

# NUTRIENT LEVELS OF SANDS FOR TOPDRESSING GREENS

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Last month the particle-size distribution of several sands available for topdressing greens was reported. Particle-size is probably the most critical factor in choosing the appropriate sand. After choosing the sand, however, some idea of the pH of the sand and the nutrient level of the sand can help in improving the topdressing program. Table 3 lists the results of soil tests on the same sands as reported last month.

**SOIL pH.** Values between 6.6 and 7.4 are considered neutral, pH values between 7.4 and 8.0 are slightly alkaline, and those between 8.0 and 9.0 are moderately alkaline. The effect of adding shallow layers of sand with a high pH over soil with a lower pH is not clear. After a period of time, the sand will probably come down to the pH of the underlying soil though how long that will take is not clear. There may or may not be some short term effects on the grass plants.

**PHOSPHORUS AND POTASSIUM.** As was expected, both P and K were very low in all sands. If you have the capability, it would probably be a good idea to mix some P and K into sand before topdressing. If you are top dressing with sand or have a high sand green you need to be sure you are applying adequate P and K. For further information you might want to obtain Extension Bulletin 458-Computer Programmed Soil Test Recommendations for Lawns, Turf and Gardens in Minnesota.

**EXTRACTABLE BASE CATIONS.** There has been some talk about nutrient imbalances, particularly about the Ca/Mg ratio; consequently, I have included the levels of the base cations in the sands. Those of you who are adding magnesium or magnesium and sulfur ought to have some test strips with different treatments to see what is effective for you. I will be most interested in hearing from you about the effectiveness of your program. I know several of you are switching sands and including new treatments with your topdressing program. Please let us know what is working and what isn't.

Table 3. Soil pH and nutrient levels of top-dressing sands from Minnesota.

Sand #	pH*	— lb/acre —			ppm			
		P*	K*	K**	Ca**	Mg**	Na**	Mn**
1	8.0	6	15	7	1779	115	< 3	4
2	7.4	6	19	11	1505	138	4	2
3	7.8	8	34	19	2413	100	5	2
4	8.0	8	19	10	2276	125	< 3	5
5	8.3	6	17	8	648	35	5	1
6	8.5	6	14	10	611	26	3	1
7	7.2	4	16	12	907	75	< 3	2
8	7.4	2	16	9	10	4	6	1
9	8.9	2	6	< 6	155	17	5	1
10	6.4	6	20	9	26	7	< 3	0

\*Determined by the Soil Testing Laboratory, University of Minnesota, Saint Paul, MN 55108.

\*\*Extractable base cations determined by the leaching method by the Research Analytical Laboratory, Department of Soil Science, University of Minnesota, Saint Paul, MN 55108.