

Lifestyle Block Package



Dung Beetle Innovations is proud to announce the arrival of a new package of dung beetles aimed specially for lifestyle block owners.

FAQ's

How do we define a Lifestyle Block Package?

This dung beetle package caters for lifestyle block owners with a small number of animals compared to a commercial livestock farmer. There are approximately 150 beetles in a colony which is sufficient for establishment and enable the dung beetle population to grow rapidly over several years to reach saturation on your property. Saturation is the carrying capacity of dung beetles proportional to the amount of manure produced by grazing livestock. The point of saturation can be achieved sooner if an additional colony is purchased owing to a greater number of beetles being released.

Are there any risks to be aware of before ordering?

While we are happy to be making small affordable colonies available for lifestyle block owners there are risks. Dung beetles fly and do not respect property boundaries! Having only 1 or 2 animals or a period when there are no animals on your property may result in your beetles moving to other sources of manure in adjoining properties. This is less likely for 2 or 3 large volume manure producers like horses and cattle and more likely for a few small volume manure producers like sheep, deer, goats, or alpaca.

If there is a good daily supply of freshly voided manure then dung beetles will invariably opt to stay. New beetles emerging in greater numbers than the carrying capacity of your property will migrate through necessity.

Having your neighbours invest in Lifestyle Block Packages will help to offset the risk and spread the load of dung beetles across a greater range.

Drenches: It is important to be aware of the potential impact the drenches you are using have on dung beetles before you order because many drenches have varying degrees of toxicity to dung feeding fauna. For a better understanding of the potential impact of drench residuals on dung beetles, go to: www.dungbeetles.co.nz. Under the Welcome menu is a submenu called 'Beetlemania'. The **Blog** page has an article 'Establishing Dung Beetles and using chemicals for internal/external control of livestock pests'.

What beetles are sold in the Lifestyle Block Package and what are the costs?

Two types of dung beetle are available in the Lifestyle Block Package: *Onthophagus binodis* for the North Island; and, *Onthophagus taurus* for the South Island. Both onthophagines have multiple generations in an active season and with eggs to adults in 8 weeks their population numbers grow exponentially.

There are two options for the Lifestyle Block Package:

Option 1. One colony of either species (depending on where you are) = \$575 (incl. GST) + shipping (NI \$14, SI \$20).

Option 2*. Two colonies of one species = \$1,035 (incl. GST) + shipping (NI \$14, SI \$20).

*Caters for 20 or more livestock animals in the lifestyle block. Releasing a greater number of beetles also improves establishment success and accelerates the rate of population growth to achieve sustained saturation of beetles proportional to the amount of manure being generated during the beetle's active season.

We use Courier Post and the Rural Delivery network.

How do we pay?

Go to the Dung Beetle Innovations website: www.dungbeetles.co.nz and click on the shopping basket to access the ordering page. Fill in the required details and select the Lifestyle Block Package. We will send you an email confirmation with payment details and order number. Note this puts you on the priority waiting list. Beetles are only sent out when they are at their most abundant (for *binodis* and *taurus* this is between January and March).

How much of the year do we have dung beetle activity with these species of dung beetle?

Both species of dung beetle on offer in the Lifestyle Block Package start to emerge from their overwintering hibernation and begin the task of dung removal for nesting from late August. Population numbers become greatest from December through to late April. Beetles then enter the overwintering phase underground either as adults (*taurus*) or as larvae (*binodis*). There are late autumn and winter active dung beetle species available in the commercial Single Species Packages for \$2,300.

When do we receive beetles?

Shipment of Lifestyle Block Packages occurs between January and March. Those who order early are higher up the priority list and tend to get the earlier colonies to maximise population growth before the season ends.

Can we propagate our own beetles to release a bigger colony?

Yes. You can grow more beetles from the colony you receive prior to releasing them using a fish bin. Drill a series of drainage holes in the bottom of the fish bin approx. 4-5mm in diameter. Choose a warm sheltered spot out of direct sunlight for half of the day to set up your breeding colony. Fill three-quarters of the bin with mostly dry topsoil or clay loamy soil sifted to remove stones, lumps and detritus. Lightly compact the soil. Add fresh manure to cover one half of the soil surface. Add the beetles then cover with shade mesh secured firmly with a tight band of bungy or shock chord. Mesh that has larger diameter holes is better than finer grade mesh because it allows improved air circulation to prevent humidity and fungus build-up. Add fresh manure to the second half of the soil in 7 days. You will now have half of the bin covered with week old dung and the other half with fresh dung. The next time dung is added remove the oldest dung pile and replace the fresh dung in its place. Repeat this step each week for 8 weeks. Several hundred new beetles will emerge around this time. New beetles take a week or two to become sexually mature before they mate and commence nesting. During the maturation process beetles just eat then sit tight in shallow sleeper cells under the soil surface. Release the beetles when ready.

How long does it take to see establishment and a noticeable improvement in dung removal off my paddocks?

It usually takes 2-3 years post release to see evidence of dung beetle establishment on a commercial farm. However, we have had evidence of establishment in as little as 2 months for the beetles available in the Lifestyle Block Package. Seeing the evidence is the trick. These beetles mine the dung beneath the crust and transport it down tunnels under the manure piles out of sight. In the early stages turn over and pick through manure piles that are a couple of days old to see holes and or beetles. The best time to observe this is when their numbers are greatest from January to March. When beetle abundance is increasing after a few years post release there will be beetles flying around just above the ground following the smell of fresh dung, and the manure piles will look shredded or clearly worked over by beetles. You may also see soil casts or push-ups appearing. After 4-5 years' abundance will be high with dozens of beetles colonising each manure pile. This is when you will see obvious reductions in dung on the pasture surface. Full carry capacity is reached in 6 to 9 years.

I have to clean dung off my paddocks. Will this interfere with the establishment process of the dung beetles?

Potentially yes. It takes a 4-5 years post release for beetle numbers to build up to see obvious reductions in dung on the paddocks and an end to dung collection. The more packages you buy the sooner that will be. In the interim you may need to continue some degree of dung management especially with horses. One option is to create dung lines taped off along a fence line in the middle of your property. Add the manure to the end of this line each time you collect it. Spread it out a bit so that you increase the area of soil real estate beneath it for more beetles to nest in without competing for space. This line essentially becomes a dung beetle breeding factory! Old unused dung further up the line can be used for compost, harrowed, or removed as the beetles will have used what they want within 7 days and moved down the line colonising the fresh manure.

I have alpacas and the males tend to create dung middens. Will the dung beetles bury the dung from these middens?

Dung beetles utilise fresh voided manure. Old manure no longer emits the chemical volatiles that attract the beetles and has lost its appeal through UV degradation and decomposition. They will however manage the fresh manure on the middens and in time those will become dung beetle breeding hubs!

I have chickens free ranging over my livestock paddocks. Will the dung beetles eat their poo? And will the chickens or wild turkeys eat the dung beetles?

All species of pastoral dung beetle we have permission to import to New Zealand utilise only the manure of grazing herbivorous mammals such as cattle, horses, sheep, deer, goats and alpacas. Chickens are opportunist foragers eating whatever invertebrates they can scratch for. Dung beetles may well be targeted if the chickens pick through dung piles. However, dung beetles tend to spend virtually all their lives protected in fresh manure rather than old crusts or underneath dung piles in nesting tunnels. Their developing grubs are protected within balls of dung 20-30 cm beneath the pasture surface. Predation on adult beetles or their young is therefore likely to be minimal.