

NITROGEN AND PHOSPHORUS RECOMMENDATIONS FOR TURF GROWN ON A PHOSPHORUS DEFICIENT SOIL

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Professional turf applicators have reduced or eliminated phosphorus from their fertilization programs based on the assumption that soil phosphorus levels are supplying adequate amounts of phosphorus to the turf. The research will be conducted for three years to investigate the effects of phosphorus fertilization programs on turfgrass performance, and monitor soil and plant tissue nutrient levels to determine the impact of the programs. The nitrogen treatments are 2, 3.2, and 4.25 lbs. N/1000 ft.²/yr. The low, medium, and high nitrogen treatments will be applied over 2, 4, and 6 applications, respectively. Nitrogen will be applied using a formulation containing 25% of slow and 75% of fast release nitrogen sources that are representative of typical home lawn fertilizers. The phosphorus treatments are 0, 0.5, and 1.0 lbs. P₂O₅/1000 ft.². Phosphorus will be applied using MKP (0-52-34). Phosphorus will be applied according to the application schedule for the nitrogen treatments. Potassium will be applied using muriate of potash (0-0-60) to all plots according to soil test recommendations and to balance the potassium applied from MKP treatments. During the establishment year, turf color and quality will be recorded weekly using a scale of 1 to 9 (1=worst, 6=acceptable, and 9=best). Soil and tissue samples will be taken to analyze N, P, and K every month and two weeks, respectively. Grass clippings will be collected every two weeks, dried, and weighed.

Research is funded by the Michigan Turfgrass Foundation, Project GREEN, The Andersons, and Lesco.

Thanks to Green Acres Sod Farm for providing the sod.