

Black beetles

African black beetle

Heteronychus arator

Black beetle

Metanastes vulgivagus

Distribution

African black beetle occurs from Maryborough south. It is an introduced species, first recorded in New South Wales in 1920, Rocky Point in the 1950's, Moreton in 1979 and Maryborough in 1990. It could probably breed further north. Strict quarantine should be observed against transfer of live specimens or contaminated material.

Black beetle is a native insect and occurs in all cane areas, but is more common in areas with wetter soils. Both species are found with paspalum and similar grasses.

Damage

Beetles of both species damage plant and ratoon cane. They chew ragged deep holes into young shoots, causing dead hearts (Photo 1). A shoot attacked near the base cannot recover. Shoots attacked above growing points may side shoot. For this reason, it is not unusual in northern Queensland for a satisfactory stand of cane to develop after a heavy attack. In southern Queensland, attack by either species is much more common and heavy in spring than in autumn. Damage by black beetle in northern Queensland occurs as much in autumn as in spring. In southern Queensland, damage from African black beetle is most common when cane is newly planted into pasture country.

Description

Grubs of both species grow to 25-30 mm long. The soft part of the body is blue to grey-white, and the head rough surfaced and dark red-brown. They do not have a characteristic raster pattern, unlike canegrubs, but could be confused with larvae of redheaded whitegrub, a harmless feeder on organic matter.

Beetles of the two species are very similar in appearance. They are shining black above and red-black underneath. The upper surface of the thorax is smooth, and the wing covers have several parallel fine ribs along their length. The black beetle is usually 15 mm long, but can vary from 12-17 mm long. African black beetle is slightly smaller, 9-15 mm long.



Photo 1: Adult black beetle attacking a shoot.



Photo 2: Head of black beetle (native species).

The head of the black beetle bears two tubercles and has the anterior rim at the front upturned to two points (Photo 2), unlike the African species. African black beetle has two rows of stridulatory grooves on the back of the last segment beneath the rear of the wing covers; these are not present in the native black beetle.

Biology

Both species have a one year life cycle. The beetles mostly emerge from midsummer until the end of autumn and then hibernate during winter. They become very active in spring, when they damage cane. Egg laying begins early in September and continues until February. Eggs of both species are laid singly in soil. They hatch in about 2-4 weeks depending on temperature. Both species go through three grub growth stages (instars) which take about 3 months in total. The pupal stage then lasts 2 weeks. Over the spring-autumn period there is usually a range of growth stages present at the one time. Grubs feed mainly on organic matter in the soil but in the final instar may feed on roots of grass.

Management

If breaking up grassy country for cane, be aware that these pests could be present. Control includes repeated ploughing and several months of fallow. Growing a legume is a good idea as legumes are not favoured hosts. Autumn planting is preferred to spring planting, because beetles are less active in autumn and the autumn-planted cane will have grown too large to be damaged by beetles when they become active in spring.

No insecticides are registered for control of black beetles in Queensland. Chlorpyrifos (500 EC) is registered at 1.5 L/ha for control of both species in sugarcane in NSW.



Photo 3: Black beetle damage to young shoot.