



USING MUNICIPAL COMPOST FOR FARMING

THE OPPORTUNITY

About 726 000 tonnes of municipal garden and kitchen wastes are buried in NZ landfills each year (according to 2006 statistics). There is potential to lower the impact of landfill wastes on the environment through promoting use of municipal compost by farmers.

This project set out to explore this opportunity, and particularly to provide scientific data relevant to farmers across a range of agricultural sectors. The research focused on utilising compost as a soil conditioner and slow-release fertiliser.

RESULTS

The impact of municipal compost in pasture, forage crop, intensive vegetable and arable crop rotations was tested in field trials in South and mid-Canterbury. These trials, set up in 2009, assessed the effect of compost on yield and soil health.

For this to be commercially viable, farmers need to know how to best use compost in conjunction with conventional fertilisers. The project established a set of guidelines that farmers can refer to, covering application rates, synergies with conventional fertilisers, and soil and environmental benefits.

Some of the key findings are:

- » A complete substitution of fertiliser with compost is not recommended. To get the best out of compost it needs to be applied with nitrogen (N) fertiliser.
- » A crop's ability to respond to available N (from soil, fertiliser and compost reserves) increases where compost has been applied.

- » Elevated soil nutrients can be expected for more than two years after compost is applied.
- » Compost also provides other key nutrients such as phosphorus (P) and potassium (K).
- » Soil organic matter and carbon content increased significantly where compost was applied.
- » With high rates of compost, there was a trend towards improved soil structural stability and water holding capacity.
- » Due to much of the N content being organic and therefore released slowly, the amount of nitrate leached was not increased by adding compost, but was by adding inorganic fertiliser N.

AT A GLANCE

SFF project	09/152 Sustainable use of municipal compost for the agricultural sector
SFF investment	\$360 000 (GST incl)
Other contributors	Farmers, resources managers, researchers, local and regional authorities, waste management industry
Total project value (including in-kind contributions): \$840 625	



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