Artificial Turf Is Hot
Say Agricultural Engineers

Two Auburn University agricultural engineers, have reported that artificial turf areas will heat up to far higher temperatures than adjacent areas of turfgrass.

Reporting at the recent American Society of Agricultural Engineers annual conference, the Alabama university researchers, J. L. Koon and E. W. Rochester, said they found that surface temperatures of the synthetic material during periods of peak incoming radiation were considerably higher than those of turfgrass. “Maximum surface temperature,” they said of synthetic material exceeded 150° F. with the corresponding temperatures of turfgrass not exceeding 110° F. “Differences in net radiation above the two surfaces were slight.

Even though the temperature may be only two to three degrees Fahrenheit hotter above the synthetic surface of a playing field in comparison with grass surface, this difference may be important when the temperature is in the critical range.

An area of Astroturf which was installed at Auburn at the edge of a much larger Tifton bermuda grassed field was the site for the studies. “The objectives of the studies were to determine differences in dry-and wet-bulb temperatures, surface temperatures, and net radiation which exists on and above artificial turf as compared with natural turf,” the investigators explained.

The Auburn researchers, pointing out that the new surface has required modification of player equipment and playing tactics, offered a table of exercise precautions based on wet-bulb globe temperature. When the temperature ranged between 85 and 90 degrees, all drills in full uniform on synthetic turf should be cancelled, and above 90 degrees all training should be stopped, with “skull sessions” the order of the day.

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