

# Spring Renovation of Traffic Damaged, Weed Infested Football and Soccer Fields

*A. J. Powell, Jr., Turf Extension Specialist  
University of Kentucky*

High traffic areas on grass sports fields were heavily damaged in the fall of 2009 due to rainfall that occurred weekly, usually on Friday's just before or during sporting events. Spring renovation is complicated because of the necessity to sometimes use these fields in the spring, and because of common weed infestation. For fields damaged by fall traffic, we normally see cool-season weeds like *Poa annua*, white clover, chickweed, henbit and veronica establish a dense cover during winter and early spring. Additionally knotweed is the first warm season weed that germinates in the spring, usually in early to mid March. All of these weeds are growing fast at the same time we normally want to inter-seed cool season grasses like fescue and perennial ryegrass. Maturing knotweed can totally eliminate bermuda seeded in May or June. We also see crabgrass germinating in mid May and goosegrass germinating in mid June, the same time we are inter-seeding or sprigging bermuda. **If a field has been neglected for more than a year or two, these weeds are so ferocious that newly planted grasses never have a chance.** Timely herbicide applications are necessary to get decent establishment.

Usually only the high traffic areas will need major renovation, and that may include no more than 1/3 to 1/2 acre in a two acre football field. The area outlined by the hash-marks and 20 yard lines, and the bench areas are of major concerns. By only concentrating on these areas, it greatly reduces the amount of seed, fertilizer, herbicide, irrigation, etc. that will be needed to get the field ready for the next playing season. In some cases only soccer goal mouths are damaged and this is often best repaired by using sod.

## Preparing Fields for Renovation

Native soil, natural grass fields in KY must have good surface drainage, i.e. at least a 1.5 to 2% center to side line slope. After using a field for 2 to 4 years, we usually flatten out the field in the center where most of the traffic occurs. If this happens and the field becomes relatively flat, it takes only one rainy fall to completely eliminate the grass cover and encourage weed domination. Therefore every winter, one should do the following:

(1) Make sure the crown has at least 1.5 to 2% center to side line slope, and if it doesn't, then a good sandy loam topsoil, without rocks or gravel, should be placed on the surface and allowed to settle out before seeding. Fill soil may also be needed for the heavily compacted sideline bench areas.

If a sandy or silt loam topsoil is unavailable, then consider applying about 3 inches of mortar sand to the surface and tilling it into the top 2 -3 inches of surface soil. It takes a preponderance of sand to modify soil enough to prevent serious compaction and it is well known that a little dab of sand will turn a hard field into concrete.

(2) If the soil is extremely compacted and hard, and little live grass remains, adding about 2 – 3 inches of well composted organic material on the surface in the high traffic areas will help immensely. Wait until the soil surface is dry, then till this organic material into the top 3 -4 inches of the topsoil. However even with this organic amendment, make sure you maintain a 1.5 to 2 % slope from center to sideline.

(3) Core aeration with holes on approximately 3 inch centers should be accomplished asap in late winter or early spring.

### **Renovating Tall Fescue(TF), Perennial Ryegrass (PR) or Ky Bluegrass (KB) Fields**

1. Remove all spring traffic. You cannot get survival of young, weak seedlings when traffic continues. Because the soil is usually compacted and there is little to no inherent organic matter in the soil, seedlings grow very slow, much slower than weeds.

2. Feb – March. Slit seed with PR sometime between mid-Feb to mid March. Hopefully knotweed and/or white clover will not dominate the germinating PR. As soon as the PR is one to two inches tall, then spray with a broadleaf herbicide like Trimec Classic (2,4-D + MCP + dicamba). This should kill the knotweed and other broadleaf species, and should not hurt the young PR seedlings. Even if it did ding the PR, the herbicide will not hurt the PR near as much as the competing knotweed and clover would.

3. Late March – Early April. Complete the establishment by apply about 1#N/1000 sq ft. as soon as the weeds are sprayed out. Seedling grass must have additional N in order to develop a decent turf. 4. Late April – May. If crabgrass has not germinated, then spray a preemergence herbicide such as Barricade, Pendulum or Dimension. If crabgrass has begun to germinate, then apply Acclaim Extra or Drive post emergent herbicide. If for some reason the slit seeding did not get done early, then one will only have the second option of applying a crab post product like Acclaim Extra or Drive. Renovating Bermudagrass Fields Bermudagrass fields are much more complicated to renovate than cool season grass fields because :

(a) Bermuda seedlings or new bermuda sprigs are very slow to establish and they cannot be seeded/sprigged until mid to late May, (b) You normally do not know if you have winterkill until late May or early June. (c) The bermuda may be overseeded with PR or annual ryegrass and the ryegrass competition slows down and masks bermuda winter recovery and establishment, even if the ryegrass is sprayed out with a herbicide. (d) Worn areas in the field will normally be dominated by weeds such as knotweed because there is no competition from dormant bermuda.

