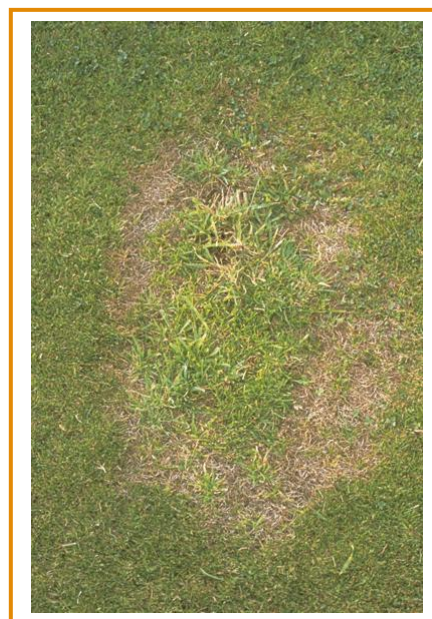


## Background

- Take-All Patch is most commonly found on newly constructed sand based greens.
- Soils with low CEC, poor Nitrogen fertility and with a high pH (>6.5) are suitable conditions for Take-All Patch to take hold.
- Take-All Patch primarily attacks Bent (Agrostis) grasses.
- Circular patches/rings are created where the Agrostis species have been killed off allowing invasion of weeds species.
- Overtime, with correct management, Take-all decline is likely to occur due to build-up of natural antagonists whereby the diseases become less severe.

## Approach

1. Ensure good availability of nutrients in poor nutrient holding soils.
2. Try to reduce pH of soil so that conditions are less favourable to pathogen.
3. Increase biological activity in the new sand environment so that there are more natural antagonists to the pathogen.
4. Manganese (Mn) has been shown to be effective as part of an integrated approach.
5. Check water quality for pH and nutrient levels.
6. Use acidifying fertilizers.
7. Avoid organic fertilizer, which tend to increase pH.
8. Avoid potassium nitrate, which increases soil surface pH.
9. Check topdressing pH.
10. Use fungicides as part of an IPM programme and be aware of causing resistance to one chemical group by its regular use.



## i-Turf Solutions

Product type	Why	Everris solution
Slow release fertilizers (NPK + trace elements)	Ensure maximum availability of nutrients in low nutrient holding soil.	Sierraform GT
Manganese fertilizer	Manganese has been shown to be effective as part of an integrated approach.	Sierraform GT: 16-0-16, 22-5-11, 18-6-18, 19-0-19, 6-0-27; STEP Hi-Mag, Greenmaster Liquid range (except Effect Iron)
Acidifying fertilizers	Lower soil surface pH.	Sierraform GT, Greenmaster Pro-Lite, Greenmaster Liquid
Carbohydrate + seaweed biostimulant	Build soil biological activity including mycorrhizas and bacterial nutrient cycling.	Greenmaster Blade
Approved fungicide	Use fungicide as part of an integrated programme.	Heritage Maxx

For solutions and treatments of Take-All Patch, please visit the dedicated solution pages at [www.everris.com](http://www.everris.com)