

SOIL TANK BENEFITS

INTRODUCTION

For many years it has been proven by numerous International and Australian research agencies that natural turfgrass provides the appropriate filter health and hygiene, and is an efficient erosion control agent that is sustainable through drought. Method of improving water efficiency for natural turfgrass growth is to ensure good soil physical conditions are available to support healthy root system which is the key to success with a healthily vibrant lawn. It surprises many people that in unrestricted conditions, grassroots can easily reach a depth of 20 to 30 cm especially in sandy soils.

In Natural Turfgrass what is seen on top more often than not reflects what is not readily visible , the root system.

THE ISSUE:

Many common challenges facing lawns include weed growth, wear, drying out and even plants capability to cope with pests and diseases most of which can be traced to problems with the physical condition of the soil.

- ✓ Good soil physical conditions are required to support healthy root systems, ***the key to success with lawns.***



A “Strong Root System” is the best defence held lawn can have against Leeds, where, drying out, pests and diseases. The roots will exploit available soil moisture and nutrients, and support thence top growth. That result in lawn will then have the vigour required to keep weeds at bay and recover rapidly from where, pests and diseases with normal maintenance.

When we talk about was physical conditions of soil, we are referring to attributes such as its hardness, compaction layers, depth, ability to drain and structural composition (clay, sand or rock). While the spotlight is often on soil fertility, issues such as fertiliser requirements and pH, **maintaining the physical condition of the lawns soil is often neglected.**

THE SOLUTION:

A common and often misunderstood problem in lawns is shallow topsoils.

The softer surface layer of soils is often accompanied by much harder (often clay) subsoil.

FACT SHEET

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The harder and more impervious any layers are the more important it is to increase the depth of your topsoil to support your lawn. Unfortunately with most new homes being constructed on a base that has been cut and filled, and with topsoil having been removed from some states, most homes have it leased some areas of soil with poor physical properties and requires a minimum of 75mm of good quality underlay topsoil. Recent investigation into the required depth of topsoil showed that major water savings can be achieved from 100mm to 200mm depth of topsoil.

The problem is shallow soils is that it makes the soil harder and more impervious therefore it is more important to increase the depth of your topsoil to support your lawns root growth systems. Lawns will not survive long dry periods if their root systems and growing soils are shallow restricting their growth.

In addition to the impact on potential root mass hard soil layers:

- ☞ Makes soil dry during low rainfall periods.
- ☞ Makes soil prone to flooding, which drowns the turf during heavy rain.
- ☞ Increases runoff and promotes erosion which in turn reduces the current soil depth.
- ☞ When erosion occurs sediment, fertilisers and other applied chemicals are then carried into waterways creating the add-on environmental problems.
- ☞ It exposes the soil to extreme temperatures which can kill off parts of the root system.
- ☞ Reduces vital soil oxygen supplies needed to sustain root systems.
- ☞ Reduces the potential of the soil to supply the appropriate required nutrients.

Soil compaction is one of the biggest and most unpublicised problems in southeast Queensland lawns.

If at all possible and available from your landscape supply yards, the use of Australian Standard Topsoil AS 4419 should be utilised wherever possible to a depth of 150 mm. If the Australian Standard Topsoil is not available there are 5 main ingredients required within the soil when purchasing lawn topsoil or underlay:

1. pH between 5.5 and 7.5, measured using 1:5 (weight/volume) soil extract.
2. Conductivity (a measure of salts in the soil) less than 1.2 dS/cm, measured using 1:5 (weight/volume) soil extract. (very salt sensitive grass may not tolerate levels this high).
3. Air-filled porosity at least 5-10% (Handreck and Black)
4. Good water holding capacity (not able to find a level for this, but could be in the standard)
5. Organic matter 3-15%

Having done this you are on the way to enjoying a healthy, lush green lawn.

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