Technical Information – Agriculture

Agricultural applications of compost

Organic matter content and the fertility of arable soils may decline under intensive cultivation. This can lead to soil erosion, surface water run-off and nutrient leaching – and decreasing crop yields.
Silage and hay crops remove nutrients from grassland. Adding compost to your soil can reverse these trends and lead to sustainable crop production.

Compost characteristics
Fairfield's compost is made from fruit, vegetable, plant and woody waste.
These are some recommended compost properties for use in turf establishment and maintenance.

Agricultural Parameters	**Reported as (units of measure**)	**Recommended Range**
pH*	pH units (1:5 water extract)	7.0 – 8.7
Moisture Content	% m/m of fresh weight	35 - 55
Organic Matter Content	% dry weight basis	>25
Screen Aperture Size	Mm	40 Maximum for soil improvement 25 Maximum for top dressing grassland
C:N Ratio		20:1 Maximum

* The pH level of Fairfield's compost is 7.0.

Compost also provides the following nutrients (approximate figures as total nutrient kilogrammes per tonne of moist compost based on typical analysis):

Nitrogen as N	Phosphate as $P_2 O_5$	Potash as $K_2 O$	Magnesium as Mg	Sulphur as S
8.1	3.3	6.6	2	1

How to use compost in agricultural applications:

Soil improvement
Fairfield's Compost not only provides valuable organic matter to soils, but also acts as a slow release fertiliser of Nitrogen, Phosphate, Magnesium and Iron, and provides a readily available source of Potash.
Other nutrients are also provided by composts such as Sulphur, and trace elements. Compost can also provide a valuable source of Calcium with a small liming effect (it may have up to 10% of the neutralising value of limestone on a dry matter basis).

What a typical application of 31.5 tonnes of compost (20 tonnes dry weight basis) will provide (approximate figures):

Nutrients	Total amount (kg/ha)	Available year 1 (kg/ha)	Available year 2 (kg/ha)
Nitrogen as N	250	25 (10%)	12 (5%)
Phosphate as P_2O_5	100		
Potash as K_2O	200		
Magnesium as Mg	60		
Sulphur as S	33		

Application advice
The total nitrogen in compost should be applied according to the needs of the next crop in conjunction with inorganic nitrogen fertiliser. The needs of the soil for the full crop rotation should be considered when assessing the other major nutrients. Regulations regarding Nitrate Vulnerable Zones must be followed and the Soil and Water Codes observed in other areas.

Compost works differently to manures, and possesses the following, added benefits:

Spring application is possible due to the slow-release nutrients in composts, not adversely affecting crop establishment and quality.

Autumn application results in less nutrient leaching compared to manures and slurries, due to the slow-release forms of many of the nutrients in composts.

It's important to time your compost application so that increased nutrient availability helps meet the nutrient requirements of your crop rotation programme.
Compost is most effectively used when it is well mixed with the soil, so avoid burying it by only ploughing. In addition, don't sow salt sensitive seed crops less than two weeks after compost application and incorporation.

Grassland and forage crops

Compost is also used to add nutrients to established grassland.
Using our Fairfield Fine 10mm grade of compost will allow the material to fall more readily towards the roots of the sward. This ensures that silage or hay quality remains unaffected, and animals can return to graze the grass without undue delay.