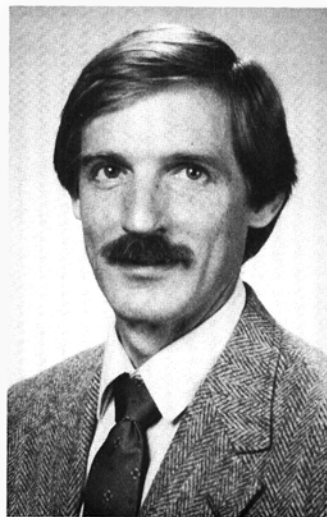


On Strengthening Our Plant Disease Clinics

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Most plant disease clinics (PDCs) in the United States are associated with the Cooperative Extension Service and function within plant pathology departments of land-grant universities. Within a university setting, a PDC can contribute significantly to research and education while enjoying the availability of consultants (plant pathologists, horticulturists, weed scientists, and others) and relevant literature. When a host department does not consider a PDC to be an important function, however, full support may be withheld.

Services vary from one clinic to another because of differences in commodity responsibilities and departmental support, but several issues are common to most PDCs. How well are the diagnosticians trained in current and traditional methodologies? Should techniques be standardized? How much effort is exerted to accurately identify and document the cause of a disease? Are the diagnosticians contributing to research and teaching? Are administrators encouraging and supporting PDCs to provide high standards of excellence?

Of fundamental importance is diagnostic reliability, which depends largely on the training and expertise of the diagnostician and on adequate financial support. Unfortunately, some departments and/or designated faculty members consider a PDC to be a necessary burden and delegate most of the diagnostic responsibilities to graduate students. This may provide excellent experience for the students but may not serve the clinic's clientele very well and may reflect adversely on both the extension service and the host department. An incorrect diagnosis can be disastrous to a grower and discredit the university. Furthermore, the clinical record, whether the diagnosis is correct or incorrect, becomes a historical document.

A current issue among diagnosticians is standardization of techniques, with the objectives of increasing the level of confidence in diagnoses and of bringing the approximately 90 clinics to a more equal level of performance. For example, use of selective and semiselective media, baiting techniques, microscopy, and specific identification parameters for prokaryotes and viruses would undoubtedly upgrade many PDCs. Standardization of procedures is also important. Even the most effective isolation techniques may be insufficient to diagnose a wilt disease of a container-grown plant if ammonium toxicity and/or high levels of soluble salts are involved but not detected or if the possible role of insects and nematodes is overlooked. From the client's point of view, the multidisciplinary PDC is ideal, and hopefully more PDCs will move in this direction.

Considerably more work needs to be done before standardization can be implemented, and the APS Diagnosticians Committee is reviewing the issue. Standardization should not be so rigorous as to preclude the art of diagnosis, and the techniques and procedures must be the best ones available.

Qualified diagnosticians are indispensable to PDCs and must have adequate space and funding to ensure success of the clinics. A "new disease" may go unreported because a diagnostician lacks support and time to demonstrate causality. Diagnosticians should be encouraged—and supplied the means—to attend workshops and professional meetings concerned with their discipline.

PDCs can make important contributions to education. Graduate students benefit from working with experienced diagnosticians and often make their own contributions to the clinic. In most universities, undergraduate students can receive both credits and valuable experience through "independent study" in PDCs. Many diagnosticians are also involved in the education of extension agents and growers.

Hopefully, more exacting methods for diagnosing plant diseases will be developed and standardized techniques will be adopted. The APS Diagnosticians Committee recognizes that diagnosticians need opportunities to improve their skills and is planning workshops to provide those opportunities. It is my hope that administrators will recognize the value and potential contributions of PDCs and support them more fully.