

Technical Information: Field Horticulture

Organic matter content and the fertility of soils may decline under intensive cultivation. This can lead to soil erosion, surface water run-off and nutrient leaching, and decreasing crop yields. 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 field horticulture.

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	25 Maximum for most crops 15 maximum for finer seedbeds
C:N Ratio		20:1 Maximum

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

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

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 ₂ O ₅	100		
Potash as K ₂ O	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, and does not adversely affect crop establishment and quality.

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

It is 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.

Mulching fruit crop rows

Established fruit crops can benefit from the nutrient value of compost plus weed suppression effects by applying compost in the row as a mulch, 25 to 75 mm deep.

Planting fruit trees/bushes with compost combats Replant Disease.