



Sustainable landscaping using compost

FACT SHEET

Composted mulches and soil conditioners are commonly used in a range of landscaping applications, such as in commercial projects, major developments, highway landscaping and in urban renewal projects. These products offer significant environmental benefits, by improving plant growth; providing essential nutrients; lowering irrigation requirements; improving the drought tolerance of plants; suppressing weeds; reducing erosion; and improving soil structure, water retention, infiltration and drainage.¹

Benefits of composted mulches

- Reduce irrigation requirements by up to 70%, mainly by reducing evaporation of water from exposed soil surfaces.^{2,3}
- Help hold water and reduce leaching loss, and improve the drought resistance of plants. These benefits can be significant in areas that do not receive irrigation.⁴
- Physically protect soils from the erosive forces of wind and rain.^{4,5}
- Reduce soil erosion by more than 90% on slopes of up to 15%.⁶
- Runoff can be reduced by more than 70%.⁷

Benefits of composted soil conditioners

- Add organic matter to the soil improving soil structure, water infiltration, and water holding capacity of the soil.⁴
- Turf grown with the application of composted soil conditioner can require up to 30% less water.⁵

- Assist in plant growth and vegetation establishment, which is critical for long-term erosion control and site stabilisation.^{4,5}
- Soil erosion can be reduced by up to 85%.⁸
- Slowly release essential macro and micronutrients for plant growth reducing the use of mineral fertilisers by up to 30% and making mineral fertiliser programs more effective.⁵

Potential cost savings

Soil conditioners and compost-based topdressings can reduce fertiliser use for establishing and maintaining turf at sporting fields by up to 30%.

A well-maintained sporting field uses a range of fertilisers costing about \$2,500 to just over \$6,000 per hectare per year (estimates provided by Nuturf Pty Ltd).

If a Council maintains 10 such sporting fields (about 15 hectares) with compost-based topdressing, savings in fertiliser costs could amount to between \$11,500 and \$28,000 per year.



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Using mulches and soil conditioners in landscaping projects can also result in savings in water used for irrigation.²

For example, a council in Southern Sydney uses bore water for irrigation. Due to costs of sinking bores, many street side plantings and ornamental streetscapes, as well as a number of smaller parks (turf and garden beds) are watered with water trucks (capacity of 1,500 to 6,000 litres per truck) that are filled with bore water. Council operates three water trucks, each staffed by two garden maintenance personnel.

Use of mulches, organic top dressings, and soil conditioners (for turf establishment) could reduce irrigation requirements by at least 40%.

This would remove the need for one of these trucks, saving all associated operating costs (more than \$100,000 per year). There will also be savings from reduced purchase of water where potable supply is used for irrigation.

References

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Application guide

- Products should comply with Australian Standard AS4454 (2003) Composts, Soil Conditioners and Mulches.
- Coarser composted mulches are applied on the soil surface around the plants after planting.
- Mulch should not touch the stems and trunks of plants; this prevents stem rot.
- Avoid application of fine mulches and/or thick layers of mulch on heavy soil types that can be prone to waterlogging.
- Composted soil conditioners are incorporated into the topsoil, commonly before planting to improve soil structure and water holding capacity.
- A mixture of fine soil conditioner and coarse composted mulch can be applied to improve both soil structure and water conservation and prevent erosion.
- Some composted soil conditioners can also be applied as organic top dressing to improve levels of soil organic matter in lawns and turf.
- Compost can be applied any time of the year. For water conservation, apply prior to summer when soil evaporation is usually highest and when plants require the most water. For erosion control, apply prior to rainfall season to reduce erosion.

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