Evaluation of Spent Mushroom Substrate as a Topdressing for Established Turfgrass. (C05mcnitt161328-Poster)

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Abstract:

The objectives of this study were to measure the effects of topdressing spent mushroom substrate onto established turfgrass that was exposed to simulated football wear. The resistance to wear damage, surface hardness, and soil compaction were evaluated over time. Changes in soil physical and chemical properties were also monitored. One 64 mm application of spent mushroom substrate yielded a total nitrogen delivery and nitrogen slow-release pattern very similar to the commercial turfgrass fertilizer Nutralene applied at the rate of 4.5 grams per meter squared of actual nitrogen. The plots receiving spent mushroom substrate reduced the soil bulk density and the hardness of the turf surface compared to plots receiving only synthetic fertilizer. Soil water retention and cation exchange capacity increased. A slight trend indicated increased turfgrass wear resistance on the plots receiving spent mushroom substrate. Additional applications may be required to determine the effect of the substrate on traffic resistance.

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