



Meet the Scientist!



A plant pathologist studies the organisms and environmental factors that cause plant diseases, and methods to reduce or prevent damage by diseases.

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<http://www.naturalinquirer.org>

<http://www.scienceinvestigator.org>

Important Scientist Characteristics

★ Plant pathologists must piece together clues as to what might be causing the damage before deciding what techniques to use for identification of a potential pathogen. Pathologists carefully observe disease symptoms, signs, patterns, past management and environment. Deductive reasoning helps a pathologist to determine what areas to investigate further.

Example of a simple research question I have tried to answer: What is the host range of *Longidorus americanus* and can it cause stunting of southern pine seedlings?

Technology or equipment used in research:

The most important tool for a pathologist is the microscope. Diseases are caused by fungi, bacteria, viruses, and nematodes (microscopic worms). All of these pathogens are microscopic and require high magnification for our eye to see.

Most Exciting Discovery

We discovered a new nematode, *Longidorus americanus*, which caused stunting of southern pine seedlings. We determined the host range of this nematode and found that small grains did not host the nematode. A nursery could control the nematode by alternating their pine crop with these small grain crops.

When did you know you wanted to be a scientist?

I knew I wanted to work on protecting our environment after attending a Girl Scout Camp in 5th grade. I realized in high school I wanted to be a pathologist after I went to a "Trees for Tomorrow" camp and a pathologist showed us all the diseases affecting the forest.

<http://www.fs.fed.us/r8/foresthealth/index.shtml>