

# CHALKBOARD

## TIPS FROM THE PROS

### **Budget-Oriented Athletic Field Care**

Dr. William Daniel, professor emeritus of soils and crops, Purdue University, IN, has developed a three-tiered athletic field care program designed to fit any budget. His hope is to get fields that aren't currently maintained onto an economy program. As the benefits of maintenance are realized, managers of these fields can move up to an improved care program or, the ultimate, best care program.

Daniel says for best performance athletic fields should meet three requirements: surface water must not accumulate; the surface should be smooth and stable; and turf should be in good condition for safety and appearance.

Timing of maintenance practices is the most significant element in any turf care program, according to Daniel. He says it's better to start early than to put athletic field maintenance off until the last moment. A fixed routine can help prevent problems with timing and maintenance frequency.

The **economy program** concentrates on the basics. Daniel recommends an application in mid-August of a minimum of 50 pounds of actual nitrogen per standard football field. If the entire area inside an oval track is fertilized, then 100 pounds are necessary. This amounts to 100-200 pounds of 45-0-0 fertilizer or 300-500 pounds of 16-4-8. A second application of fertilizer should be made in mid-season.

The field must be watered if at all possible. Daniel urges those managers without irrigation systems to consider a traveling type of irrigator with automatic cutoff. These sprinklers travel along a 400-foot cable. A one-inch hose, 200 feet long, is attached to a water source near the 50-yard-line on the side of the field. The hose can then reach the entire length of the spray pattern.

Mow as high as practical, says Daniel, rather than as low as possible. It is important to maintain as much leaf surface as practical to provide maximum protection against wear and cushion. The extra leaf surface also encourages deeper rooting and provides energy within the plants. Mowing height of two inches is considered average for Kentucky bluegrass or tall fescue. Raise the cutting height 1/2-inch during the summer.

Sharpen mower blades frequently. If at all possible, use a lightweight rotary or reel mower instead of a flail mower on athletic turf. Heavy tractors will cause compaction. If you must use a tractor mower, make sure it has turf type tires.

Overseed lightly before each home game. Spread five pounds of seed over thin areas with a cyclone spreader. Allow cleats to push the seed into the soil.

After the last home game, mulch thin areas with an organic topdressing or one ton of crushed corncobs. Fertilize again in late winter or early spring to force early grass growth.

Before June, kill broadleaf weeds and knotweed with an application of 2,4-D and dicamba.

As summer practice begins, protect key wear areas of the field from unnecessary traffic. Encourage the coaches and band director to use other areas whenever possible.

The **improved care program** utilizes turf fertilizers high in nitrogen, low in phosphorus and medium in potassium. Daniel suggests a portion of the nitrogen be in slow-release form. He says apply two to three pounds of nitrogen per 1,000 square feet as a 16-4-8 fertilizer in mid-August.

Until August 15, water only when wilt starts to show. If in doubt, says Daniel, don't water. After August 15, water more frequently as needed to keep the field healthy.

Mow the field in the summer at two inches and lower it to 1½ inches at the beginning of the season. Overseed before every home game with improved, more disease-resistant Kentucky bluegrasses and perennial ryegrasses. Fertilize in mid-fall to help the turf recover from game damage. Immediately after the playing season ends, mulch worn areas with organic material.

In early spring fertilize with a soluble nitrogen source. Apply one of the preemergence herbicides in April to prevent crabgrass from germinating. Mow the turf before application since these materials must enter the soil to be effective. Water them in soon after application.

In June or late May kill broadleaf weeds as mentioned in the economy program.

The **best care program** includes a closer look at soil. Take samples for testing. Correct pH and nutrient deficiencies indicated by the test results. Use lime and gypsum only if needed.

Install an automatic irrigation system after consulting with a reliable irrigation supplier. Many football fields have irrigation systems spaced in a triangular pattern in three rows of full-circle heads or four rows with part-circle heads on the edges. Resist the temptation to overwater. Use the system only as needed.

Repair any divots following each game. Overseed before wet games with ten pounds of improved seed varieties. If large areas

of turf are damaged, consider resodding to improved varieties of Kentucky bluegrass. Sod should be grown on mineral soil.

In addition to following the improved program, mow frequently and spray for leaf-spot disease four times per year as wet, humid weather dictates. Consult the Cooperative Extension Service for applicable fungicides. Deep power slice (verticut) with the slope from sideline to sideline once per year before or after the playing season.

The end of the season is a good time to correct problems with surface smoothness by spreading sandy topsoil on problem areas. Use a harrow to break up any dirt ridges, then overseeded repaired areas.

### **Selecting Field Colorants**

There are times when colorants are needed to improve the appearance of sports fields. Sports turf managers should not be embarrassed when they need to use colorants, says Bill Rhymes of Mallinckrodt. The appearance of a field is often as important as its general condition.

Rhymes says there are several different types of colorants, including wettable powders, ready-to-apply liquids and concentrated flowables to be diluted with water before spraying. These products are classified into three groups, organic dyes, inorganic dyes and paints.

Generally, organic dyes are short-lived and are used primarily as spray indicators. Inorganic dyes last several days. Paints last several months.

Probably the widest use of colorants is on dormant grass. For years, superintendents of major sports stadiums have used colorants to touch up dormant or off-color turf. However, these materials also can be used on actively growing grass.

In addition to improving the overall appearance of an existing field, colorants help conceal some of the edges or soiled areas of newly installed sod. They can also be mixed with topdressing materials such as sand to make divot repairs blend in with the existing turf.

Rhymes says be sure to use only those colorants made specifically for turf. Seek products that, when dry, do not rub off or stain uniforms. Note any variations in color between products and select the colorant that matches your turf most closely. Ask your distributor if you can have samples to do test areas next to your field.