

STOP DISEASE OVER WINTERING

If not managed correctly the recycling of crop stubble, prunings and leaf litter into humus can become a limiting factor to plant growth. Slow and incomplete organic matter recycling can increase the opportunity for disease over wintering and reduce nitrogen availability in the spring.

BioStart Digester contains a combination of enzymes, signal molecules, bacteriocins and secondary metabolites from the fermentation of beneficial soil bacteria including *Pseudomonas putida*. These organic compounds activate the soil microbes responsible for decomposition. By speeding up the natural decomposition process, Digester improves nutrient recycling and soil structure and reduces the opportunity for disease over wintering.



- Reduces the opportunity for disease over wintering
- Speeds up crop residue, pruning and leaf litter decomposition
- Improves nutrient recycling
- Improves soil structure

For specific crop recommendations contact your local BioStart representative. For best results avoid applying Digester in the heat of the day.

Digester is compatible with commonly used herbicides & suspension fertiliser.

Pack sizes available: 10 and 20 litre

DIRECTIONS FOR USE:

CROP	TIMING	APPLICATION RATE	RECOMMENDED CO-APPLICATION
Grapes	Autumn (leaf fall) or at mulching	2 L/ha in a minimum of 200 L of water applied over leaf litter and prunings to the soil. For heavy disease over-wintering, cut-out diseased orchards, compacted or water-logged soil: 4 L/ha in a minimum of 200 L of water.	To reduce application cost: co-apply with commonly used post harvest herbicides or liquid fertiliser. Digester can be applied via ground sprays, overhead sprinklers or fertigation.

Digester

PRIMARY DECOMPOSER ACTIVATOR



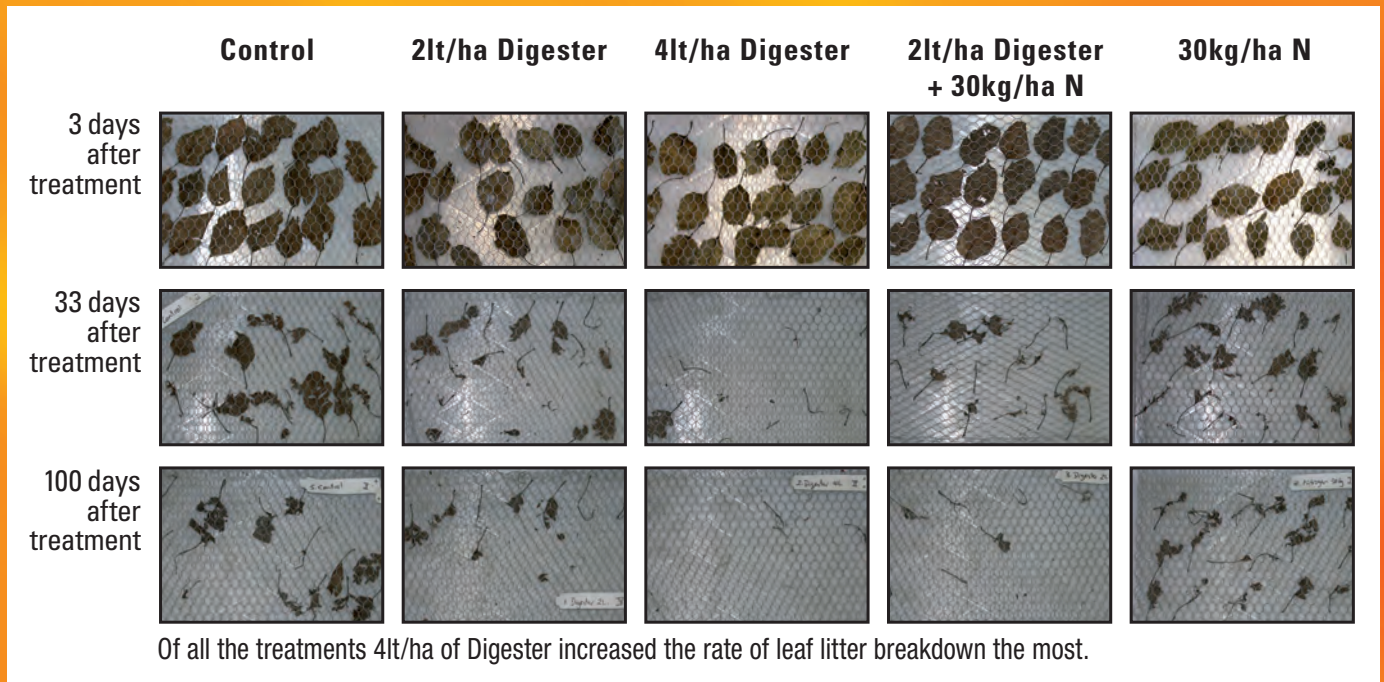
MADE IN NEW ZEALAND



Faster trash decomposition

Reducing the volume of leaf litter on the orchard floor can reduce disease over wintering. In this trial cages of leaf litter were placed in the orchard and then sprayed with various treatments. The cages were then photographed at regular intervals to monitor the rate of decomposition.

Conclusion: Of the treatments 4lt/ha Digester increased the rate of decomposition the most. The nitrogen only treatment only marginally increased the decomposition rate over the control.



Improved seed bed preparation

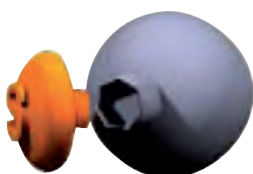
The speed of stubble decomposition can regulate the establishment of the following crop. At sowing time nitrogen that would otherwise be available for the emerging plant will be tied up fueling stubble decomposition. An application of Digester after light incorporation of stubble will ensure stubble is fully decomposed prior to sowing, improving seed strike and early root development.



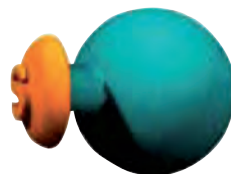
Signal molecule technology

Microbes have the ability to communicate. They can send and receive signals. This ability allows them to sense the presence of other microbes (quorum sensing) and plants and change their metabolic function. It's therefore important that the right microbes receive the right signals at the right time in order to maintain a healthy soil microbial biomass.

The signal molecules in Digester target the pre-cursors for the indigenous saprophytic fungi, 'signalling' them to wake up and reproduce. This leads to a rapid rise in their populations and the activation of saprophytic fungi for increased decomposition rates.



Signal molecule docks with a dormant targeted organism



Once docked the signal is received and metabolic function is changed



The signal molecule is released and the organism begins reproduction