IMPROVING WEAR TOLERANCE OF ATHLETIC FIELDS

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The demand on sports facilities by our large, urbanized, leisure-oriented clientele has been and will continue to be dramatic. The fields that serve the clientele must provide good playing surfaces that are safe for the users. Good surfaces are those that are uniform in color, density and texture; those that are capable of being clipped at a suitable height for the particular game; those that are free from pest activity and those that are firm, tough and wear-resistant yet sufficiently "giving" to cushion players. Players, coaches, parents and adult users are demanding that these surfaces be safe for the intended activity.

If this seems like a tall order, it is! Filling this entails applying basic agronomic practices: choosing the right grass and soil, constructing the facility correctly, then maintaining the turf cover with proper mowing, fertilization, irrigation, coring and thatch control practices. These steps will fail, however, if fields are overused by too many activities, and grooming and recovery time is insufficient.

Three basic factors should govern the selection of a turfgrass for a sports facility. First, the grass must be adapted to the local environment, with the components of on-site soil and climate taken into consideration. A well-adapted species and variety of that species will give a good quality turf of high recuperative ability and a turf of reduced pest susceptibility. Second, the grass selection should account for the use the facility will receive. Specialized sports as well as intensity of use are important considerations. Third, the intensity or level of management that can be provided should strongly influence grass selection.

The plant characteristics that favor wear tolerance are above-ground mass of plant material produced per unit time, high lignin and cellulose content in the shoot, and hardened cells for strength and rigidity. Also, turfgrasses that are quick to recover from injury are better able to tolerate traffice.

Thte cultural practices that must be focused toward improving wear tolerance are aerification, fertilization, irrigation, mowing, and weed control. Speciality practices such as insuring surface and subsurface drainage, topdressing and surface smoothing and temperature modification are also used to improve the ability of turfgrass to tolerate intense traffic.