Bermudagrass Playing Surface Conditions Altered with Fertility and Surfactants under Different ET Replacements

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In the 2018-2019 study, the surface characteristics of natural and synthetic turfgrass were tested. There were significant differences in the surface temperature between the athletic field surfaces. Synthetic and natural turfgrass have been commonly used on athletic fields for a long time. The purpose of this project is to see if a soil surfactant and different rates of nitrogen fertility will affect the surface characteristics of established natural turfgrass with different amounts of ET replacement. The common type of turfgrass used was (common bermudagrass). Surface hardness, canopy temperature, soil moisture content, and percent green cover were measured weekly for 84 days at a research farm from July until September. Each measurement was taken three times per plot. The hypothesis was not supported. Brand B applied at 49kg N/ha with soil surfactant did not have the softest surface, lowest differential temperature, and highest percent green cover while maximizing water reductions. The surfactant however, did not cause the surface characteristics of the turfgrass to increase or decrease. Brand B applied at 49kg N/ha also had the one of the softest, lowest differential temperature and highest percent green cover for the 70% replacement. In conclusion, altering the care and water management of turfgrass could conserve a significant amount of natural resources with less monetary funds while establishing more conducive playing surface for turfgrass playing fields.