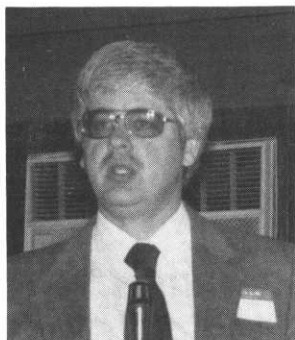


## PATHOLOGICAL POINTERS

By WARD C. STIENSTRA, Extension Plant Pathologist  
University of Minnesota

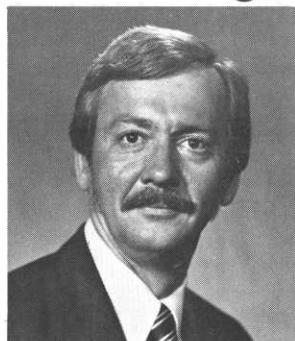


The end of June and early July was a time for attacks of Pythium. As some of us have experienced Pythium, we know it can cause turf losses in Minnesota. The symptoms I observed were usually small, irregularly shaped spots, 1-6 inches in diameter. Turf plants were first water soaked, then leaves shrivelled and faded to a brown color. Spots tended to be in groups and not related to low spots. The grass blades tended to mat together and lay down. Pythium blight is a warm, wet weather disease problem. It likes 80°+ days and a moisture saturated atmosphere. Night time temperatures of 70° and above keep Pythium active. The use of fungicides was recommended and plots with these materials were free of the disease.

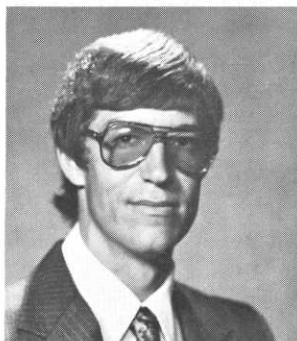
A recent report on golf course pesticide use in Ohio reveals that in 1978 the total budget (operational costs, fungicides, insecticides, and herbicides) was \$59,480,137.00. This is the cost of the 648 courses in Ohio. The average fungicide budget was \$4,074.00. Fungicide costs were 4 times greater than insecticides, and 3 1/2 times greater than herbicide costs. Chlorothalonil was used in greater quantity and Cycloheximide was applied to more areas than any other fungicide. Twenty different fungicides were used by respondents, making it possible to estimate approximately the relative importance of various turf diseases by compiling the number of fungicides applications per disease. Dollar spot received the greatest number of fungicide applications, nearly two times the second place disease, Brown Patch. Leaf spot-melting out was third, and snow mold ranked fourth, with Pythium blight at fifth place. Fungicide use is approximately 4 times greater than herbicide or insecticide, which may be due to the need for fungicides to be applied more often in a growing season than either weed or bug control materials. The golf course industry demands a very low tolerance level for turf pests when compared to pest management on home lawns or parks. This is especially true on golf greens and tees, as compared to fairways.

The use of disease or insect resistant turf-grass cultivars have not sufficiently been incorporated into the turf areas to seriously eliminate disease or insects, and in many cases, pest resistant turf-grass varieties are not available. The use of pesticides for use of control of diseases will continue to be important for many years. We must continue to strive to understand how to effectively and efficiently use turf grass pesticides while incorporating new sources of genetic resistance and cultural disease prevention practices.

## Bergerson-Caswell Appoints New Officers



**Gary F. Hart**



**John W. Henrich**

Gary F. Hart who recently joined the firm after completing 21 years in the U.S. Navy has been elected vice-president and manager of the municipal and industrial pump department. As a commissioned chief warrant officer in the Navy, he has served as the chief engineering maintenance officer aboard the USS Yellowstone.

John W. Henrich, recently manager of the municipal and industrial pump department, has been elected vice-president in charge of municipal and industrial well drilling. Mr. Henrich is a graduate of Southwest State University, Marshall, MN, where he received a degree in mechanical engineering. He has been employed by the firm since 1976.

Arthur R. Hart, president of Bergerson-Caswell, Inc., Maple Plain, Minnesota announced the election of two new officers of the firm.