

DISEASE AND QUALITY RATINGS OF BENTGRASS GREENS FERTILIZED WITH SUSTANE 1997-1998

Karl Guillard and William Dest
University of Connecticut, Department of Plant Science

Purpose of Study, Methods

The purpose of the research is to determine the effects of Sustane on golf course bentgrass quality, particularly with respect to diseases. The study ran on six different golf courses in Connecticut over a two-year period. For the check, or "control" treatment all locations applied standard management practices to one putting green, which included routine fertilizer and full-rate fungicide applications throughout the two growing seasons. Similarly, all locations designated a separate putting green that received Sustane natural fertilizers (the compost treatment) and *one-half rate* of the standard preventative fungicide applications.

Treatment Rates Averaged Over All Locations	<u>1997</u>	<u>1998</u>
Lb. N / 1,000 Sq. Ft. from Sustane whole season	3.25	2.7
Fluid Ounces / 1,000 Sq. Ft. all fungicides full rate	47.2	46.4
Fluid Ounces / 1,000 Sq. Ft. all fungicides half rate	23.6	23.2

Observations

1. There were no significant differences for color or disease ratings between the two treatments in 1997 or 1998.
2. There were no unusual disease outbreaks that favored either treatment during the two-year period of the study.
3. The application of Sustane to greens may result in a large potential savings to golf course with respect to fungicide applications.
4. Environmentally, a lower pesticide load can result in less potential movement of pesticides offsite.

The results suggest that fungicides rates can be reduced at least by half the normal application rate when they are used in combination with Sustane natural fertilizer applications on putting greens. Response from the majority of superintendents involved in the study has been favorable. As result of this project, some of the participating golf course superintendents changed fertilizer selection to Sustane and reduced fungicide application rates on expanded areas, including the other putting greens and tees over their respective golf courses. At least one of the six superintendents discontinued all use of fungicides on his practice chipping green and applied Sustane only with no increase in the incidence or severity of disease.

Table 1. Putting Green Quality Ratings comparing standard fertilizer and fungicide treatments to Sustane with ½ rate reduced fungicides averaged over six golf courses in Connecticut, 1997 and 1998.

	<u>1997</u>			<u>1998</u>		
	<u>Color</u>	<u>Density</u>	<u>Disease</u>	<u>Color</u>	<u>Density</u>	<u>Disease</u>
June						
Fertilizer + Fungicide	3.3	5.8	1.2	3.7	7.5	1.6
Sustane + ½ Fungicide	3.4	6.0	1.0	3.6	6.7	1.3
July						
Fertilizer + Fungicide	3.25	7.3	1.0	4.2	7.75	1.2
Sustane + ½ Fungicide	3.7	7.0	1.0	4.0	7.1	1.0
August						
Fertilizer + Fungicide	3.75	7.8	1.6	3.8	8.2	1.2
Sustane + ½ Fungicide	4.1	7.4	1.0	3.8	7.3	1.1

Color was rated on a scale of 1 to 5, with 1 = yellow and 5 = dark green

Density was rated on a scale rated 1 to 9, with 1 = bare soil and 9 = very dense.

Disease rated on a scale of 1 to 5, with 1 = no disease and 5 completely infested.