 7024 male annihilation technique lures across the CAZ. These lures were removed in mid-August 2023 to ensure that they would not impact surveillance trapping once field operations had concluded.

Larval surveys:

- Properties within the CAZ were visited and inspected weekly at a minimum for fruit fly larvae in plant and plant products and for the monitoring of compliance with the Quarantine Area Notice.
- Larval samples were submitted to DPIRD Diagnostic and Laboratory Services for analysis by loop-mediated isothermal amplification (LAMP) testing followed by PCR testing.

Pest freedom reinstatement:

- Under the ANFFMP, reinstatement of area freedom is achieved after one generation plus 28 days, or 12 weeks after the last wild fruit fly or larvae is detected (whichever is longer) in the CMZ.
- The PFA reinstatement date for WA was extended three times in response to the detection of a single male fly in the CMZ on 12 September 2023, 1 December 2023 and 19 December 2023.
- The movement of host fruit grown in the CMZ to the pest free area was restricted in accordance with the ANFFMP.

- On 12 March 2024, all requirements under the ANFFMP for the reinstatement of fruit fly PFA were met.

Community and industry engagement:

- A significant state-wide public awareness campaign was initiated by DPIRD following the outbreak declaration.
- Community and industry engagement was targeted locally and at a broader level, with awareness raised via ongoing advertisements (print, radio, venues, billboards and digital), social media, industry updates, media articles, industry newsletters, shopfront posters and updates to local schools.
- On ground community engagement included drop in stalls at popular parks and reserves in the CAZ.
- Regular meetings with impacted industry members were conducted throughout the response.
- DPIRD maintained a website containing up-to-date information on the fruit fly outbreak, including movement restrictions, media releases and community awareness campaigns during the response.

Staffing:

- Staffing levels peaked at approximately 240 staff per day.