

Purdue University

Purdue e-Pubs

---

Historical Documents of the Purdue  
Cooperative Extension Service

Department of Agricultural Communication

---

6-1-1980

## Athletic Field Care

W. H. Daniel

Follow this and additional works at: <https://docs.lib.purdue.edu/agext>

The Grass is Greener

---

Daniel, W. H., "Athletic Field Care" (1980). *Historical Documents of the Purdue Cooperative Extension Service*. Paper 267.

<https://docs.lib.purdue.edu/agext/267>

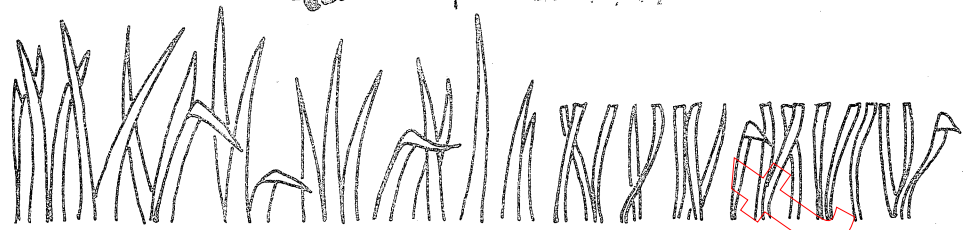
For current publications, please contact the Education Store: <https://mdc.itap.purdue.edu/>

This document is provided for historical reference purposes only and should not be considered to be a practical reference or to contain information reflective of current understanding. For additional information, please contact the Department of Agricultural Communication at Purdue University, College of Agriculture: <http://www.ag.purdue.edu/agcomm>

This document has been made available through Purdue e-Pubs, a service of the Purdue University Libraries. Please contact [epubs@purdue.edu](mailto:epubs@purdue.edu) for additional information.

**the  
grass  
is  
greener**

COOPERATIVE EXTENSION SERVICE, PURDUE UNIVERSITY, WEST LAFAYETTE, INDIANA 47907



Adm. Yes  
Replaces 1977

AY-16

## **ATHLETIC FIELD CARE**

by W. H. Daniel, Extension agronomist

For best performance the athletic field needs to meet three requirements: (1) surface water must not accumulate; (2) soil surface should be smooth and stable; and (3) turf should be in good condition for safety and appearance.

Athletic turf needs to be in the best possible condition. Timing is the most significant element in any turf care program. Better to begin early than too late.

The following turf programs can be expanded to match budget, time, and technology available. Parks, baseball fields, playgrounds and other such areas have similar needs.

### **Economy Program**

**A.** Fertilize in early fall (about August 10 in Indianapolis). Use 50 pounds actual nitrogen on a field or 100 pounds inside a track oval.

Example: 45-0-0 at 100-200 pounds  
16-4-8 at 300-500 pounds

**B.** Start watering, if at all possible, as needed. Consider using traveling types of irrigators with automatic cutoff, such as the larger turf types with 400-foot cord and the 200-foot of 1-inch plastic hose (more efficient), or the smaller lawn types with 100-foot tape and 3/4-inch hose (less expensive).

**C.** Mow as high as practical rather than as low as possible. Maintain more leaf for increased wear and cushion and to provide energy within plants. Mowing height of 2 inches is considered average.

**D.** Overseed lightly before each home game. Spread 5 pounds with Cyclone seeded over thin worn areas. Allow cleats to push the seed into the soil.

**E.** Fertilize again in mid-season to force growth as the soil cools.

**F.** See **Improved Care Program**.

**G.** Fertilize in late winter or early spring (by April 1 in Indianapolis) to force early grass growth.

**H.** Kill broadleaf weeds and knotweed before they compete with turf (before June 15). Use a combination of 2,4-D and dicamba. Follow label instructions.

**I.** Mow often, but **high** all summer. This practice favors deeper roots and builds reserves of energy in rhizomes.

**J.** See **Improved Care Program**.

**K.** Spread wear. Protect center of field. Extend and mark extra 5 yard lines wherever possible for optional team and band practice.

### **Improved Care Program**

Increase values of the **Economy Program** by:

**A.** Using turf type fertilizer high in N, low in P, medium in K (examples, 16-4-8, 18-5-9) with slow release nitrogen. Apply 2-3 pounds N for each 1,000 square feet in mid-August.

**B.** Until August 15, water only when wilt starts to show. If in doubt, don't water. After August 15, water more lightly and frequently as needed for surface playing conditions.

**C.** Maintain by mowing at 2 inches all summer, then 1.5 inches after first home game.

**D.** Overseed before every home game. Consider using only newer, more disease resistant varieties of bluegrasses. (Wabash, Touchdown, etc., and/or perennial ryegrasses such as Manhattan, Regal, Pennfine, Derby.)

