

SAFE SPORTS TURF IS MULTI-PURPOSE FACILITIES

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Safe sports turf should be the goal of any sports turf manager and those individuals involved with it. All too often safe sports turf is not a high priority until a serious injury draws someones attention to it. Investing in a well planned program of professionally trained personnel, equipment and materials needed and scheduling of events, will pay off in the long run. With the high dollar injury lawsuits being won today, you must do everything possible to prevent these injuries.

Natural grass is the best playing surface for sporting activities. When managed properly it will be soft and resilient enough to help prevent injuries, yet also provide good footing. Unfortunately, there are some sports fields that are heavily compacted, unlevel and rough...basically neglected! As a result injuries can happen. It requires serious dedication to stay on top of these conditions and sports turf knowledge to not let them get out of control.

Here's an example of the need for proper event scheduling and communication:

You have an all important game Saturday night. Monday it rained. So the groundskeeper could not do any work aerofying, fertilizing, seeding or field painting. Now it's Tuesday, four days to game time. Field work to be done as mentioned above, but still quite wet. Oh yes, the band needs at least a day of practice and the coach wants to get out there with the team. Two more days gone, two days left. Oh nuts, another day of drizzle. One day left. Forget the aerofying and fertilizing, just get painted, but the band needs one more practice and the coach wants at least one more practice. Coach and bandmaster tell groundskeeper, throw some sand on it.

Day of the game, team loses game because player slipped making that cut and cost team a touchdown. Damn groundskeeper, when will he learn to care for a field?

Ladies and Gentlemen, this is, I admit, an exaggerated hypothetical picture, but it can happen in various ways.

Due to budgets, time and weather we must work as a team. Proper event scheduling is a must. Meet with the coaches and band leaders, work out a schedule short enough to complete your work and give them time too. You are all part of the same team, and the job is much easier working together, and in the end you can all enjoy the winning season knowing you each did your part, but as a team. And remember, post season brings the school more money so the school can get more of the things you each need.

Along with scheduling, I will be focusing on five components of turfgrass management: mowing, irrigation, fertilization, weed control, and cultivation. When done properly together along with event scheduling they will help provide a safer sports turf. When even one is misapplied, not only will the grass suffer, so may your athletes.

MOWING

Mowing is the most fundamental turfgrass cultural practice. Depending upon the cultural intensity required on a given site, mowing can range from being done to maintain top growth within specific limits, to enhance the aesthetics of a turf or to help control weeds that are intolerant of mowing. As a

general rule do not remove more than 1/3 of the grass blade with any one mowing. Mow often enough to prevent this. Otherwise the grass will be put under unnecessary stress.

Whether you use a reel mower, a rotary mower or a flail mower, it is very important to have sharp blades or reels to help ensure a clean cut. Because each time the grass is cut, it opens a portion of the blade, thus creating the potential for disease causing pathogens to invade the plant. If the reels are dull and nicked up, the grass blade will have torn, ragged cut thus stressing the plant and opening up more of an area for possible pathogens. The quality of cut is important.

The mowing height varies with each turfgrass, be it cool season or warm season. A thin weak turf can result from a cutting height lower than the turfgrass species tolerance. As a result weeds can fill in the area. Weeds have a greater difficulty invading turf when it has strong competition from a properly mowed turf that is healthy, dense and aggressive.

IRRIGATION

The sports turf manager needs to know and understand the soil he is working with. The soil should never become completely dry or be completely saturated for prolonged periods of time. Irrigation is a very difficult aspect of turfgrass management. When irrigation is misapplied it can only hurt your sports turf managers program. It is a “tool” of the profession and needs to be treated with respect.

Deep and infrequent irrigation cycles are recommended. This will encourage the roots to reach for the water thus growing deeper and enhancing the strength and resilience of the turf. Frequent shallow irrigation will result in a weak shallow rooted turf that will have reduced wear tolerance and high susceptibility to injury from disease and/or climate stresses.

The sports turf, timing of the irrigation cycle is important. It should be timed to avoid soil moisture when high activity is anticipated on the field. When possible, irrigation should be scheduled to avoid watering at least one day prior to an event. This will help reduce soil compaction from the event.

