

Banana weevil borer

Cosmopolites sordidus

(General information)

Description and life cycle

The eggs of the banana weevil borer can be found in a pit that has been chewed into the side of the pseudostem. The site of egg laying is nearly impossible to find due to banana sap congealing and covering the hole. The larvae continuously feed within the corm producing distinctive tunnels until they are almost 2cm long when they move towards the outer edge to pupate.

The lifecycle of banana weevil borers (Figure 1) is temperature dependent and is shorter in warmer conditions. The total time from egg hatching to adult emergence can be as short as 12 weeks in ideal conditions in northern Queensland. Newly emerged adults are reddish brown but quickly assume their characteristic shiny black appearance as their exoskeleton hardens (Figure 2).

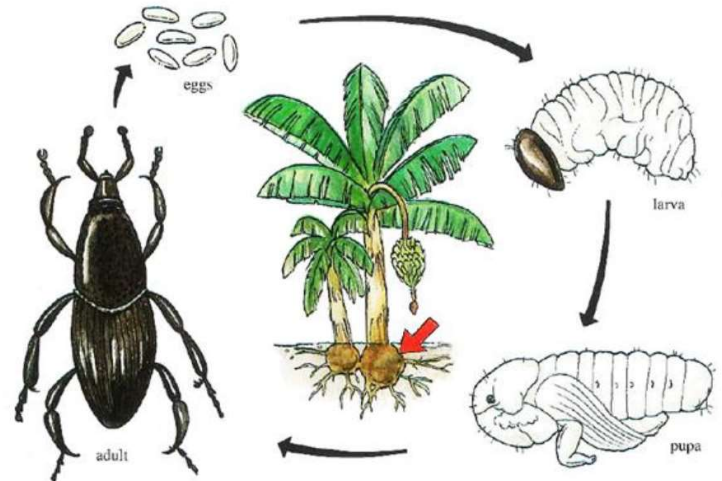


Figure 1 Life cycle of banana weevil borer (arrow indicates part of plant affected)

Banana weevil borers have functional wings, however, they rarely, if ever, fly. Instead, they can travel by walking up to 6-7 m between plants at night, resulting in a very slow spread. Movement is reduced during dry weather, as adults remain in the corm to avoid desiccation. Dispersal of banana weevil borers over larger distances is primarily by the introduction of infested suckers and bits at planting.

Occurrence & seasonality

Banana weevil borer is found in all major banana growing areas throughout the world. Bananas and other species of the genus *Musa* are the only known hosts.

It has been observed that there are two distinct peaks in the emergence and activity of adults- the first in spring during September and October, and the second in autumn, during March and April. These peaks are particularly evident in subtropical regions where activity almost ceases during winter. In the Far North Queensland tropics, where winter temperatures are not as low, activity continues throughout the year, although at a reduced rate in winter. In Far North Queensland, dry conditions greatly reduce adult activity, as adults remain in the corm to avoid desiccation, whereas rainfall may be a major factor in increasing adult activity.



Figure 2 Adult banana weevil borer with scale.

Damage

Most of the damage is done by the tunnelling of the larvae within the corm (Figure 3 & 4). In heavy infestations, tunnelling will extend for a short distance up the pseudostem; the presence of tunnels can be seen if the pseudostem is cut close to the soil surface.



Figure 3 Dark tunnelling pattern from banana weevil borer shown through corm.



Figure 4 Dark tunnelling pattern from banana weevil borer shown through corm.

Healthy, fast-growing plants can withstand considerable infestation without showing obvious signs of reduced vigour. Typical symptoms of a severe infestation are reduced growth, choking, yellow leaves and weak or dying suckers.

Plants under attack are also prone to falling out (particularly in windy weather) but the root system of fallouts must be inspected carefully to ascertain the cause. Fallouts can occur from both banana weevil and burrowing nematode damage. When banana weevil borer is the cause there is an obvious breakage with the lower part of the rhizome and roots are often retained in the ground (snapped off, Figure 5). Whereas if burrowing nematode is the cause the entire corm is exposed along with stubby roots ('roll-out').



Figure 5 Banana weevil borer damage can cause plants to snap at the base.

For more information contact the Better Bananas team via email betterbananas@daf.qld.gov.au

This information is adapted from: Pinese, B., Piper, R 1994, *Bananas insect and mite management*, Department of Primary Industries Queensland and Treverrow, N., Pearley D., and Ireland, G 1992. Banana weevil borer : a pest management handbook for banana growers. : NSW Agriculture, North Coast Region; NSW Banana Industry Committee; Horticultural Research & Development Corporation.

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