Plant disease clinic aids farmers, gardeners

PENN STATE — A disease clinic for plants, the only one of its kinds in Pennsylvania, operates within the College of Agriculture at The Pennsylvania State University. What's more, the services are free.

The Plant Disease Clinic at Penn State can diagnose all sorts of problems—those caused by tungi, bacteria, nematodes, viruses, and air pollutants. Clinic personnel diagnose problems not handled by the regular soil and forage testing laboratories at University Park.

Managing the clinic is John D. Peplinski, senior research aide. The diagnostic staff includes all Extension specialists within the Department of Plant Pathology. Peplinski indicated the analysis of plant problems is available to anyone needing such help.

"Of all specimens received, 35 percent are referred to us by county Extension agents," Peplinski commented. "The remaining 65 percent are either submitted directly by mail, are brought in personally, or come to us through faculty and staff members."

Many plant specimens are received from other/states. The Penn Staters also cooperate with workers in several other university clinics of the Northeast to help understand and solve plant problems. About 1800 specimens are processed at University Park in a year. Of these, some 50 percent come from commercial operations and the other 50 percent from homeowners.

Kits are available for submitting plant specimens and soil samples. These kits are available in room 218 Buckhout Laboratory, University Park, Pa., 16802—as well as at all county Extension

Use of the kits is encouraged. A form in each kit, when filled out, provides valuable information to aid clinic personnel in diagnosing plant disease problems.

plant disease problems. Clinic tacilities include a laboratory for microscopic examination of diseased plants. Lab personnel can also isolate and grow plant pathogens—disease organisms. Moreover, virus analysis is carried out using certain plants called "indicator plants" that readily show disease symptoms. Viruses are also detected with a technique known as ELISA, an acronym for the scientific name of enzyme-linked immunosorbent assay.

If the plant pathology staff finds that diseases and air pollutants are not involved in a problem, then Extension specialists are consulted in other departments entomology, agronomy, horticulture and torestry.

"Listings of specimen records can be produced," Peplinski said, "whenever people request information regarding certain diseases or crops 1 ample, it a listing is needed or all tomato samples received by the clinic in 1980, we can print this list with our computer terminal."

The Penn State computer storage system proved to be a valuable source of information for the Nuclear Regulatory Commission in its investigation of plant problems reported in the Three Mile Island area. Computer listings of plant specimens received by the clinic in 1979, from counties surrounding TMI, were given to the NRC





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