RESEARCH LABORATORY TECHNICAL REPORT

BARTLETT TREE EXPERTS
SCIENTIFIC TREE CARE SINCE 1907

Vertical Mulching

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Vertical mulching (VM) is a technique used to assist in alleviating soil compaction within the critical root zones of trees i.e. area under the canopy. VM is also a means of fertilising trees and encouraging soil biological activity. VM can also reduce damage from excessive water by allowing necessary aeration during wet periods and sub-soil water penetration during dry periods. The technique also aids in promoting the formation of fine feeder roots.

Technique

Use a mechanical auger with a 7.5 cm drill bit to create holes that are 7.5 cm wide and 30 cm deep. The holes should be arranged in a grid pattern under the tree canopy with a 50 cm spacing between holes (Photograph 1 & 2). Dispose of the soil dislodged by the auger and fill each hole with a diluted liquid fertiliser*.

*The liquid fertiliser used and dilution rate (1:100 or 1:50) will depend on the results of a soil nutrient analysis.

Once the liquid fertiliser has drained away re-fill each hole with the following blend of fresh soil:

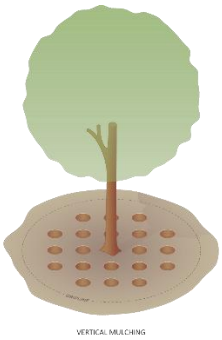

Photo 1 and 2 Vertical Mulching

Biochar (5%):John Innes Soil No 2 or 3 (50%):Multi Purpose Compost (40%): Slow release (6-12 month) inorganic or organic fertiliser (5%)**

**Other soil blends exist that can be used however, the one above has been shown to provide significant beneficial effects on declining trees as part of ongoing Bartlett Tree Research Trials. In addition at this stage other products such as microbial inoculants, worms, pH amendments can be added

Cover the entire treated area with a 5-10cm layer of woodchip mulch.

Advantages of Vertical Mulching

* Aeration of soils where the majority of tree feeder roots are located.
* Improved water percolation through the soil.
* Addition of organic matter directly into the soil and around the root system which further promote beneficial soil biological activity (worms, mycorrhiza etc).
* Promotes water penetration to the subsoil during dry weather periods.
* Increased root turnover especially feeder roots.

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