



Our Mission

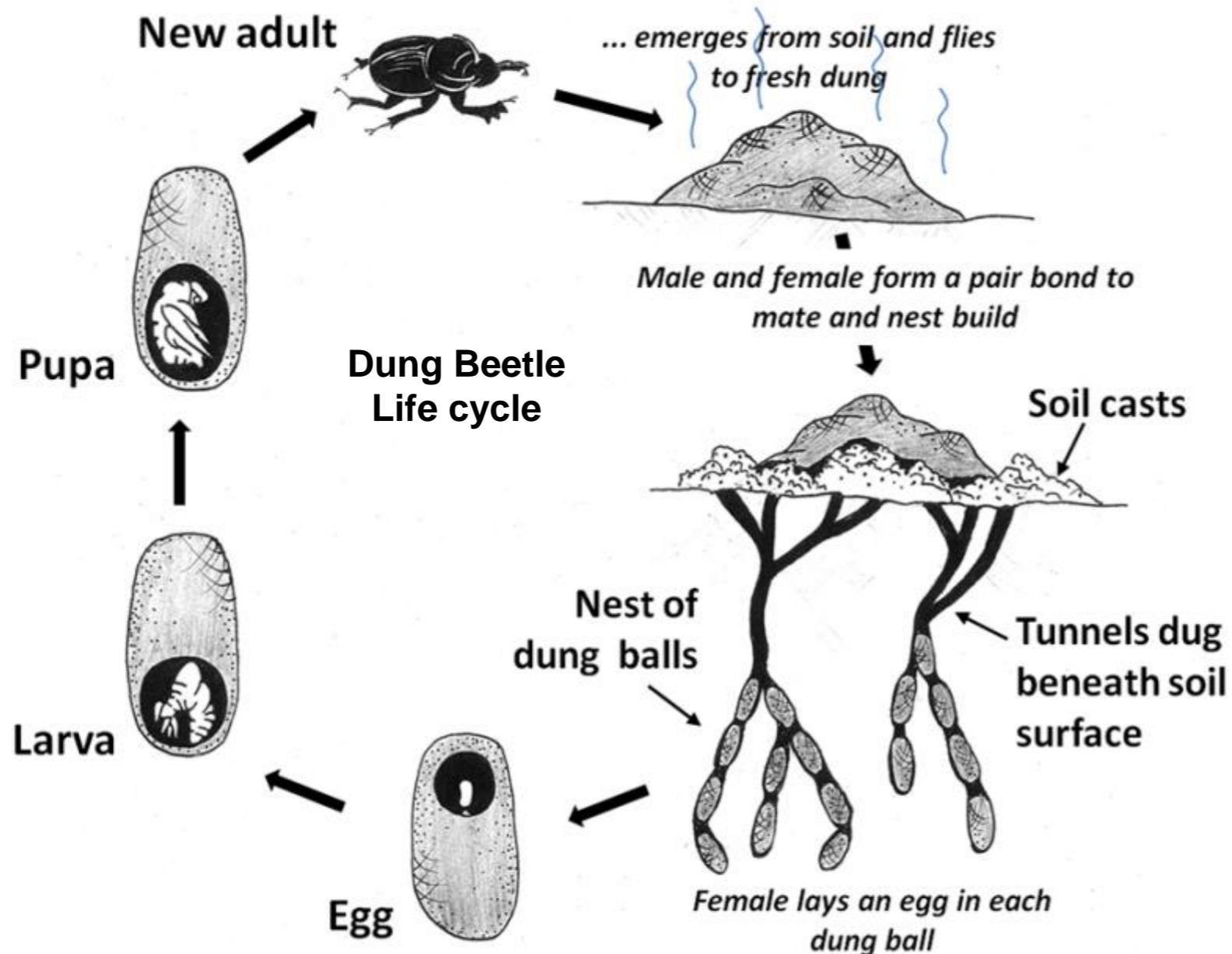


To rebalance New Zealand's pastoral farming systems; through the sale, management and research of dung beetles.

“ The Nation that destroys its soil destroys itself. ”

– Franklin D. Roosevelt, 1937

THE PROBLEM WE ARE ADDRESSING



Sheep and cattle have been brought to New Zealand without the associated dung beetles which have evolved to process their dung. New Zealand lacks native pastoral dung-burying beetles. Our 15 species of native dung beetles are forest dwellers and do not feed on pastoral dung or occur in pastoral habitats.

At any one time in New Zealand 5% of all grazing farmland is covered in dung. Roughly 600,000 ha are wasted due to cattle dung alone. Around 745-950 ha a day is covered by dung which accumulates and sits around from weeks to months before it breaks down. Additionally, forage is avoided around the dung in an area 5 times the size of the dung pad because it is repugnant to grazing livestock.

By introducing pastoral dung beetles we will have the opportunity to rapidly and effectively remove dung from large areas of productive land. Without dung beetles our pastoral dung problems will worsen and sustainable productivity will be harder to achieve in the future.

ECONOMIC BENEFITS FOR FARMERS

Sustained dung burial and tunneling by dung beetles leads to.....



- Increased soil health and pasture production
- Reduced pests, and disease/livestock infection
- Reduced fertiliser inputs through nutrient cycling

Improved soil health and pasture production

Proven benefits include increased soil aeration and surface water penetration, reduced compaction, increased soil mixing and incorporation of organic matter into the soil profile, improved microbial and earthworm activity, and nutrient cycling. Also results in less surface runoff - reducing pollution and eutrophication of waterways.

