Pasture Pests:
Black Beetle (*Heteronychus arator*)

Information Sheet

The African **Black Beetle** arrived from South Africa via Australia into New Zealand early last century and it is causing increasing amounts of damage.

**Identification**

**Adult beetle** when newly emerged from the ground are a rich chestnut colour and soon after changes to glossy black. It is about 15 mm long, with the male usually slightly smaller than the female.

They are usually found in the top 1 cm of soil. They undergo extensive dispersal flights in Spring and Autumn but surface air temperatures must be above 17°C for flights to occur.

**Eggs** are usually found singly; they are about 2 mm long and oval, close to the surface, in spring.

**Larvae**: The creamy white C shaped larvae, usually found in the top 10 cm of soil, which are similar in general form to grass grub larvae but much larger (see photo).

The head is light brown, and the body greyish or creamy white except for the hind end. This is a brown / black colour as the contents of the gut shows through. Like grass-grub the larvae pass through 3 stages before pupating and emerging as adults.

**Distribution and Damage**

The Black Beetle is found throughout the northern part of the North Island of New Zealand. The areas where Black Beetle are most present are in Northland, Waikato and Bay of Plenty along with a southward coastal extension into northern Taranaki and Gisborne.

Black Beetles have a high temperature requirement for most life processes. Temperatures greater than 20°C suit the Black Beetle life cycle perfectly but they are severely inhibited at between 10-15°C.

Black Beetle favour sandy, peaty, or free draining loam country, and to a markedly lesser extent the heavier clay soils of the hill country.
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The beetles and larvae of black beetle feed on several pasture grasses including annual ryegrasses, perennial ryegrasses, tall fescue, paspallum and kikuyu and also on the following crops maize, sweet corn, potatoes, kumara, and strawberries. The larvae feed on roots often close to the surface of the pasture that can become open and susceptible to weed invasion.

Damage to pastures from larvae can appear similar to grass-grubs but occurs over summer (January to March) while grass grub damage typically appears autumn/winter.

A typical sign of adult feeding at the base of the plants is patches of yellowing tillers that will pull easily from the pasture may become noticeable both in autumn and spring. In bad infestations pastures can be rolled back like a carpet. Any more than 10 adults/m² in pasture is considered a problem and they can reach as high as 95/m².

**Life cycle**

Black beetle breed one generation per year, but it is common to find stages of black beetle out of phase with the main generation. In some areas 20 % of the population will overwinter as third stage larvae or as pupae, and the adults which develop from these stage lay their eggs in January and February, it’s possible to find all stages of black beetle in the soil at the same time.

Adult females normally lay 7-10 eggs in the soil from late September to late December. Larvae grow through three instars over the summer and pupate in February-March. New adults begin to emerge from late February and feed actively for the next few months. Typically following a summer drought, massed flights occur in autumn. Adults overwinter in the soil, emerging in spring to start feeding again and to lay eggs.

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*Note: Coloured bars indicate periods of peak activity in each of the life cycle stages*

For more information or to discuss how to protect your pasture against Black Beetle please contact Specialty Seeds NZ via our details below.

For more detailed product information please ring 0800 727 - 8873 or go to www.specseed.co.nz