



BioShield Grass Grub Granules

Grass grub control for pasture and turf

BioShield Grass Grub is an easy-to-apply granule that reduces NZ grass grub populations in pasture and turf long-term. BioShield Grass Grub is a certified organic biocontrol that works by introducing a disease specific to NZ grass grub larvae.

How it works

BioShield Grass Grub contains the active ingredient *Serratia entomophila*, a soil bacterium that occurs naturally in New Zealand which causes amber disease in New Zealand grass grub (*Costelytra zealandica*).

- Granules are broadcast over the pasture
- Amber disease bacteria washes into the soil and is ingested by grass grub larvae
- Bacteria multiply in the grass grub's gut causing it to stop eating within three days
- Grass grub die of starvation and decompose, releasing the bacteria in their gut into the soil where it is ingested by other grass grubs
- The infection cycle continues ensuring long-term control of the grass grub.



The grass grub on the right has amber disease, has stopped eating and is dying, while the grub on the left is still alive and ingesting soil.

Grass grub control timeline

- 85 days – an average of 43% of grass grub larvae have amber disease
- One year – the grass grub larvae population is approximately halved
- 3–5 years – Disease infection cycle continues reducing the grass grub population.

Application Rate

Crops and pest	Timing	Application rate
Pasture (grass/plantain/clover mixed swards)	February to May	Broadcast 30 kg/ha of BioShield Grass Grub granules on to when the second and third instar grass grub larvae are actively feeding.

Pack Sizes

BioShield Grass Grub Granules are available in a 15 kg bag.

Storage

- Store in a cool place below 20°C.

Directions

Apply when:

- Soil temperature is above 10° C
- Soil moisture is above 15%

Post treatment do not use:

- Alternative grass grub control practices such as heavy rolling or insecticide treatments as this will reduce the effectiveness of BioShield.
- Mob stocking within the first six weeks after application of BioShield to ensure the *Serratia entomophila* establishes.