The type of soil profile and water contribute greatly to the amount of irrigation needed to supplement what nature gives us. I would encourage you to have a soil test done to help you and your manager better know what you are dealing with. This will not only tell you the type of soil (% sand, % silt, % clay) but can also help guide you with your fertilization program by having a nutrient level test done at the same time.

FERTILIZATION

Learning what to use, when to use it and how are vital to a proper fertilization program. There are an extreme number of different types of fertilizers on the market today. You must find the right types that work for you and your turf.

The major elements or nutrients—nitrogen (N), phosphorus (P), potassium (K) are the ones most often supplied in commercial fertilizers. The needs for each vary from turf to turf, site to site. As I mentioned earlier, soil testing can be a guide in helping to set up a fertilization program.

Nitrogen (N) initiates leaf growth and color. It can also affect temperature and drought hardiness and disease susceptibility. Phosphorus (P) affects establishment, root growth and development of turfgrasses. Potassium (K) is often recommended to improve turfgrass wear tolerance as well as survival from cold, heat and drought stress.

There are also micronutrients to be considered in each fertilizer. An example of one of these is iron (Fe). It helps promote a deeper color to the turf without a flush of growth.

WEED CONTROL

A weed is any plant that is undesired. It may be aesthetically displeasing because of its color or growth habit. It may be so aggressive it is “choking” out the desired turf. In any case it should be dealt with before it gets out of hand.

Two methods of weed control are chemical and cultural. When dealing with herbicides you should remember that if they are misused they can also adversely affect your desired turf.

Preemergent herbicides are applied prior to the emergence of the weed to be controlled. An example is the application of Siduron for the control of crabgrass in Kentucky bluegrass. This is applied several weeks prior to the anticipated germination to ensure control. This product is selective in that it will prevent crabgrass germination but not the germination of additional Kentucky bluegrass.

CULTIVATION

Cultivation practices are primarily designed to reduce problems associated with soil compaction. Excessive compaction can result from too many games, practices or basic abuse of the field. Compaction can be a major factor in the field not being a safe turf. Compaction leads to shallow rooting, drainage problems and weed infested turf. All of this affects the development and maintenance of sports turf management.

Aerification can help us with each of these possible problems. Core cultivation can be done where hollow tines or spoons are used to remove soil cores (plugs) from the turf. The size and depth of these holes vary with type of equipment used. Aeration that is as deep as possible yet does minimal surface disruption is ideal. After core cultivation, the plugs that remain on the surface should be removed or broken up and dragged in as a topdressing that can also help level some of the small divots from prior events.

Shatter coring is done with solid tines or blades. This can be done without the follow up cleaning work needed with core cultivation. An example of this is the Vertidrain machine. It can go up to the depth of 16 inches. This helps drainage as well as relieving compaction and helping the turf become safer.

Another type of aerator on the market is the Toro hydroject. It uses high pressure water to penetrate the soil and aerate. It also does not have the follow up cleaning of cores.

Each of these methods can be a valuable asset to a sports turf management program. Don't let cost deter you from getting the proper type of aerator. If you cannot afford to purchase one of these units, one option would be to contract the service out to a qualified consultant or company. They can come in and do it for you at a much lower cost than the initial outlay of cash to purchase the unit. Another option would be to work with other area school districts, park systems, golf courses and work out possible equipment loans. Old fashion horse trading... You help them, they help you. Be creative in ways to get what you need to help achieve that safe turf.

In closing, allow me to reiterate the need for a well designed sports turf management program. Remember, when done properly, even scheduling, mowing, irrigation, fertilization, weed control and cultivation will help provide a safer sports turf. Let them know you support them and appreciate their needs. Try to educate them on parts of your work. The more they know, the better you and your sports turf will be. Try to help them by limiting the field events at each site. Work together! Remember, a well maintained turf can handle a considerable amount of use without serious damage. However, it does have its limits and excessive use can lead to unsafe conditions.

I encourage you to ask questions or ask for help. Get advise from a professional consultant, a university or an extension agent. Contact the Sports Turf Managers Association (STMA) for additional help. Safe sports turf is a must! A young persons life can change in a split second due to a serious sports injury. Don't let it be a result from poor sports turf management. Help yourself and the sports turf industry be safer in the future.