

BACKGROUND

- Black layer can have serious consequences on the health of turf.
- It is important to understand the causes of this problem and the methods used to control and prevent future occurrence.
- Black layer only occurs in anaerobic soil conditions.
- It is caused by a physical condition of the soil.
- If soil drainage is insufficient it is likely that anaerobic conditions will develop and encourage Black Layer.
- Anaerobic bacteria produce Hydrogen sulphide gas, which has a characteristic 'rotten egg' smell.
- Hydrogen sulphide is poisonous to grass plant roots.
- Hydrogen sulphide reacts chemically with metal elements such as Iron (Fe), creating black deposits, which form layers within the soil.



APPROACH

1. To control Black Layer it is essential that you treat the cause of the problem and not the symptoms.
2. Use a good quality rootzone material.
3. Minimise layering in the soil profile through compatible top dressing and mechanical action.
4. Minimise thatch in a programmed approach.
5. Minimise compaction and soil panning.
6. Use penetrant wetting agent to improve water through rootzone.
7. Sulphur does not cause Black Layer. Sulphur is an essential grass nutrient.
8. Potassium nitrate does not prevent 'Black Layer'. Continued use of Potassium nitrate may cause soil de flocculation, which could increase the risk of 'Black Layer' (J.B. Beard).
9. Continue normal programme but ensure good cultural practices.

i-TURF SOLUTIONS

Product type	Why	Scotts solution
Liquid fertilizer applied as a foliar	Black Layer causes poor soil structural conditions so plant unable to take up soil based nutrition.	Greenmaster Liquid range
Penetrant wetting agent	To improve water flow through rootzone and to improve soil aeration.	H2Pro Maximise