In some cases dung burial has shown increases in pasture growth of around 30% and responses have persisted for over 2 years after dung burial*.

Beetles have been shown to add 0.06 kgDM per kg of buried dung. 100 cattle will produce a staggering 230 tonnes of dung in 120 days* (the seasonal activity of a beetle species), which when buried boosts production by 13,000 kgDM with a feed value \$2,800**.

The additional live weight gain is between \$2,800 - \$4,000**.

There also have been significant increases in the levels of soil nutrients such as nitrogen and phosphorus, reducing the input cost for such fertilisers.

Reduced N Volatilisation

An estimated 27kg of nitrogen is produced annually per animal, 22kg is lost if dung beetles are not present.

Saving just 5 kg of nitrogen per head annually equates to \$7 per head, or \$2,700 for an averaged size beef farm.

Reduced pests and disease/livestock infection

Disease pathogens and bacteria within dung are buried reducing transmission by flies and reducing waterway contamination from surface runoff.

Reduced infection of livestock by parasitic nematodes. Dung is aerated which desiccates nematode eggs. Eggs and larvae are damaged or destroyed by physical abrasion during dung manipulation.

Dung beetles impact on reducing nematode numbers is significant and likely to reduce dependency on drench use.

* Doube BM, (2008), MLA.

<http://dungbeetle.org.nz/benefits/>

** 22c/kgDM, Feed Conversion Ratio 7 – 10, 56% dressing out, \$3.90/kgCW

Four Dung Beetle Packages

The four packages are:

1. Whole farm package - small to average farm. \$6,000 + GST. 4 species in 4 colonies of 200 – 500 beetles each. 4 species will provide coverage for most of the year.
2. Whole Farm Package - average to large farm. \$10,000 + GST. 4 species in 8 colonies of 200 – 500 beetles.
3. Farm Starter Package. \$2,000 + GST. 1 species. 200 – 500 beetles.
4. Small Block Package. \$1,250 + GST. 1 species. 100 – 250 beetles. (Our recommendation is to supply 250 of the smaller species).

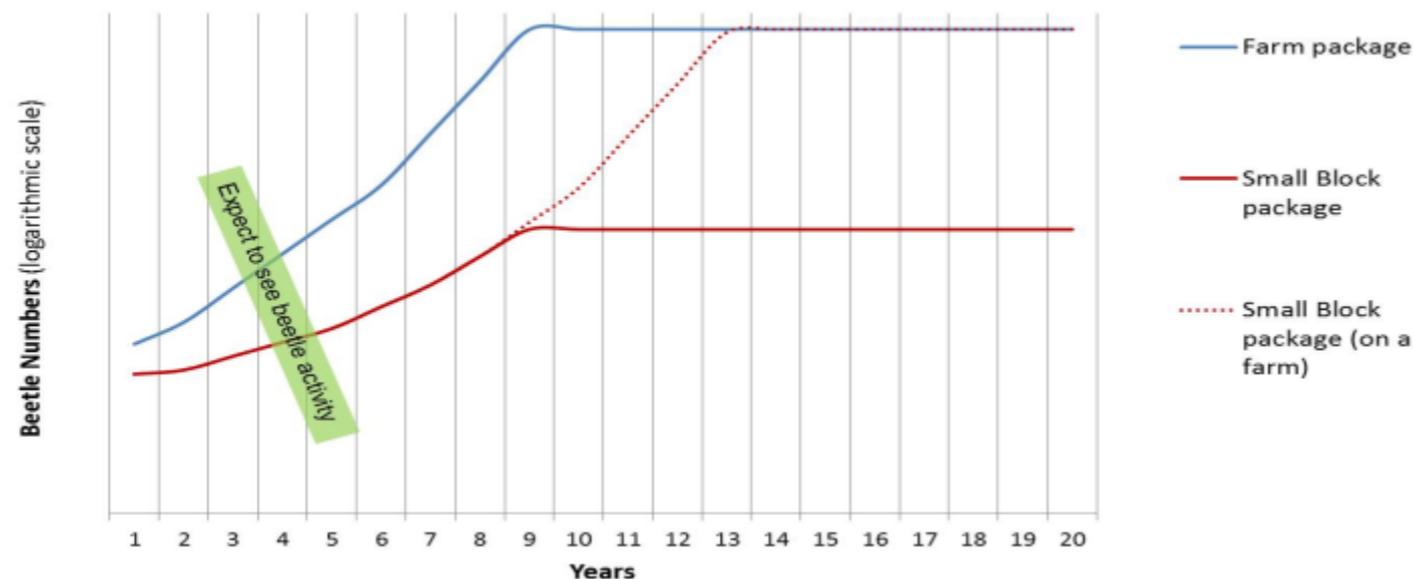


Farming for the future



Geotrupes spiniger
22mm

Note the exact species will be selected in consultation with DBI's entomologist.



When properly established, farms will reach their natural beetle carry capacity within 9 – 10 years. Moderate numbers will be achieved in 4 – 6 years.

The carrying capacity is a function of the quantity of dung.

Reducing the number of beetles released, i.e. purchasing a Small Block Package for a farm situation, increases the time it takes to reach capacity pushing the time out from 9 to 13 years.