



Standard Guide for Maintaining Cool Season Turfgrasses on Athletic Fields¹

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1. Scope

1.1 This guide covers the minimum requirements for maintaining cool season turfgrasses used for natural surface athletic fields. Practices covered include mowing, fertilization, irrigation, core cultivation, overseeding, and pest management.

1.2 The decisions involved in maintaining a quality natural playing surface should consider soil types, local climate and other factors; therefore, it is recommended that you contact your local cooperative extension service for more specific information on soils, and grass species and cultivars adapted to your area.

1.3 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Terminology

2.1 *Definitions of Terms Specific to This Standard:*

2.1.1 *athletic field, n*—a field constructed and utilized for conduct of various organized sporting events.

2.1.2 *cool season turfgrasses, n*—grass species widely adapted to cool temperate climates. Some species persist and are used in warm humid to warm subhumid climates; referred to as the transition zone. Cool season species commonly used for natural playing surfaces include Kentucky bluegrass, perennial ryegrass, tall fescue, fine leaf fescues, creeping bentgrass, and colonial bentgrass. Creeping and colonial bentgrasses are normally used only on croquet and lawn bowling courts.

2.1.3 *thatch, n*—an accumulation of undecomposed organic matter that can form at the soil surface in a turf.

3. Significance and Use

3.1 A dense, uniform stand of turfgrass on a playing surface improves the playing quality and safety of the field by providing firm footing for the athletes and by cushioning their

impact from falls or tackles. These standards are the minimum inputs required to provide such a surface. Various published guides have been used in the development of this guide (1-5).²

3.2 Field conditions may directly influence the frequency and type of athletic injuries occurring as a result of using the fields. While these standards do not guarantee that such injuries will be prevented, a well-maintained turf on a natural playing surface should minimize field-related injuries.

4. Apparatus

4.1 *General*—Experience and good judgment are important to match the proper type of equipment to the nature of the task to be performed.

4.1.1 *Mowing Equipment*—Mower types include reel, rotary, and flail; although, the latter type is not recommended for fine playing surfaces. A reel mower should be used for playing surfaces requiring mowing at less than 1.5 in. (3.8 cm). Mower blades should always be kept sharp and properly adjusted in accordance to manufacturer's recommendations. Mowing equipment should be operated in a speed range consistent with the manufacturer's recommendation.

4.1.2 *Spreaders*—Spreaders are necessary if dry fertilizer or pest control materials are to be applied. Spreader types may include drop, rotary (centrifugal, spinner), or oscillating. Spreaders should be calibrated to deliver the desired, labeled, or recommended rate of fertilizer or pest control product being applied.

4.1.3 *Sprayers*—Sprayers are necessary if liquid fertilizers or pest control materials are to be applied. Low pressure systems are recommended. Sprayers should be calibrated to deliver the desired, labeled, or recommended rate of fertilizer or pest control product being applied.

4.1.4 *Core Cultivators*—Core cultivation (aerification, coring) equipment relieves soil surface compaction. Core cultivators should be of the type that physically removes soil, such as a hollow tine or spoon. Cultivators with ½ to ¾ in. (13 to 19 mm) tines on 4 to 6 in. (100–150 mm) spacings should be used on all playing surfaces. Spikers, slicers, or similar types of equipment are not suitable for relieving surface compaction.

¹ This guide is under the jurisdiction of ASTM Committee F08 on Sports Equipment and Facilities and is the direct responsibility of Subcommittee F08.64 on Natural Playing Surfaces.

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² The boldface numbers in parentheses refers to the list of references at the end of this standard.