

Grass grub



Introduction

Grass grub (*Costelytra zealandica*) is a native insect found in indigenous tussock grasslands and is considered to be the most important insect pest of improved grassland throughout New Zealand.

Description

Adults are shiny, light to dark brown beetles about 10 mm long. Larvae are soft, creamy-white, with a C-shaped body and a light brown head capsule (pictured above). The final instar (third instar grub) tends to be 12 – 20 mm long. The eggs of grass grub are a creamy white, oval and about 1.5mm in diameter when first laid.

Life cycle

Although there is variation from one locality to another, generally eggs are during November and December. They emerge as larvae in January which actively feed until late winter. Larvae then cease feeding to become pupae in October and finally adults emerge in November. There is normally one generation per year, although in some southern localities a life cycle may take two years to complete.

Damage

The early signs of grass grub damage include yellowing of pasture, plant death, pulling of pasture, and reduced growth. In cases of severe attack, the pasture can be rolled back like carpet. The damage done to pastures by grass grub tends to become apparent from February in the North Island and from March in the South Island.

Commonly there is an initial loss of white clover followed by ryegrass, which allows for the invasion by weeds and lower producing grasses. Grass grub larvae damage tends to occur in patches. In localities where two-year life cycles occur, pasture damage can occur during spring as opposed to the more common occurrence of autumn damage.

Management

The action threshold in established pasture is between 100 and 200 grubs per m². The threshold is set at 75 grubs/m² in newly sown pastures. Recommended sampling time is early autumn when third instar grubs are prevalent.

There are a number of management options available to aid in the control of grass grub populations, including insecticides, biological controls and paddock management options. Mechanical options include cultivating the soil or heavy rolling a paddock; both of which can greatly reduce populations if carried out at suitable times and conditions. Mob stocking animals on paddocks can achieve similar results. There are a number of insecticide treatments available including: SuSCon Green[®] (contains chlorpyrifos); Diazinon[®] 20G or Gesapon[®] 20G; Terbufos (Counter[®] 20G) or coating seed with imidacloprid (Grubbuster[®] or Gaucho[®]).

Another option is **Bioshield grass grub** (www.ballance.co.nz) which is a commercial preparation of a naturally occurring bacterium (*Serratia entomophila*) and which can provide long term control of grass grub by causing amber disease in grass grub populations.

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