

SOD CULTURAL SYSTEMS STUDIES

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Results from the first three years of sod production research were reported at past turf conferences and sod production field days. Attention was given to separate studies on (a) fertilization rates and timing of nitrogen applications, (b) cutting heights and frequencies, (c) establishment studies on rates and times of seeding, and (d) comparisons of cultivars, blends, and mixtures of turfgrasses for sod. Results from these studies were used to initiate new experiments for 1972 involving several of these cultural practices. The objective was to combine the most favorable cultural practices into a program which would yield the most rapid and efficient sod production.

Plots were seeded in September, 1971 at the M. S. U. Muck Experimental Farm. The following variables were studied:

1. Grasses:
Merion versus a blend of four Kentucky bluegrasses (Merion, Fylking, Nugget, Park)
2. Cutting height (mowed twice weekly)
1.5 inches versus 2.5 inches
3. Irrigation:
none versus applied as needed
4. Nitrogen treatments:
15 pounds nitrogen per acre, applied monthly
30 pounds nitrogen per acre, applied monthly
45 pounds nitrogen per acre, applied monthly
30 pounds nitrogen per acre, applied May and June
60 pounds nitrogen per acre, applied May and June
30 pounds nitrogen per acre, applied, May, June, and August

Because of the frequency of rainfall during the growing season, there was no difference due to irrigation. Thus, the irrigation treatments were discontinued.

All sod strengths during 1972 were low in spite of a good establishment during 1971. The frequency of rainfall may have contributed to the lower sod strengths. Sod strengths were determined in August and in October. Although the differences in sod strengths were small, the blend of Kentucky bluegrasses was slightly stronger than the Merion monostand. The sod from the 2.5 inch cutting height was stronger than at 1.5 inches. Higher nitrogen rates caused somewhat weaker sod strengths. These results are consistent with earlier observations.

A mowing frequency and nitrogen rate study was seeded in September, 1971. Treatments were initiated in June, 1972. Nitrogen rates were 30 and 60 pounds nitrogen per acre per month during the growing season.

Mowing frequencies were: twice per week; once per week; every 2 weeks; every 4 weeks; and every 6 weeks. All clippings were removed with each mowing and representative weights taken. The objectives were to determine (1) the amount of clippings produced and (2) the influence of infrequent mowing on sod strengths.

The sod strengths were also low and somewhat variable in this study. Generally, the less frequent mowings at the lower nitrogen (30 pounds nitrogen per acre per month) levels were stronger than on weekly mowed plots. Differences were smaller at the 60 pound nitrogen treatment.

The higher nitrogen treatments produced the highest clipping yields, as would be expected. The 4- and 6-week mowing intervals produced greater clipping yields than more frequently mowed plots. These results indicate that infrequent mowing might be utilized for reducing mowing costs until the sod needs to be brought to market quality. The clippings could then be used for other purposes as proposed by Beard in earlier studies. The amount of time needed to bring the sod to the desired shoot density and quality is not known at this time. These results are considered preliminary and are not to be recommended at this time. The studies will be continued in 1973 and 1974.