

## HIDDEN PAINS OF TURF GRASS - “PUTTING GREENS” CAUSED BY GREEN MICRO-ALGAE AND CYANOBACTERIA: A CASE STUDY

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Turf grass diseases are affecting the esthetic value of golf courses, causing severe economic losses to the management. Despite its economic significance, very few studies are reported worldwide on turf grass pathology and control remedies. Turf grass “putting greens” caused by green algae and cyanobacteria is one such problem occurring during wet seasons. In Sri Lanka, golf is not very popular and restricted to a particular social group. These are not scientifically researched despite their significance to the industry. The current study was conducted to evaluate the reasons for the sudden death of turf grass observed in one leading golf course resort in Kandy, Sri Lanka, which resembled the “putting green” disease. To understand the problem and the source of contamination, a pilot study was carried out to study the presence/absence and prevalence of green microalgae and cyanobacteria in affected and healthy areas. Overall, twenty soil samples were collected from three affected sites, two healthy regions neighbouring the golf course and two samples from sea-sand added areas with 3 replicates per site. A total of 32 species were recorded from affected sites; 15 cyanobacteria and 17 algal species belonging to five classes, Cyanophyceae, Chlorophyceae, Trebouxiophyceae, Klebsormidiophyceae, and Zygnematophyceae, while species number in healthy and sand samples were 2 and 18 respectively. *Chlamydomonas* sp. was common among samplings sites. Further, the species similarity determined by cluster analysis observed between sea-sand samples and affected areas but not with sampling sites neighbouring the golf course suggests that sand samples could be a source of contamination. The “putting green outbreak” seems to be caused by algae and cyanobacteria. However, it needs to be further investigated to confirm. Since most of the species belong to mucilage-producing taxa, this will highly affect the aesthetic value and will raise safety concerns, ultimately affecting their profit margins, highlighting the importance of developing control strategies for turf grass putting the green disease in Sri Lanka.

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