Athletic Field Maintenance Program
for Tall Fescue and Perennial Ryegrass Fields

Program Designed for Football, Soccer and other Fall Sports[1]

Timing = +/- 15 day leeway for applications

Timing	**Typical Product/Custom Applications**	**Management/Overseer Maintenance**
Jan - Feb		Fill low, poorly drained depressions with sandy loam soil or sand-soil mix. Soil test[2] - randomly collect 1 pint of soil from surface 1 inch, take to local UK Extension Office for analysis.
Feb 20	Slit seed thin and worn out areas with perennial ryegrass[3]	If irrigation system is charged, keep surface moist for quick germination.
Mar 15	Apply urea (46-0-0)4 at 44# N/A (1# N/1000 sq ft) = 100# product/A or 2.2# product/1000 sq ft.	Begin mowing when the new seedlings and /or older turf grows above the 2-3 inch mowing height. Mow frequently to prevent grass from getting above an approximate 4 inch height. For soccer and other sports that depend upon good ball roll, a mowing height of 1.5 inches is appropriate and can be tolerated by perennial ryegrass, but more frequent mowing is required. A good rule of thumb is to never remove more than 1/3 to ½ of the foliage at any one mowing.
April 15	Spray broadleaf weed herbicide like Trimec Classic to control knotweed, clover, dandelion and other broadleaf weeds. Apply crabgrass preemerge herbicide[6] or wait until June and apply crabgrass postemerge herbicide.	Core aerify[5] on 3 inch centers, 3-4 inches deep, with ¾ inch tines, then break up and spread the cores with drag mat or chain drag.
Jun - Aug		Irrigate during extended drought periods. Moisten the soil 3 to 4 inches deep with heavy, weekly applications. One inch of water per week is sufficient and a major portion of that is often supplied by rainfall.
Jun 15		Core aerify[5] as suggested for April 15 above
Aug 15	Apply urea as suggested for March 15[7]	Irrigate fertilizer in to prevent burn.
Oct 1	Apply urea as suggested for March 15	
Nov 15	Apply urea at end of playing season as suggested for March 15[7]	Core aerify[5] as suggested for April 15 above

[1] **Cool season grass fields** are traditional in Kentucky and work best when traffic is withheld either in the fall or spring season allowing annual renovation/seedling establishment during off-season. These fields cannot usually be seeded in winter, late spring or summer and then played upon the following fall season. When play must occur both in spring and fall, it is almost always best to plant bermudagrass because it can be renovated (with traffic withheld) during early summer, and then played on the following fall.

Baseball and other spring used fields. When cool season grass fields are used during spring and not used intensively during fall, the early spring slit-seeding , as suggested in this program, should be postponed until September. Seeding methods and pesticide applications would be similar.

[2] If the soil test results indicate a need for 2.5 + tons lime/A or if phosphorus (P) or potassium (K) are 'very low, low or medium', then Ag lime and extra fertilizer should be added to the custom program, at least for one annual application. Complete fertilizers like 10-10-10, 19-19-19, etc. can be substituted for one of the urea applications.

Although urea is recommended throughout this program, it could be substituted with many great specialty turf fertilizers. Most specialty turf fertilizers contain some slow release N and this reduces the burn potential. However, urea is the cheapest form of nitrogen (N) and it is most readily available at farm stores and cooperatives throughout Kentucky.

[3] Turf type perennial ryegrass is usually preferred for renovation because it has quick germination, fast seedling establishment and can be mowed shorter than tall fescue. If most of the field is already pristine tall fescue, with no perennial ryegrass, then slit seeding with tall fescue would be suggested. Best varieties of perennial ryegrass and tall fescue can be found on the UK web site, www.uky.edu/ag/ukturf. The big advantage of tall fescue is that less irrigation is needed during hot, dry summers in Kentucky.

Slit seeders are designed to incorporate the seed and smooth the soil surface. They open a slit in the soil and place most of the seed into the slit at a shallow depth. The seeder should be calibrated to seed approximately 50 lbs / acre (1 lb/1000 sq ft) of either tall fescue or perennial ryegrass, and the area to be renovated should be traversed in differing directions 2 or 3 times to get best coverage. Because of the difficulty of getting seed established in poor, compacted soil, some extra establishment will occur if you broadcast another 3 lbs / 1000 sq ft over the surface just prior to the last slit seeding.

If a slit seeder is not available, then broadcasting seed at 6 # per 1000 sq ft following a very heavy core aeration will help get some soil-seed contact. Core aerification prior to slit-seeding is also very advantageous.

[4] The March 15 urea application is important to feed new germinating seedlings. The portion of the field that is not seeded would not normally need this nitrogen and could be omitted. Too much nitrogen causes excessive growth rate and increases brown patch disease problems.

[5] Core aerification, done 2 or 3 times each year is extremely important for high traffic areas, especially between hash marks, in bench areas and in high traffic goal areas. Core aerification that removes 3 – 4 inch cores, and deposits them back to the surface is important for the following reasons:

(a) relieves surface compaction and surface hardness when dry.

(b) improves soil aeration. Without soil oxygen, roots will not grow and the surface soil stays saturated for long periods of time after irrigation or rainfall. Root depth is minimized and irrigation must be utilized much more frequently during summer months.

(c) the deposited soil cores, when broken-up and distributed (by dragging), serve as an important topdressing that discourages organic buildup at the surface (i.e. improves microbial activity) and smoothes the surface for better footing. This can and should eliminate the need for sand topdressing.

(d) improves water infiltration and reduces problems with wet, slick surfaces.

[6] Crabgrass control is necessary on almost all fields. There are several options, with products applied at different times:

(a) If the slit seeded ryegrass or tall fescue germinates and gets an inch or two tall (and before crabgrass germinates), then you can apply a preemergence crabgrass product like prodiamine (Barricade), dithiopyr (Dimension) and pendimethalin (Pre-M). If it will not be necessary to seed additional grass, then any one of these products could be applied anytime from mid February to April 15, prior to crabgrass germination.

(b) MSMA sprayed in mid June when crabgrass is still young and succulent. This would be sprayed at 2# a.i. per 1000 sq ft, with a repeat necessary in 7 to 10 days. You should not spray MSMA when temperature exceeds about 85 degrees. MSMA is the cheapest postemergence crabgrass product but if improperly applied, severe turfgrass burn can occur.

(c) Acclaim Extra, sprayed at a relatively high label rate, will also kill young crabgrass. It is much more expensive, but usually only needs to be sprayed one time. Again, the timing is usually in mid June to early July when the crabgrass has not matured or tillered.

[7] This urea application is intended to dress-up the field prior to the first game. It certainly could be deleted from the program and this would reduce the risk of a mis-fertilizer application during risky hot weather.