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The Doctor of Plant Health

The Ph.D. degree (Doctor of Philosophy) is universally recognized, at least in academic circles, as the highest degree awarded to graduate students who have demonstrated competence to conduct original research in their subject of major study. It is an essential ingredient in the dossiers of most applicants for appointments to academic positions in higher educational institutions, and in positions demanding creative research in governmental and industrial laboratories.

This degree is also highly regarded when held by private-sector practicing professionals in plant sciences, because it identifies the recipient as a person who has completed a rigorous advanced educational program.

In other words, the Ph.D. degree has become a license to practice in academic and nonacademic research laboratories as well as a status symbol for the practicing crop production specialist who is more interested in the application of knowledge than in conducting basic academic research.

As we move into the twenty-first century and note that U.S. agriculture is now largely a technologically based activity, we need to anticipate agricultural needs rather than merely react to events after they become firmly entrenched.

In my judgment, we have arrived at the point where we need to recognize that properly prepared professional individuals must become more involved in private-sector consulting activities associated with plant health.

Successful agriculture in the United States today is not just a desirable way of life or a part-time rural experience. It is an economic enterprise, utilizing rural areas and resources to produce food and fiber for national and international consumers in an economically rewarding way, without destroying or degrading the essential natural resources used. To maintain the validity of that statement in the future, a support system of research, education, and professional advice will be required.

In an earlier editorial on this page (January-February 1984), I described the need for a private-sector practitioner in plant health. I also advocated the development of a profession of largely private-sector plant health specialists. What I did not say in that editorial is that our college and

university educational programs in the plant health fields must help achieve this professional status. Graduate training in the plant health sciences (plant pathology, plant nematology, economic entomology, and weed science) currently leads to two levels of advanced degrees: the Master of Science and the Ph.D. The Master's degree is often viewed as a stepping-stone to the Ph.D., as an evaluation point during expected progress to the higher degree. The Master's is also sought as an advanced degree for persons who want specialized training, but do not want to engage in research.

It is time for the more renowned institutions engaged in training research scientists in the plant health professions to venture out of their traditional modes and develop rigorous advanced degree programs culminating in a professional doctoral degree.

This is not really a new concept, but it is new to the plant health field. A successful physician or surgeon doesn't have to be a research scientist. Veterinarians, public health practitioners, lawyers, and educators practicing their professional skills don't need the kind of graduate training associated with the Ph.D. degree to be proficient.

The curriculum of the practitioner in plant health will be quite different from the usual Ph.D. track. Dissertation research will have to be replaced by clinical training and practical experience. Plant health practitioners must be trained in, and understand, basic ecological principles and the elements of epidemiology. They must be familiar with systems sciences and computer usage and language. In fact, the knowledge base and multidisciplinary understanding requirements are every bit as demanding as the traditional Ph.D. requirements.

The challenge before our educational institutions is to break away from the traditional approach of training Ph.D.'s in the plant health sciences for both research and practitioner roles and to develop a professional doctorate. Let us be prepared to serve effectively in twenty-first century agriculture.

Who among us will dare to develop the Doctor of Plant Health (PHD)?