

Dear ETS members and turf enthusiasts,

Nowadays, the comparison between artificial and natural turfgrass is a very relevant topic: ETS deeply believes that the benefits of turfgrass will never be provided by artificial turf. On the contrary, artificial turf can be harmful both for human health and for the environment.

On nb.2/2009 of the European Journal of Turfgrass Science (EJTS – former “Turf-Rasen-Gazon” journal), published by the Deutsche Rasen Gesellschaft (Germany), 2 remarkable scientific articles on the comparison between natural and artificial turf are available.

The first article, Okobilanzieller Vergleich der Umweltauswirkungen von Kunst-und Naturrasenspielfeldern – Ecological balance of Natural an Artificial turf, by Stahl H. and Schuler D., analyzes different parameters in both kind of sport ground.

Due to the increasing interest of the environmental issues of playground, the Oeko-Insitut of Darmstadt compared the life cycle assessment of an artificial turf and a natural playground. The values presented are always reported in comparison with a standard playing rate of 1000 hours per year.

Some of these parameters are: greenhouse effect, not-renewable energy and photooxidants (chart 1)

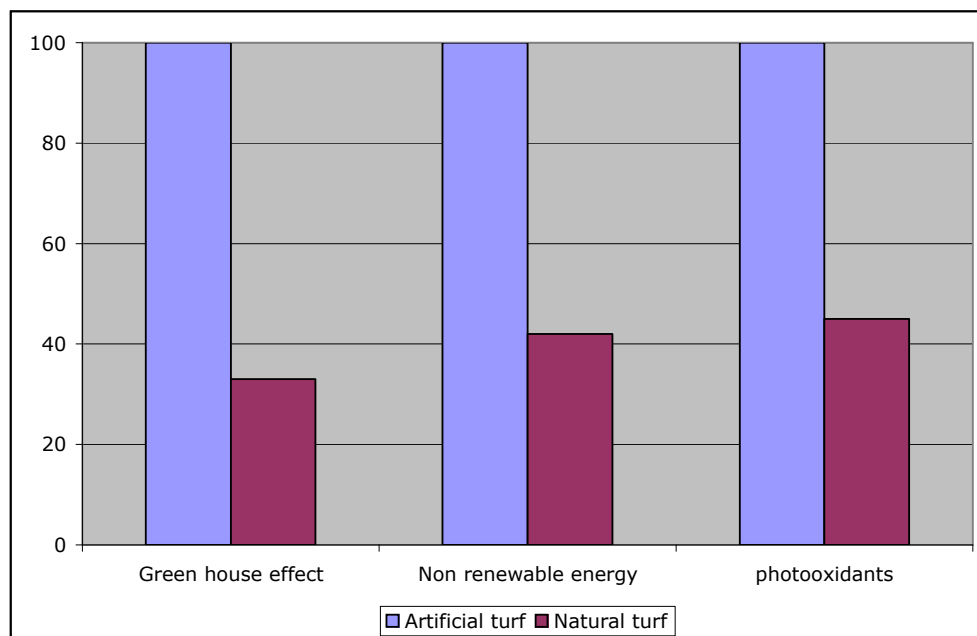


Chart 1: Part of the indicators used for the life cycle assessment, and their relative value.

The overall result showed, for most of the indicators studied, the ecological primacy of natural turfgrass vs artificial.

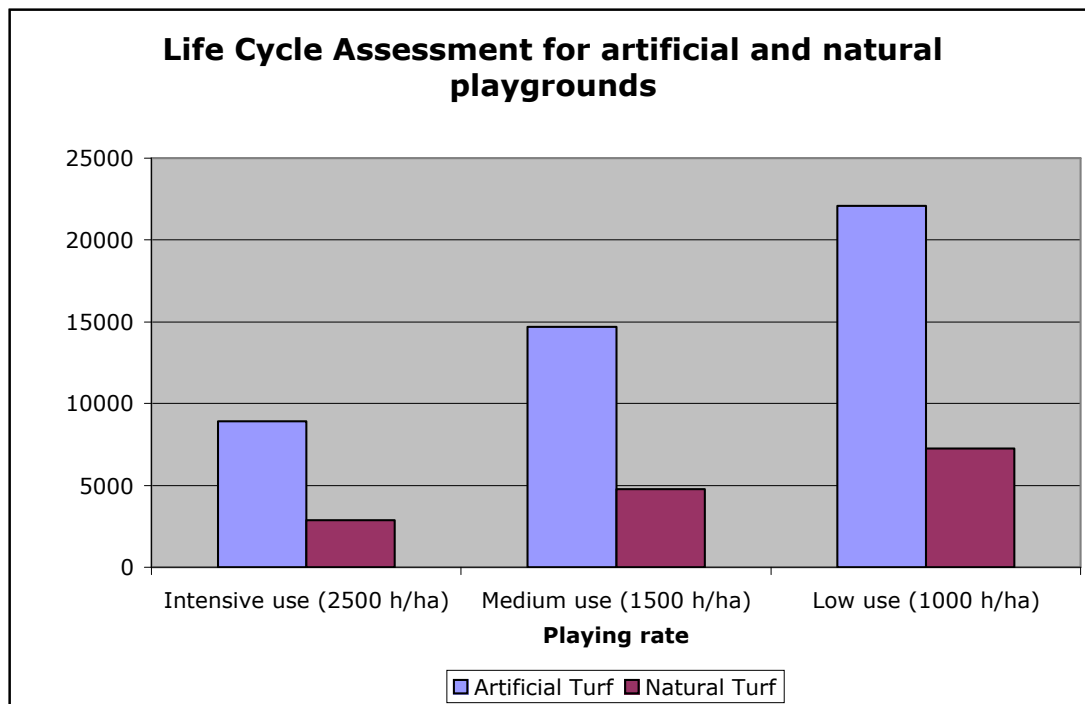


Chart 2: Life Cycle Assessment for artificial and natural playgrounds (emission of CO₂-equivalent) – The overall value includes several factors as: Carbon-sink, elastic layer, filling material, system realisation, maintenance, transports...

The second article: Vergleichende hygienisch-mikrobiologische Untersuchungen auf Naturrasen- und Kunststoffrasenflächen, by B. Horney, U. Bornkessel, Y. Manterfeld and W. Praemassing reports the results of a study on the presence of several microbial pathogens both on natural and artificial turf.

The results are clear: while natural turf does not present such kind of pathogens, on artificial turf it is possible to find several genus and species of pathogens such as Streptococcus spp. and Pseudomonas spp.

(Source: ETS elaborations based on the original articles)

Finally: here you can verify nature's slow path towards the colonisation of artificial turf! In the North of Italy, in Riva del Garda, on July 2009 evidences of colonisation of artificial turf by warm-season grasses such as Eleusine indica, Cynodon dactylon and other, were found in the Benacense stadium, recently set up with the most innovative techniques for artificial turf. These picture are showing one of these warm-season grasses growing on the artificial playground; in the second one, you can see Cynodon dactylon colonizing the same sport field from its edges to the centre of the playground.

