

James Timmerman

Pesticide-Soil Nitrogen Interactions. Pesticides are frequently applied to turf to control specific diseases, insects, or weeds. Others are used for broad spectrum controls. Very little is known about effects on non-target species, particularly on soil microorganisms. Since microorganisms play a major role in the decomposition of organic nitrogen carriers in the soil, pesticides may theoretically affect soil nitrogen relations.

Greenhouse studies on Pennlawn red fescue indicate differences in growth as affected by certain insecticides and fungicides. Clipping weights were increased as much as 50% during a three month period with application of one fungicide as compared to no pesticide. It is necessary to determine if this response is caused by disease control (or insect control), direct effect on the physiology of the plant, or if some effect is created which influences soil nitrogen relations. Field plots of bentgrass have been established to further study these relationships.

STOP 13

Dr. Paul Rieke

Soil Mixes for Putting Greens. Forty-eight soil mixtures with 2 replications were established. Most of these mixes are very coarse in texture with coarse sand being a major component.

Water was withheld during the drouthy period in early June to subject the plots to moisture stress. Note the recovery upon adequate irrigation. Table (13) gives a brief summary of the drouth susceptibility as determined by visual quality.

TABLE 13. DROUTH TOLERANCE OF SEVERAL SOIL MIXES
East Lansing, June 5, 1967

Course	Soil Mix				Quality Rating*
	Sand	Fine Sandy Loam	Peat	Other	
-		1	-	-	1.5
X		1	1	-	4.7
X		1	2	-	4.4
X		2	1	-	4.3
1		X	X	-	2.4
2		X	X	-	3.5
3		X	X	-	4.2
4		X	X	-	4.9
6		X	X	-	5.3
8		X	X	-	5.7
4		1	1	1cc**	6.2
4		1	0	1cc	6.8
4		1	0	2cc	7.1
4		1	1	-	4.2
4		1	2	-	5.7
4		2	1	-	5.5

*Visual quality rating: 1-best; 9-poorest. Average of 2 replications.

**cc = calcined clay.