



RapidFLY Product Specifications

The RapidFLY real-time fruit fly monitoring service:

- Is designed and tested to detect and communicate insect pest pressure;
- Commercially available for the male fruit fly in the *Bactrocera* genus, and mostly used for *Bactrocera tryoni*, using cuelure attractants;
- Is based on rigorous laboratory and field testing over several years in partnership with the CSIRO (Commonwealth Scientific and Industrial Research Organisation), the Department of Agriculture, Water and the Environment and Horticulture Innovation;
- Is currently being tested for other applications including female fruit flies, Mediterranean fruit fly and other exotic fruit flies;
- When used as part of an area-wide monitoring and surveillance system has been shown* to have very high cost-savings when compared to traditional surveillance systems that rely on manually checking insect traps;
- Is designed to work as a grid of traps. The recommended deployment is along orchard borders at approximately 150m spacing, with some traps in the middle of large blocks. When used in this way the system provides highly useful pest information about hotspots, real-time pest detection and tracking and validation if pest management is working.

The RapidFLY Trap:

- Has been tested for monitoring male QLD fruit fly in production systems in comparison to industry standard traps (Lynfield Traps), and found to be equivalent;**
- Is highly accurate for estimating insect pressure and validating if pest management is working. Our analysis shows*** that RapidFLY rarely misses a fly, less than 0.01%. This is termed a false negative; a circumstance where the app shows zero detection but a fly is present. The RapidAIM false alarm rate is also very low, ~ 2%. This is termed false positive; a circumstance where the app shows more flies than are present in the trap, and occurs when fruit fly pressure is high. RapidAIM Pty Ltd advises that instances where false positives may occur are in situations where fly populations are well above levels of concern and focus should remain firmly on management;
- Has been evaluated for performance and is recommended as a fruit fly monitoring device using the supplied Nufarm Amulet lure (details below). Use of other lure formulations has not been tested and cannot be recommended for use.

Product name	RapidFLY Trap		
Height	16.5cm	Materials	Trap enclosure is plastic, comprised of UV stabilized acrylic styrene acrylonitrile (ASA) and UV stabilized Polypropylene (PP)
Width	14.5cm	Accessories	4G LTE Antenna (SMA Male) 50cm hanging rope and steel hook
Depth	16.5cm	Input power	Dual cell Li-Ion 3.6V rechargeable battery pack 12-18 months estimated in-field battery life in normal conditions****
Weight	550g	Communications	NB-IoT (Telstra mobile network)
Colour	Clear plastic and opaque yellow plastic	Attractant	Nufarm Amulet Cuelure Fruit Fly Stations: <ul style="list-style-type: none"> - Fipronil, concentration: 3.4 g/kg - 4-(p-Acetoxyphenyl)-2-butanone, concentration: 94 g/kg

** RapidAIM reduces the time spent checking traps by 90%, saving Government 35% on pest surveillance costs and 60% on outbreak response costs. This is based on calculations made for costs spent on sampling visits, lure changes and deployments in State Government biosecurity programs. Data gathered during Hort Innovation Project ST16009 2019*

***Equivalency data was collected by State Government collaborators as part of the Hort Innovation Project ST16009, draft manuscript peer review in preparation.*

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*****Battery life estimates based on trap being located in an area with good Telstra mobile network coverage and low-medium fruit fly prevalence.*