

RENOVATING TURF BY SODDING

Resodding old or damaged turf has important advantages over seeding, and intensive site preparation isn't always necessary.

Worn or damaged areas on sports fields can be repaired by several methods; working the site and seeding, overseeding and sodding. The latter system is often the most expensive, particularly where intensive working of the site is conducted prior to sodding.

The amount of tillage or site preparation prior to sodding is dictated by the need to reshape the surface and the time limitations on the use of the field. On many older fields the grade has already been satisfactorily established and only minor levelling, if any, is necessary.

Two factors need to be considered when assessing a turf renovation program by sodding. The first factor is the time of year. Weather conditions play an important role because sod laid in late spring or midsummer will be more subject to water stress, will require irrigation, and require more time to return to uniform growth and colour (up to two months) than sod laid in September, or even as late as November, after normal use of the field has stopped.

The second factor that needs to be considered is the amount of site preparation which is performed. Prof. Jack Eggens and Dr. Ken Carey conducted an interesting experiment to determine how much preparation was required prior to laying the sod. They began with a site where the old vegetation was killed ten to twenty days prior to sodding by the use of glyphosate. The old turf was scalped with a rotary mower and the debris removed. The treatments were applied in the spring, summer and fall to a mixed bluegrass/bentgrass/fescue sod on a high maintenance area with automatic irrigation.

Four different site preparation procedures were followed:

- sodding directly over the killed turf,
- addition of one inch of top soil, smoothing and sodding,
- vertical mowing to two inches, smoothing and sodding, and
- stripping the existing turf with a sod cutter and resodding on the bare surface.

The timing of the sodding operation had a significant effect on the appearance of the turf. Sod laid in either late spring or midsummer took up to two months to show no stress symptoms whereas sod laid in the late fall remained uniformly green and had fully recovered by the following spring (Table 1).

Removing the old sod with a sod cutter gave good soil-sod contact so that relatively rapid recovery occurred in 30 days, even when sodding occurred in mid August (Table 1). Although failure to remove the old sod had little effect on the rate of recovery when sodding was done in October, the August application of sod over the existing thatch, etc, in particular, resulted in a significant delay in the rate of turf return to full vigour. In fact, in the long term there were no differences observed between the different treat-

Table 1: The effect of site preparation and date of sodding on the rate of recovery of newly-laid Kentucky bluegrass sod receiving high maintenance.

Site Preparation	Laid May 30			Laid Aug. 11			Laid Oct. 20		
	DAYS AFTER RESODDING								
	10	30	60	10	30	60	10	30	60
	(% recovery)								
No Preparation	20	65	100	5	60	100	100	100	100
Topsoil Added	40	75	100	50	95	100	100	100	100
Verticutting	35	75	100	60	95	100	100	100	100
Stripping Old Sod	85	90	100	95	100	100	100	100	100



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ments in thatch development, incorporation or breakdown of the covered organic material, or root growth.

Annual bluegrass infestation was found to be higher in those treatments with the least site preparation (Table 2). Sodding in midsummer tended to have a higher population of the grass weeds, annual bluegrass and creeping bent grass, than sodding at other times of the year. Although no herbicides were applied in the two years following the laying of the sod, only minor infestation of broadleaf weeds occurred which illustrates a major advantage of sodding - weed control. The advantage appears to be enhanced when sodding occurs at a time when recovery rates are maximized, that is, late fall.

The results of this study point to the

advantage of timing field repair for late October or November when field use has ceased. The indication is that the sod will be well rooted and ready for use as soon as soil conditions are dry enough to permit play the following spring. No irrigation will be required in most seasons as evapotranspiration is minimal at this time of the year.

Conversely, if sodding becomes necessary in midsummer irrigation is essential and must be available for the first 30 days after sodding. It is an advantage to irrigate prior to sodding so that the sod is laid on a wet surface. Sod which is delivered in midsummer will tend to be dry and insufficient water is applied to wet through the sod to a dry soil underneath. Site preparation is also more important in midsummer

to insure close soil-sod contact and prevent drying of the sods, particularly at the edges and corners.

Sodding with minimal site preparation will only be successful where soil conditions such as compaction or low fertility are not a problem. In either case significant soil disruption is necessary to relieve the compaction or to incorporate phosphorus and potassium. Eggen and Carey also suggest minimal site preparation may not be successful where the renovation was made necessary through disease or insect damage. If the root zone is left relatively undisturbed or untreated the insects or disease may still be in place to reinfest the newly laid sod.

Table 2: The influence of sodding date and site preparation on weed infestation two seasons after the date of sodding.

Site Preparation	Annual Bluegrass			Creeping Bentgrass			Broadleaf Weeds		
	DATE OF SODDING								
	May 30	Aug. 11	Oct. 20	May 30	Aug. 11	Oct. 20	May 30	Aug. 11	Oct. 20
	(% weed invasion)								
No preparation	0	17.5	5.5	0.5	3.0	0	1.0	0.5	0.5
Topsoil Added	0	1.5	5.0	0.5	1.5	0	0	0	2.0
Verticutting	0	9.5	3.0	0.5	2.5	0.5	0	2.5	0
Stripping Old Sod	0	5.5	0.5	0.5	3.5	0.5	0.5	2.5	0



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