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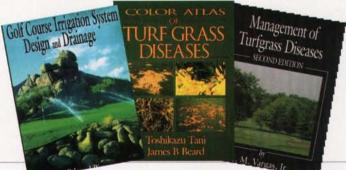
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Safest Field

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the use to which they are subjected. It is still possible, however, to produce an acceptable playing surface by adjusting maintenance practices to coincide with existing inferior soil conditions and turfgrass cover. Obviously, the degree of aesthetics and turfgrass health suffers, which has a direct effect on expectations for that area, especially if the field is scheduled with activity that is beyond its capability.

The following list of turfgrass maintenance items are what I consider to be the most important in descending order. Obviously, there may be some, perhaps even many, who would disagree or dispute my priorities; however, they are based on developing an acceptable, safe playing surface regardless of the budget available. The list assumes that the rootzone and turfgrass species and variety are already in place.

1. Irrigation

Even if the playing surface is comprised of undesirable weeds and grasses, if it's green and thick it can provide acceptable play. Irrigation is the best insurance for keeping desirable turfgrasses alive and healthy, preventing the encroachment of weeds and other undesirable grasses. Prudent management of the irrigation system will promote the most effective and efficient use of water in maintaining good playing conditions.

2. Mowing

Having the proper mowing equipment and mowing at the proper height and in the proper manner will go a long way toward producing a good playing surface. Proper mowing techniques will enhance the surface safety, playability and aesthetics.

3. Fertilization

To get the most out of what you have requires a proper diet. With heavy-duty activity, the turfgrass must be given a chance to grow and repair itself, and a fertility program, no matter how modest, will help promote a healthier plant. Proper timing based on the physiological growth characteristics of the plant is very important. More money available in the budget gives more options and opportunity for longterm extended growth.

4. Aeration

Regardless of the soil type there eventually comes a need to open up the soil surface and upper portion of the rootzone area to relieve soil compaction. This allows water and oxygen to flow more freely within the soil profile, creating a better growing environment and better playing conditions.

5. Topdressing

Applying a small amount of sand/soil mix to the turfgrass surface helps to level the field while creating a growing medium to assist the turfgrass in its growth expansion. It also helps to decrease excessive thatch and provide a firm, resilient surface for play.

6. Pest Control

No turfgrass area is immune from weeds, insects or diseases, and periodic control measures are usually necessary. Knowing the conditions that invite pests into the turfgrass environment is very valuable information. The timing and type of control is of equal value. A local Extension Service or university is a valuable resource for help.

7. Dethatching

Thatch in turfgrass areas is created when the rate of dead plant material (roots, rhizomes, stolons and stems) exceeds the ability of the biological community of the soil to decompose it. Excessive thatch inhibits water and nutrients from entering the rootzone. Excessive thatch can also create an environment for the proliferation of undesirable microbial activity that can present disease and insect problems. And, excessive thatch can affect the playability of the field. Players on heavily used sports fields can perform their own dethatching just by the amount of activity.

8. Overseeding

Overseeding is one of the best practices available for thickening existing turfgrass stands or changing a turfgrass stand from one species to another, such as the case with dormant warm season grasses in the winter being converted to a cool season species. The success of an overseeding program involves proper seedbed preparations, proper seeding application methods and rates, proper moisture levels during the establishment period, proper nutritional supplements and an adequate non-use period for the field in order for the turfgrass to become well established.

For programs with constant use on the playing fields, the success of overseeding will be extremely limited. Not only is overseeding expensive in terms of time and money, but to be truly successful requires the field to be shut down for a period of time for establishment to take place, something most high-use playing fields do not have the luxury of doing. For this reason I've chosen to put overseeding way down on the list of priorities. Obviously, if adequate downtime can be afforded, then overseeding would move way up on the list of priorities; however, with daily field activity, overseeding is not much of an option for creating a turfgrass stand.

9. Sodding

The quickest way to create a turfgrass stand or to repair worn-out turfgrass is by sodding. Just as with seeding, soil preparation is a key element in the success rate of sodding. Providing the proper soil texture, structure, nutrient availability and moisture will greatly enhance the establishment, health and vigor of sod.

It's also important to remember that the sod's soil should be of similar texture to that of the prepared soil to avoid layering, which drastically affects water infiltration and percolation. Keep in mind, also, that newly sodded areas require very different irrigation regimes than those of established sod for at least three to four weeks under adequate growing conditions.

Because of this, sodding worn-out areas on a field will require a greater amount of effort and time in selective irrigation so as not to over-irrigate the existing turfgrass areas. This is also the most expensive way of providing a turfgrass stand, initially. However, when considering the overall costs of sodding versus seeding, turf managers will find that they pretty much even out when both become established.

Summary

The primary purpose of a sports turf manager is to provide a safe and aesthetic playing surface that offers the most optimum playing conditions possible. Obviously, the more time and money that is available, the more options will exist for providing better conditions.

What I've attempted to present here is a list of priorities that one can pick and choose from depending on his or her budget and represents only a set of guidelines toward maximizing the budget dollar. Each turf manager is unique with varying degrees of expectations for playing field conditions, but for the safety of the players and the health of the turfgrass, this list may be a useful tool in developing your management strategies for building the best field on any budget. \Box

Steve Wightman is stadium turf manager for San Diego's Jack Murphy Stadium.

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