

STOP 2

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Sod Rooting Study. Comparisons of the rooting, after transplanting in 12 x 12 inch fiberglass screen-bottomed frames, of Merion Kentucky bluegrass sod produced on mineral and organic soils are being made. The two sods were produced under similar management systems and were in good marketable condition when transplanted on August 6, 1968. A "seedbed" was prepared on the underlying sandy loam soil and a 1-1-1 ratio fertilizer was incorporated into the surface 2 inches at a rate of 1 lb. N per 1,000 sq. ft. The sod received from 1/8 to 1/4 inch of water daily at midday for the first three weeks and was irrigated as needed thereafter. Regular mowing at 1 1/2 inches was practiced. The sod rooting frames were lifted vertically with a block and tackle arrangement. Table 2 gives the average (over 4 replications) vertical lifting force in pounds per sq. ft. required to break the roots. Sod requiring more than 25 lbs. lifting force is considered well rooted. To date, the rooting of sod grown on both mineral and organic soil has been satisfactory. This study will be continued over a two year period.

Table 2. Average (4 reps) vertical lifting force (lbs/sq. ft.) required. East Lansing, Michigan.

Sod Type	Dates 1968					1969		
	8/20	8/27	9/3	10/7	11/6	5/5	7/8	8/11
Mineral	18.7	27.5	32.8	37.8	45.2	110.5	88.8	91.5
Organic	20.0	42.0	37.2	42.0	41.2	85.0	90.8	124.5

Earlier research (1966 and 1967 seasons) on the rooting capability of organic vs. mineral grown sod verified several recommendations for successful sodding. These results were obtained from a series of seven 21 day tests where the sod was transplanted into 10 x 10 x 18 inch deep, glass faced root observation boxes. Data on root organic matter production and counts of roots visible on the glass face of the boxes were obtained. The effects of water rates, soil moisture content at the time of sod laying, depth of sod cutting, and the soil type upon which the sod was laid were investigated.

Proper water management is the most critical factor in successful sodding. Rooting occurred most rapidly when the sod was laid on moist soil. For 2-3 weeks after laying, the sod should be watered daily at rates that

keep the sod from drying out and the underlying soil moist but not saturated. This is usually 1/8-1/4 inch of water daily but can vary with weather and soil conditions. Laying sod on a 1:1 topsoil-subsoil mixture or on topsoil resulted in increased root production compared to a clay subsoil. Proper soil preparation and fertilization is as important for sodding as for seeding. Greater root organic matter production occurred when sod was harvested at a standard (3/4") rather than at a thin (3/8") depth. Sod grown on organic soil produced more root organic matter than sod grown on mineral soil.

STOP 3

Dr. Joseph M. Vargas

Systemic Fungicide Evaluation. Dollar spot (Sclerotinia homecarpa) is a very common problem on bentgrass greens and other areas where bentgrass is grown. It occurs throughout the growing season in Michigan but is most prevalent during the cool weather of the spring and fall.

Brown patch (Rhizoctonia solani) is a less common disease in most of Michigan with the exception of the southern portion of the lower peninsula. This disease occurs during the hot humid weather of summer. It was quite extensive in the Lansing area this summer but unfortunately it did not develop on the experimental plots.

This experiment is an attempt to control these two diseases with some of the systemic fungicides. The systemics differ from the ordinary contact fungicides in that they are taken up by the plant where they can (a) prohibit the further spread of a disease which may be present, or (b) prevent any new infection from taking place. Because of the systemic properties of these chemicals, it is hoped that they will be long lasting and reduce the number of applications normally required to control these diseases. This should help reduce the high labor costs involved in more frequent applications. The results after two applications are given in Table 3.