

# Controlling banana weevil borer populations after a cyclone or bad weather event

Excessive trash build up from cyclone damaged plants provides an ideal environment for the build-up of banana weevil borer populations. High banana weevil borer numbers can hinder replanting or establishment of new plants.

## Damage symptoms

The larvae tunnel within the corm that lies just above and below the soil surface. During instances of high weevil populations, tunnels are found through most of the corm tissue and a short distance up the pseudostem. This tunnelling weakens the plant and renders it susceptible to 'fallout' in windy weather. Heavy infestations interfere with the movement of nutrients within the plant, and plants appear weak and unhealthy.

Typical symptoms caused by banana weevil borers include; slow or poor plant growth, small choked bunches, yellowing of the leaves and extensive plant fall outs and yield loss (from plant fallout and small fruit and bunch development).



*Banana weevil borer adult (left) and larva (right)*

## Life-cycle

Adult weevils are about 10-12mm long, hard shelled and have the pronounced snout typical of weevils. The newly emerged weevil is reddish brown but soon becomes uniformly dull black.

The weevils are nocturnal and hide during the day in or around corms or in moist trash near the plant. Unusually sluggish in their movements, they feign death when disturbed and seldom fly. Natural spread is very slow. Dispersal is primarily by the introduction of infested suckers and bits for planting but populations are known to build up where excessive trash is present and poor orchard hygiene especially after a cyclone.

Eggs are laid singly in a shallow pit at the base of the pseudostem. They are oval, about 2mm long and pearly white. The eggs are very hard to find because the oviposition site becomes covered by congealed sap.

The larvae are creamy-white, up to 10mm in length with a distinctly curved body. They are swollen in the middle and have a hard brown head. Pupae are about the same size as the larvae. Inside the white pupal skin the structure of the future adult with its snout, wing buds, legs and antennae is visible.

An average life cycle is completed in 12 weeks in north Queensland. The eggs hatch in eight days. The larvae immediately burrow into the corm and undergo four moults over 3-14 weeks before pupating close to the surface of the corm. The short (8-day) pupal period is followed by the emergence of the reddish-brown adult. The pre-oviposition period varies and may extend to 40 days. Adults live between 6 months and 2 years.



*Plant fallout caused by banana weevil borer*



*Banana weevil borer corm damage*

## **Preventing banana weevil borer build up after the cyclone**

It is essential to use weevil-free planting material. Ideally, planting material should be obtained from plant nurseries, tissue cultured plantlets or alternatively from weevil free blocks.

Replant into residue free land. Ensure trash, harvested pseudostems and bunches breakdown quickly to reduce potential weevil feeding and breeding sites. Banana residues can be cut up or mechanically

mulched to increase the rate of breakdown.

Plant protection is assisted by applying a registered insecticide to the base of the new mother plant and suckers. Stem injection of a systemic insecticide can give up to 4 months protection from banana weevil borer.

Avoid the use of systemic pesticides in dry conditions usually late June to November, to reduce secondary pest outbreaks of spider mite. During this phase trapping can be used to identify orchard hot spots in the farm and ground sprays can be used with a registered insecticide.

The Australian Pesticides and Veterinary Medicines Authority's (APVMA) website <http://www.apvma.gov.au/> contains a database called PUBCRIS which can be used to search for current registered insecticides by crop and pest.

It can be access at: <http://services.apvma.gov.au/PubcrisWebClient/welcome.do>.

Always follow the manufacturers label instructions when using pesticides.

## More information

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