Compost can be used to add organic matter to agricultural soils for growing high quality arable and grassland crops.

The addition of compost to agricultural soils can reverse the effects of intensive farming which include soil erosion, surface water run-off and nutrient leaching. With improved soil health, crops will flourish.
Applications

Cereals – barley, wheat, oats
Rapeseed/canola
Corn
Forage grasses – rye, oats
Sustainable & certified organic farming
Cattle grazing

Benefits of using compost

- Improved soil structure and workability
- Improved water holding in light soils
- Improved irrigation efficiency
- Reduced bulk density in heavy soils
- Reduced need for fertiliser
- Reduced nutrient leaching
- Increased yield potential
- Reduced dependency on pesticides
- Stabilised soil pH
- Improved soil microorganism activity
- Protection against erosion
- Improved availability of major nutrients

Many of these benefits become noticeable over time and more quickly on poor quality soils which are over-used, sandy or with high clay content. Results can include:

- Increased germination rates
- Faster establishment and early growth
- Reduced fuel costs for cultivation

In Canada, composts made from manure, biosolids and municipal solid waste are applied at 10-15 t/ha in year one, then at half this rate thereafter. The practice supplies nutrients and improves soil water holding capacity for canola, wheat, oats and barley. In Texas, cows prefer grazing oats treated with cow manure compost to oats treated with chemical fertiliser. The compost applied at 10-25 t/ha provides nutrients and improves soil quality.

**Example of Success**

Kilograms of nutrients typically in 1 tonne of compost*:

- Sulphur as S: 8.1
- Magnesium as Mg: 6.6
- Potash as K₂O: 3.3
- Phosphate as P₂O₅: 2
- Nitrogen as N: 1

*Yard trimmings compost

Application recommendations

- Cultivate soil using disc or similar implement.
- Test soil for lime and fertilizer requirement.
- Check compost characteristics.
- Uniformly apply compost throughout the field using a traditional manure spreader.
- Lower rates (5-10 tonnes/hectare) of compost are typically being used in multiple (successive) year applications as a nutrient supplement, organic matter source, and to improve water holding capacity.
- Higher application rates (30-60 tonnes/hectare) are used to modify soil structure and other properties in the short term, as well as act as a primary nutrient source.
- Thoroughly incorporate the compost to a depth of 200-250mm using a disc or mole board plough.
- Plant seeds.
- Irrigate based on plant needs, soil moisture, and climatic conditions.