Sugar Research Australia

Information Sheet

IS13051

Wireworms

Sugarcane wireworm

Agrypnus variabilis

Wireworm

Heteroderes spp.

Distribution

Several species of wireworm damage sugarcane. The sugarcane wireworm is found in wetter, poorly drained soils in central districts and at Ingham. It is sometimes a pest in poorly drained parts of fields north to Mossman. *Heteroderes* spp. wireworms are the main species in southern districts. Some 'round' wireworm species also damage cane.

Description

The sugarcane and *Heteroderes* wireworms are true wireworms. They are larvae of click beetles. The beetle of the sugarcane wireworm is up to 15 mm long and grey-brown. The larva grows to 20 mm long and has a firm, slightly flattened, shiny creamy-white segmented body with a hard yellow head and hard yellow forked rear end. *Heteroderes* spp. wireworms are larger than the sugarcane wireworm and more orange in colour (Photo 1). 'Round' wireworms have cylindrical bodies and have the rear end tapered to a point.

False wireworms are sometimes found in sugarcane fields. They look like true wireworms, but belong to a different family of beetles. They are not a major pest of sugarcane.

Damage

Wireworms bore into the eyes of germinating billets or ratooning stubble, or into the growing point of young shoots. Entry is by a small (< 2.5 mm) circular hole (Photo 2). Symptoms of damage are poor or patchy germination and dead spindle leaves ('dead hearts'). Poor stooling varieties are probably more prone to wireworm damage.

Biology

Beetles of sugarcane wireworm emerge during November - December and lay eggs in the soil. Eggs hatch in about 8 days. Larvae need wet soil during the first 3 weeks after hatching, but can handle dry weather afterwards. Larvae feed and grow over a 10 month period. In central districts sugarcane wireworm are pests mainly of autumn plant-cane. Damage is less likely in spring plant-cane when larvae are almost fully fed and about to pupate. The pupal stage lasts about 2 weeks.

Wireworms will eat other soil insects, including soldier fly larvae and canegrub eggs and young grubs.

Management

Bifenthrin, fipronil and chlorpyrifos are registered for control of wireworms in plant cane. Each of these are available in many products. Products containing bifenthrin include Talstar® 250EC, Astral® 100EC, Bifenthrin 100EC and Kenso Agcare Tal-Ken 100. Fipronil is the active ingredient of products like Nufarm Regent 200SC. Products containing chlorpyrifos include Lorsban®500EC, Chlorpyrifos 500EC, and Strike-Out®500EC.

Billets and soil in the planting furrow are sprayed with insecticide mix at the rear of the planting chute, immediately before covering soil is brought in over the billets.

Always read the product label and Material Safety Data Sheet (MSDS) for conditions of use and safety instructions.

In ratoons, shoots killed by wireworm are usually compensated for by excess numbers of shoots produced by the cane plant. When ratoons are under stress (dry weather) the impact of wireworms is worse.

Photo 1: Wireworm.

Photo 2: Wireworm boring into the 'eye' of a billet.