

# **ATHLETIC FIELD CONSTRUCTION AND ESTABLISHMENT**

## **Basic Requirements for Native Soils**

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Not everyone, in fact few, can afford or maintain a sand modified athletic field. Construction money and maintenance expertise are always limiting and sand based fields have a much higher risk of failure than properly constructed soil based fields. When using native soil, the best possible field construction and establishment standards for Kentucky are:

1. Stockpile available topsoil to one side before making major grade changes.
2. Establish a center crown, e.g. 18" from center to sideline for football or 10" from center to sideline for soccer. For many practice and league-type fields however a one-directional natural grade of 1½ to 2% (2' per 100') is acceptable without crown - especially if you do not have to disturb a well-drained natural soil. All mechanical soil movement destroys good soil structure and this is especially true if soil is worked when wet.
3. Establish sideline drains that will quickly remove excess water run-off. About 15' from sidelines, make drainage swells that slope about 2% from the 50 yard-line to end of field, install perforated drain tiles and backfill to the surface with gravel - or - add some soil to the gravel surface and install plastic drainage grates (open catch basins) every 20-30 feet along the drainage ditch.
4. Cover the entire field surface with 4-6" of a good silt loam or sandy loam soil. Do not leave heavy clay subsoils exposed on or near the surface.
5. Install an automatic irrigation system or make provisions to irrigate with either a traveler or portable system. If irrigation is not possible, the risk of poor establishment increases.
6. Prepare seedbed, fertilize according to soil test recommendations, and work needed fertilizer and lime into the surface 3-4". When working the soil, be careful to protect the crown and do not leave shallow depressions that will collect surface water. Never work the soil when it is WET.
7. Allow soil to settle – wait for a rainfall or two, or irrigate to saturate the soil. SOIL SETTLING and additional surface preparation is always necessary if considerable soil is moved to or from the site. Most field FAILURES are caused by insufficient settling of the surface prior to establishment.
8. For establishment, bermudagrass is usually the field of choice and it can be established by seed, sod or by sprigs. However, when using bermudagrass the initial cost will be higher than if seeding with tall fescue or perennial ryegrass and more expensive mowing equipment may be needed. If the field is to be used in August-September, sprigs or seed must be planted in late May or early June. The second choice would be to seed the field with a turf-type tall fescue. This must be done the previous fall or in very early spring if play is to begin in the fall. The initial cost is cheaper to seed tall fescue, but the potential quality is less.
9. Regardless of the grass chosen, you won't have good turf without good maintenance and disciplined field use. Crabgrass and broadleaf control, nitrogen fertilization, continuous mowing, irrigation during droughts, annual renovation (repair) and coring are

**not options** in turf maintenance – they are a necessity for quality turf. And – all must be accomplished **TIMELY**.