Dung Beetle Fact Sheet: 5

Copris incertus (Mexican dung beetle)

Size: up to 15 mm

Characteristic features: This is a medium sized, glossy black beetle. They possess a characteristic shovel-shaped head with a horn. The size of this horn varies between males but is also present as a small spur in females. They have long lines down their wing covers which further differentiates them from 'black beetle' grass grubs that can be a pest in pastures. *Copris incertus* squeaks when agitated! When abundant in fresh manure piles beetles will squeak en-mass at an audible level to warn encroaching livestock or humans not to stand on the manure pile.

Origin: Native to Central and South America with range from Mexico to Ecuador from sea level to 1700m latitude.

Export Distribution: Hawaii, Western Samoa, Vanuatu, New Zealand. Failed to establish in Northern states of Australia where it was released.

Expected distribution in New Zealand: North Island to top of the South Island.

Flight Activity: Night time. Can be seen working in manure during the day.

Seasonal Activity: Spring emergence and nesting, quiet through summer with peak activity following rains in late February onwards until May and June (in warmer regions)

Dung preferences: Fresh firm cattle dung and horse manure, but also seen nesting in runny dairy manure, sheep and alpaca logs. This medium-bodied beetle prefers larger volume dung necessary for nest building. Large, non-pellet, deposits of sheep/alpaca dung (logs) are also utilised at least for adult feeding.

Nesting behaviour: Adults build an underground chamber 15 to 35 cm deep depending on soil conditions. Their soil push-ups or casts (pictured) are a sign of nesting. Females and males cooperate to fill the chamber with a brood mass of dung which the female divides up into 4-10 spherical balls depending on the size of the brood mass. She lays a single egg into each ball then sits guarding the balls and their developing young from fungus, earthworms or other soil invertebrates.

Life Cycle: Development from egg-adult takes 8-12 weeks depending on soil temperature. There are two generations a year.

Abundance: The number of dung beetles per farm depends on many criteria but most importantly the amount of fresh dung available, and dung quality. Chemical residues from livestock drenches can be detrimental but not critical to dung beetle population growth. Dung beetle friendly drenches are available. An integrated approach using dung beetles and drenches is recommended with an awareness of the side effects chemical residues in drenches can have on of dung beetles. For information on dung beetles, drenches and dung beetle management please refer to the Dung Beetle Innovations website: www.dungbeetles.co.nz.