### **Renovating Non-overseeded Bermuda Fields**

In areas where bermuda was heavily worn the previous fall, you can easily see that there is very little potential for stolon recovery because (1) the area will have sparse dormant bermuda stolons on top of the surface and (2) weeds such as knotweed will

begin to dominate. In the field corners and end-zones, the dormant bermuda will usually be very dense and weed populations minimal. Consider the following procedure:

(1) Late Feb to mid March. Spray the field with 1- 2 quarts of Rd Up per acre to kill cool season weeds.

(2) Preferably remove traffic because traffic in the spring will increase compaction when soil is wet. If traffic cannot be removed, then expect more repair costs when renovated in May.

(3) Late March – early April. If knotweed germination appears to be heavy, spray with Trimec Classic. You never want to spray Trimec when bermuda is beginning to turn green because it will delay green-up by 2 to 4 weeks. If there is no apparent bermuda in the areas to be renovated, then Rd Up could be sprayed to kill the knotweed and other weeds.

(4) Early May. Aerate the field with coring tines, hopefully to extract cores no less than on 3 inch centers.

(5) Mid May – June 1. Slit seed bermuda at 2# seed / 1000 sq ft if soil is not extremely hard. If soil is extremely hard and compacted, then only consider rowplanting bermuda sprigs. It is extremely hard to get young bermuda seedlings established on uneven humps and mounds if the soil is hard.

(6) If broadleaf weeds like knotweed and white clover have escaped your control methods and they are covering the surface, then immediately before or after seeding, you can spray a new herbicide called Quicksilver (carfentrazone). It should not affect germination or seedling growth of the bermuda, and it will suppress the broadleaf weeds (at least burn the leaves off for 2 to 3 weeks and render the weeds much less competitive with the bermuda seedlings). Bermuda will not grow within the shade of trees or weeds.

(7) If crabgrass becomes competitive with the newly planted bermuda seed or sprigs, you can spray MSMA in 2010, i.e. if you already have MSMA in storage. It cannot be purchased for sports field use in 2010 or any year thereafter. Without MSMA, your best choice is Drive (Quinclorac). Drive will also control clover. Some KY sports turf managers have had good success spraying a low rate of Revolver (foramsulfuron) on seedling bermuda to safely control seedling crabgrass and goosegrass. Always follow the label precautions.

(8) Bermuda is a hog for nitrogen, even seedling bermuda. Therefore to get establishment, it is important that you apply N every 2 -3 weeks until coverage is obtained.

## Renovating Overseeded Bermuda Sports Fields

(1) Late Feb – early Mar. If the field is not needed for play in the spring, then it would be best to use 1 – 2 quarts of Rd Up in late Feb or early March to kill the overseeded PR , Poa and cool season broadleaf species. If the field must be used for spring soccer, baseball or softball , then an additional application of 1#N/1000 sq ft should be applied to give the overseeded ryegrass a good color and improved recuperative ability.

(2) April – early May (if not in play). Aerate the field with coring tines, hopefully to extract cores no less that on 3 inch centers.

(3) Late April – early May (or as soon as the field is free of play). To kill the overseeded ryegrass, Poa and some broadleaf winter annuals, apply 17 oz/acre of Revolver and fertilize with about 60 lbs of N/acre (preferably using fast release ammonium nitrate or urea).

(4) Mid May – late May. If soil is not extremely compacted, slit seed with bermuda going in two directions, seeding a total of 2# seed/1000 sq ft, or if soil is very hard, then consider row-plant bermuda sprigs.

(5) June –July. If crabgrass becomes competitive with the newly planted bermuda seed or sprigs, you can spray MSMA in 2010, i.e. if you already have MSMA in storage. It cannot be legally purchased for sports field use in 2010 or any year thereafter. Without MSMA, your best choice is Drive (Quinclorac). Drive will also control clover. Some KY sports turf managers have had good success spraying a low rate of Revolver (foramsulfuron) on seedling bermuda to safely control seedling crabgrass and goosegrass. Always follow the label precautions.

(6) Bermuda is a hog for nitrogen, even seedling bermuda. Therefore to get establishment, it is important that you apply N every 2 -3 weeks until coverage is obtained.