**E.** Fertilize in mid-fall to force growth.

**F.** Immediately after playing season ends, mulch thin areas with one ton crushed corncobs or organics, which, as they decompose, favor soil aggregation and separation. Add extra fertilizer next year to compensate for decomposition.

**G.** Fertilize lightly with a soluble nitrogen source to force growth in early spring.

**H.** Prevent crabgrass, etc. Apply pre-emergence herbicides (April 1-May 1); can be applied with fertilizer. Mow twice in spring before applying pre-emergent. Kill broadleaf weeds and knotweed as needed.

**I.** Mow frequently and **high**.

**J.** Cultivate intensely once in mid-summer. This practice loosens, reduces compaction, buries crowns, and aids in leveling. (Consider using rental machines or purchase). Go over repeatedly in one day (greens-aire twice; aerifiers three to six times). Shred cores, drag, roll, smooth, and water as needed.

**K.** Extend yard lines to provide for maximum practice areas. Use center for pass patterns only. Minimize practice on the field. Mark off 5 yard lines in other turf areas for band practice and wet weather use.



## Best Care Program

Consider all points in **Economy** and **Improved Programs**, plus:

**A.** Build levels of N, P, and K by repeated use of slow-release fertilizers. Take composite 0-2 inches deep soil samples for test. Use lime and gypsum only if need is indicated.

**B.** Install triangular spaced, automatic pop-up, padded head irrigation. (Consult with reliable irrigation suppliers. Consider 3 rows of full circle, or 4 rows including part circles on edges.) Use only as needed.

**C.** Repair any divots following each game. Overseed before wet games with 10 lbs. seed. Consider resodding to newer varieties.

**D.** Maintain high nutrient reserves in soil.

**E.** Spread clear plastic sheeting (4 or 6 mil) with holes (punched by aerifier or golf shoes) to conserve heat, hold moisture and reduce freezing. Do not use solid field covers any more than necessary as this tends to weaken turf.

**F.** Refer to **Improved Program**.

**G.** Refer to **Improved Program**.

**H.** Mow frequently. Spray for leafspot disease control (4 times per year) as wet, humid weather dictates. See Cooperative Extension Service leaflets on disease, BP-7-1, BP-7-2, BP-7-3, and BP-7-4.

**I.** See **Improved Program**. Deep power slice with slope from sideline to sideline once each year. Apply pre-mixed top dressing material (sand 50%, fine calcined aggregates 25%, crushed corncobs and/or peat 25%) after last game; then cultivate and loosen.

**J.** Make all practice areas along 5 yard lines. The use of shorter cleats, 1/2 inch or less, for practice is suggested. They are safer and conserve the turf.

**K.** Improve appearance of the field by spraying damaged or worn areas with colorants if needed.

Soil warming via buried electric cable, 12-24 inches center, 6 inches deep, and vented clear plastic covers (holes every 2-6 inches) can further protect turf and provide some climate control.

Sod, if used, should be grown on mineral soil (muck is unacceptable for athletic turf areas). Cut as thin as practical—3/4-inch is standard. Lay pieces offset and forced against each other.

## Assure adequate drainage via either—

### Vertical Trenches

- Set teeth on trencher to make narrow 3-inch trenches. Go 12-24 inches deep diagonally across slopes; five yards apart is suggested. Extend beyond sidelines to other drains.
- Place 2-inch, narrow, plastic drainpipe with slits (Turf-Flow or equal in 500 foot rolls) into trench. Backfill to **overflow** with washed medium sand.
- First trenching should be above and over any existing tile. Then add additional trenches as desired.
- Continue to add trenches until field is well drained. Consider 5-7-9 inside the field plus 2 outside sidelines.

### Vertical Slits

Any 3-10 inch deep narrow openings backfilled with calcined aggregates or washed sand can aid in absorption of excess water.

- In early spring, a shovel may be used to pry open a slit in soil, overfill with sand or calcined aggregates (Turface, Terra-Green, Dialoam, etc.). Again pry open 3-10 inches deep; again overfill. Continue program in wet spots as needed.
- Consider tractor mounted sharp blade pulled through wet areas; then backfill immediately to overflow.
- Holes made as deep and loose as desired and backfilled to overflow can improve wet spots.

### Vertical Grooves

Revolving blades on power machines designed for vertical slicing (down to 3 inches deep) are available as rentals or purchase. Go from sideline to sideline (with slope). Spread calcined aggregates or washed sand onto surface, then drag over areas. Repeat annually. Water will follow slits toward sidelines.

Cultivate once or twice a year including intensely in mid-summer. See **Improved** and **Best Care Programs** to improve surface smoothness at end of the season in fall.

- Deliver and spread sandy topsoil as needed to level.
- Then harrow or drag until contour is smooth.
- Then spread seed and fertilizer and amendments.
- Use cultivating machines (aerifiers, aeroblade, etc.) to punch through, loosen and mix.

REV 6/80