

Acknowledgements

The Plant Disease Clinic depends on a industrious staff of both full-time and part-time employees to prepare culture media, isolate pathogens from plant tissue, measure soil pH, extract nematodes from soil and plant tissue, maintain records, answer the telephone, keep track of samples, and send out reports. In 1998, diagnoses in the Plant Disease Clinic in Blacksburg were performed by Mary Ann Hansen and Diane Reaver with valuable assistance from Elizabeth Bush.

We also consult with many faculty and staff in various departments in order to make complete, accurate diagnoses and recommendations. We would like to thank the following people for their willing assistance during the past year:

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The Weed Identification Clinic is operated by Dr. Scott Hagood with the assistance of Mr. Claude Kenley. Mr. Tom Wieboldt, curator of the Herbarium in the Biology Department, performs many of the identifications.

We would also like to thank Mr. Todd Powell of TSP Software for designing and continuing to support the Plant Clinic database. The database has given us the ability to keep complete records of Plant Clinic samples and to electronically mail reports to Extension Offices.

Introduction

The annual report for the Plant Disease Clinic and the Weed Identification Clinic located on the Virginia Tech campus in Blacksburg is presented in the following pages. Results of the soil assays performed by the Nematode Assay Laboratory are not included, nor are plant specimens which were submitted to and diagnosed at the Agricultural Research and Extension Centers throughout the Commonwealth.

For those pathogens which could be identified to species or for which only one species is known to occur on the host plant in question, the species name is listed. For those diseases in which one of several species could have been involved, the epithet is listed as "sp". The Plant Disease Clinic did not routinely identify pathogenic organisms to species since species identification can sometimes be a very time-consuming process and often has little bearing on control recommendations. Most pathogens were assumed to be disease incitants if they were cultured in sufficient numbers from the plant tissue, if they were reported in the literature to be pathogens of the particular host plant, and if they were reported to cause the observed symptoms.

Viral problems were, for the most part diagnosed by the ELISA (Enzyme-Linked Immunosorbent Serological Assay) method by Agdia, Inc. Agdia provides testing services for a wide range of plant viruses; however, testing is limited to the viruses for which antisera are available. Host inoculation was also used to identify viruses in some specimens.

The phrase "Cause of Problem Unknown" is used for specimens for which no pathogen could be isolated and for which no obvious environmental or cultural condition could be associated with the problem. Trees have more specimens in this category, and in the category "Insufficient Sample", than any other type of plant. Tree problems are more difficult to diagnose in a clinic setting than problems of annual plants for several reasons. First, tree problems often develop over the course of several years and current symptoms may be related to stressful conditions that occurred several years previously. Also, it is difficult for growers to supply an appropriate plant specimen for diagnosis since the causes of many tree diseases occur in the trunk or roots.

Some insect problems are also listed in this report. Insect damage is often mistaken for disease, and samples with insect damage are sometimes submitted to the Plant Disease Clinic rather than the Insect Identification Lab. We make a preliminary diagnosis of insect damage on these samples and refer them to Mr. Eric Day in the Insect Identification Lab; the final diagnosis on all samples of insect damage is performed by Mr. Day.

Reports are now mailed electronically to the Extension Office email address. If requested, we will simultaneously send electronic reports to one or more individual Extension personnel. Since implementing electronic mailing, which minimizes the time it takes to get reports back to the agents, we have discontinued faxing reports. For the time being, we are continuing to send the handwritten reports back to the Extension offices through the Extension Distribution Center. Any factsheets or additional printed information is attached to the handwritten reports. Any comments or questions about reports or plant problems can be emailed to us at <clinic@vt.edu>.