



SYMBIO LIQUID AERATION



Benefits

- ✓ *Eliminates anaerobic black layer*
- ✓ *Combats the effects of squidge, water logging and compaction*
- ✓ *Encourages the breakdown of thatch which improves percolation rates*
- ✓ *Provides oxygen for increased microbial activity*
- ✓ *Increases the uptake of applied nutrients for rapid plant growth*

A revolutionary product that provides oxygen for healthy soil, microbe and plant growth in water-saturated, compacted and anaerobic root zones.

MODE OF ACTION All healthy plant growth and microbial soil activity requires oxygen, which is usually supplied by air moving into the soil.

SPORTS TURF ROOTZONES are constructed and managed to be firm and even and as such, have few natural air spaces in the rootzone. As a result, sports turf rootzones may rapidly become anaerobic as a result of physical compaction, overwatering or prolonged rainfall.

When regular physical aeration is impossible or a dense thatch layer holds water, the soil becomes anaerobic and black layer; root breaks, squidge and yellowing, poor-quality turf follow.

Contains 22% Nitrogen w (28% Nitrogen volume)

SYMBIO LIQUID AERATION is a blend of complex components that contain a high number of atoms of oxygen for every molecule of product. When diluted and sprayed over turf, these atoms of oxygen become available for use by the plant and soil microbes, encouraging normal aerobic activity in the rootzone.

STORAGE CONDITIONS Store in a cool dry place between 5°C and 30°C.

Hazard

Causes serious eye damage

Precaution

Keep out of reach of children

Take any precaution to avoid mixing with combustibles or reducing agents.

Wear protective gloves and eye protection

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing

Immediately call a POISON CENTRE or doctor/ physician

Dispose of contents/ container in line with regional regulations, empty container may be disposed of to trade or municipal waste

WARNING



APPLICATION AND TIMING

For maintenance of aerobic conditions to complement reduced physical disruption 1-2.5 litres per hectare. Use 2.5L/hectare for faster thatch reduction.

For compacted soils, dense thatch and squidge 2.5 -5 litres per hectare.

For Black Layer, highly compacted soils and waterlogged thatch 5 litres per hectare

Symbio Liquid Aeration can be tank-mixed with microbial products and most inorganic and organic fertilisers. Do not mix with fungicides. Always test mixes before adding to spray tank – complete a bucket test.

Apply as required to maintain excellent aerobic conditions apply every 2-4 weeks depending on soil conditions and irrigation inputs and/or rainfall.

If the anaerobic layer is deep in the root zone, the best results will be obtained by tining to the anaerobic layer before spraying to allow the liquid to penetrate quickly through the rootzone to the affected layer.

PACK SIZE: 5L



SYMBIO LIQUID AERATION



Symbio Liquid Aeration is a non-hazardous biodegradable oxidant that makes oxygen atoms available to stimulate the metabolism of bacteria and fungi thereby accelerating beneficial aerobic biological processes in soil and water. It rapidly changes anaerobic conditions to aerobic, destroying odours and preventing dangerous methane and hydrogen sulphide build up from unused fertiliser. It is an oxygen-rich liquid that is manufactured from oxygen & nitrogen bearing salts dissolved in distilled water. There are no poisons or harmful chemicals in it, so it is safe to humans, animals, plants and the environment, but could cause problems if ingested.



Treated



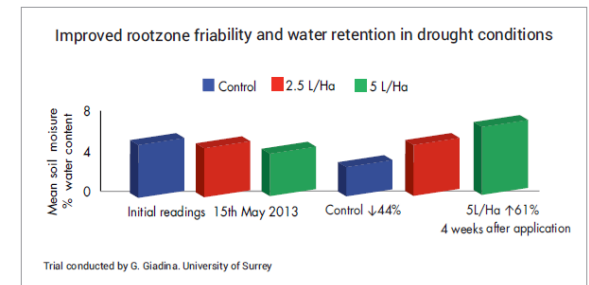
Untreated

So, how does it work?

The uniqueness of Symbio Liquid Aeration is that it is produced by a chemistry technique in which the reaction is endothermic (energy absorbing). For every molecule of this chemical, six atoms of oxygen are available for microbial usage compared to two atoms for metal peroxides and four for permanganates. In order for bacterial respiration or metabolism to occur, electron acceptors are required in the oxidation (metabolism) process. The most energetically favourable electron acceptor is oxygen (O_2), nitrate (NO_3) being next, and sulphate (SO_4) being the least energetically favourable electron acceptor. Because of Symbio Liquid Aeration's structure and properties, one of which is the molecule negative net charge, it acts as an oxidizing agent in atmospheric conditions as well, which adds to its uniqueness by allowing the instantaneous oxidation of malodorous compounds, oxidising sulphide to sulphate etc.

Symbio Liquid Aeration is a hydrated compound, which attracts moisture to keep bacteria and fungi working and also contains a surfactant

to allow it to migrate into the biomass, thus helping to "dry out" wet soils.



Symbio Liquid Aeration is a natural bio-stimulant. It enhances the ability of aerobic bacteria and fungi to degrade and mineralise organic matter. The oxygen rich Symbio Liquid Aeration helps fungi and facultative aerobic bacteria to metabolise more efficiently by turning the bacteria from anaerobic to aerobic. In the aerobic form the bacteria can degrade about seven to ten times the organic matter compared to the anaerobic state, plus toxic hydrogen sulphide is not produced by aerobic degradation.

It oxidises sulphides and promotes the nitrogen cycle converting ammonia and ammonium to plant available nitrate.