GENERIC FOOTBALL FIELD MAINTENANCE PROGRAM

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Mowing

- Rule of thumb - "mow frequently enough so that no more than one third of the grass height is removed at each mowing". If your mower is set at two inches then after mowing the clippings should only be one inch long. Clippings should easily filter into the turf canopy and should not be removed from the field by sweeping or bagging.
- Reel-type mowers produce the best cut and make an attractive stripe on the field.
- For the best traffic tolerance, mow cool season grasses at two to three inches and warm season grasses at one to two inches.

Watering

- Water only when the plant tells you. Look for the first signs of visible wilt and then water deep and infrequent. Mature turf can withstand moderate drying and this will increase root growth and prevent over watering of the field.
- Over watering can increase turf disease and create anaerobic soil conditions.
- When forcing growth with nitrogen fertilizer and when establishing grass from seed or sod, it may be necessary to water with lighter amounts more frequently.
- A permanent, and preferably automatic, irrigation system that evenly supplies a minimum of 1/4 inch water daily is desired.
- Commercial traveling gun sprinklers have also been successful when an automated system is not possible.
- Small homeowner-type sprinklers are not suitable for football field irrigation.

Fertilizing

- Have the soil tested once a year and make adjustments for pH, phosphorous and potassium.
- In addition, apply potassium during the growing season at the same time and same rate as nitrogen.
- At least once per year, apply a complete fertilizer containing nitrogen, phosphorous, and potassium.
- Apply phosphorous in combination with coring to facilitate incorporation into the soil profile.

- Nitrogen Fertilization Schedule:

  Cool season grasses (bluegrass, ryegrass, and fescue)

March to April	1.0 lb N/1000 sq. ft. from a soluble N source;
May	1.5 lb N/1000 sq. ft. from a slow release source;
Sept. to Nov.	1.0 lb N/1000 sq. ft. per month from a soluble N source.

  Warm season grasses (bermudagrass)

  -One month after green-up and two months before the first frost, apply 1.0 lb N/1000 sq. ft. per growing month.

Pest Control

Contact your State Turfgrass Extension Specialist for local pest control recommendations. Pesticides are an effective way to control weeds, diseases, and insects when pest populations are high enough to cause turfgrass decline. Your goal should be to properly identify the pest problem in the early stages; determine if the pest population would significantly alter turf function; and develop a plan to reduce the pest population. Routine pesticide application as a preventative measure of pest control is not recommended on high school athletic facilities. Treat the pest curatively once it has been observed; and preventively only when you have had prior outbreaks and have good reason to suspect a recurrence.

Remember you are not exercising sound policy when pesticides are used as insurance against turf loss and as a substitute for proper employee training in turfgrass management.

- Weeds

    - Herbicide applications must be carefully scheduled to account for newly emerging turfgrass that may be part of your annual renovation program for high-traffic areas. Most herbicides are not labeled for use on newly planted or seedling turf.

    - Broadleaf weeds can be effectively controlled with selective post-emergent herbicides.

    - When annual grassy weeds are anticipated, control with a pre-emergent annual grass herbicide.

    - Knotweed and crabgrass are especially competitive weeds in high-traffic areas. When renovating and reseeding high-traffic areas, seed at 1.5 to 2 times the normal seeding rate to give the young turfgrass a competitive edge. High seeding rates in small areas can often eliminate the need for herbicides.

- Diseases

    Specific turf diseases can be managed with fungicides and cultural practices such as mowing, watering, and fertilizing. If you are experiencing routine loss of turf from disease, it is time to change your management practices or select more disease-resistant grasses. Fungicide application should not be a routine practice on high school athletic fields.

- Insects

    Subsurface feeding insects are of major concern because they feed on roots, cause turf to be easily dislodged, and result in poor footing. Know the life cycle of underground feeders such as grubs and anticipate when they may become a problem. Insecticides can give a quick kill once you know where and when a pest is present. Insecticide application should not be a routine practice on high school athletic fields.

Cultivation

- Hollow and solid tine coring, water jet coring, slicing, and spiking are methods of cultivation that are routinely used on football fields to reduce soil compaction.

- Cultivation equipment physically penetrates the surface to improve air, water, and nutrient movement into the soil.

- Hollow-tine coring equipment is absolutely necessary in the management of high-traffic athletic turf. Football fields should be aerated at least twice per year. In high-traffic areas, it is not uncommon to aerate six to eight times per year.

Renovation

High school football fields usually require renovation every one to three years. The extent and cost of renovation will depend on how long the field has been neglected. Typical components of a renovation are:

- Repair crown by adding soil and regrading.

- Core aerify and add complete fertilizer and other soil amendments.

- Topdress with sand or sand/soil mix.

- Drill or slit seed in two to four different directions with commercial turf-type equipment. Drill seeding is preferred, but broadcast seeding in combination with power slicing and coring has also been successful.

- Water light and frequently until turf is established.

Traffic Control

Managing a football field requires coordination among the administrator, coach, band director, and grounds manager. Administrators should keep in mind that proper traffic control costs nothing in terms of dollars and at the same time offers the most effective means of reducing dangerously worn areas on game and practice fields. Understanding your role as a user of the field is a first step in communication.

- The coach must take an active interest in scheduling practice activities and preventing excessive turf wear. The coach and the grounds manager can work together to develop improved grass areas specifically for drills that are conducted off the game and practice fields.

- The band director should have a practice field painted on another grass area or in a parking lot. The area should be situated so that the practice can be viewed from above, as if you were in the bleachers. Band practice on the game field should be limited to once per week and only when the soil is dry enough to resist compaction in marching paths. No activity (band, football, or field maintenance) should be conducted on the field while there is frost on the grass.

- The grounds manager should realize that he is caring for a multi-use facility rather than just a football field. Extra use requires additional labor, equipment and resources.

- The administrator should clearly define the conditions for using the field. As much as possible, reserve the field for games only. Be prepared to allocate resources on an annual basis for field maintenance and on a less frequent basis for field renovation. Spread larger capital improvements out over multiple years, i.e. automated irrigation system:

  Year 1 install pipe, valves and wire;
  Year 2 install heads and operate system manually; and
  Year 3 install automatic controller.