Envirofert Compost Trial Summary

For the past five years Envirofert Ltd has run independently assessed field trials in a range of crops by applying compost, each crop has been managed with standard cultivation practices, normal fertiliser and plant protection applications.

Table 1. **Summary of yields from field trial plots**

	Lettuce	Cauliflower	Carrots	Onions	Parsnips
Rate of compost application	20 T /Ha	20 T / Ha	10 T/ Ha	10 T/Ha	10 T/ Ha
Increase in yield compared to control block	15%	34%	12%	27%	11%
	+ 8,000 heads /ha	+ 7,500 heads / ha	+ 7 T / ha	+10 T/ha	+ 7.5 T/ha

These trials demonstrate conclusively that all crops responded positively to the addition of Envirofert compost, improving economic yield, soil structure and fertility.

Changes in soil properties due to compost addition

Envirofert's trial block has had compost applied for the past five years. The positive effects on soil properties in response to compost application include;

- Soil organic matter has increased by 4.7 % to 5.3% an increase of 9000kg of Organic Matter / ha
- Soil pH has consistently stayed higher
- Nutrient levels for Calcium, Magnesium, Potassium and Phosphorous have all increased
- Soil penetration (ability of roots to access a greater volume of soil) has improved.

All of these factors support better crop growth and reduced tillage costs as the soil is less dense and more easily cultivated.

Benefits of compost

Compost improves soils in three main ways to produce more resilient crops;

The physical properties of soils

- Compost improves soil structure, soil porosity and water holding capacity, creating a better plant root environment. An Organic Matter lift of 1% increases the water holding capacity by 160 cu metres per ha.
- Compost improves moisture infiltration, permeability and reduces the bulk density of heavy soils reducing erosion and runoff.
- Compost improves the moisture holding capacity of light soil's – reducing water loss and nutrient leaching, and improving moisture retention.

The chemical properties of soils

- Compost improves the ability of soils to hold key nutrients while reducing nutrient loss by leaching, this enables soils to retain nutrients longer.
- Compost helps buffer the soil's pH.

- Compost supplies macro and micro nutrients.

The biological properties of soils

- Compost supplies organic matter (10 tonnes of Compost applied to soil, will supply approximately 3.7 Tonnes of Organic Matter).
- Organic matter contains humus. Humus helps in soil aggregation supports biological life making nutrients more available for plant uptake and aiding in the proliferation of beneficial soil microbes within the soil.
- Compost helps supress soil borne diseases and can bind and degrade certain pollutants.

Nutrient analysis of compost

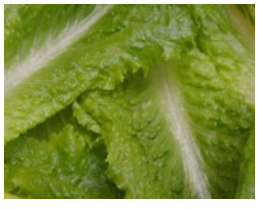
Compost is a multi-nutrient product. Using an estimate of fertiliser prices the value of compost on a nutrient basis applied at 10 Tonnes per Ha;

Nutrient	Amount kg/ha	Value	(priced equivalent)
N	**84**	**$87.00**	Urea
P	**25**	**$97.00**	DAP
K	**46**	**$72.00**	KCL
S	**22**	**$17.00**	Elemental S
Ca	**271**	**$42.00**	Lime
Mg	**38**	**$109.00**	Kieserite
Total value of nutrients per Ha		**$424.23**	

This value excludes the soil amending properties from compost applications including;

- Improved soil structure
- Improved soil moisture holding properties
- Better insect and disease resilience
- Lower cultivation costs
- Increased yields



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