

## COMMON PROBLEMS ON ATHLETIC FIELDS AND HOW TO SOLVE THEM

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During the lifetime of an athletic field many problems develop that can lead to the decline and eventual demise of the facility. Some problems can be solved without many resources, others cannot be solved regardless of the resources.

Many problems relate to the initial development of a site. These include improper drainage and poor soil profiles. These can be partly corrected by the use of wetting agents and top dressings. The most serious problems on athletic fields are caused not so much by poor maintenance but by overuse and use during very wet conditions.

Infields on softball diamonds can become unplayable if used during or after heavy rains. This problem can be corrected without extensive reconstruction. The addition of crushed limestone (available from many sand and gravel processors) in layers as thin as 2" will allow infields to drain rapidly for quick use after heavy rainfall. Outfield problems are much more difficult to solve, especially if the field is used for more than one sport or activity. Heavy use can wear most turfgrasses down to the soil-line, thus, destroying the crown and the plant's ability to recover. If possible, use should be restricted when fields are wet or under stress. By alternating fields, and using different areas on the field for practice and play, some of these problems can be reduced.

To correct severe wear problems after they exist calls for the use of highly regimented maintenance programs. Irrigation, deep core cultivation, heavy overseeding, fertilization, and weed control are all necessary to ensure successful recovery. In the area of topseeding a few options are available. Here in southeastern Michigan, good success has occurred with the use of turf-type tall fescues. Varieties such as Cimarron, Rebel, Bonanza, Apache, and Olympic have exhibited fine leaf texture and adequate winter hardiness. When combined with improved perennial ryegrasses such as Manhattan II, Palmer, and Omega they present a dense turf that will resist traffic and poor maintenance better than the improved Kentucky bluegrasses. In addition, the seed is less expensive and the establishment of dense turf is quicker than with the bluegrasses. When extensive overseeding is necessary to re-establish turf in heavy traffic areas, tall fescue/ryegrass mixtures have proven successful at the University of Michigan at Ann Arbor. One of the problems of these mixtures is a lack of uniform texture across large areas. Additionally, the two grasses have different moisture and fertilizer requirements. The tall fescues do not tolerate high nitrogen levels (above 2 lbs/1000 sq ft/yr). The perennial ryegrasses do not tolerate low nitrogen levels (below 2 lbs/1000 sq ft/yr). Where uniform appearance is of greater importance perennial ryegrass blends have been used with good results.

Mowing heights of 2" - 2.5" give the best results with both tall fescues and perennial ryegrasses.

Knotweed is a major problem on heavily used fields. It can be successfully managed using any 2,4-D/MCPP/Dicamba combination available on the market.

Easy solutions for sports turf problems do not exist. Most of the management options available have some faults. While the Kentucky bluegrasses offer the most attractive turf, they are difficult to re-establish on heavily used athletic fields. The perennial ryegrasses do not exhibit the hardiness or mowing qualities of the bluegrasses, but are much easier to re-establish. The tall fescues do not have the hardiness or fine leaf texture of the ryegrasses or the bluegrasses, but can be established and maintained at a lower cost. By experimenting with different turfgrass programs it is possible to find workable solutions to the problems that any site may present to a successful turf manager.