

## Laboratory 1 Study Guide (video: 1 hour 27 minutes)

### Study Questions

1. In a general sense, what types of symptoms do most bacterial and fungal pathogens induce, and how do they differ from those induced by most viruses? Nematodes?
2. Considering the Amazon sword plant scenario, why was it so important for the grower to distinguish between biotic and abiotic disease?
3. What are chromistic algae, and how are they similar to, different from true fungi?
4. What differentiates “symptoms” and “signs” of disease?
5. What types of signs do bacterial plant pathogens exhibit? How do they differ from those produced by fungi?
6. What group of organisms produces zoospores as infectious units? What type of habitat are these spores best suited for?
7. How do “witches’ broom” symptoms develop? Damping off symptoms?
6. What group of pathogens is most likely to induce mosaic, mottle, distortion, and/or stunting symptoms?
7. What group of soil pathogens is associated with few, if any above ground symptoms, except for varying degrees of stunting symptoms?
8. What specific (and different) roles do oospores and zoospores play in the life cycle of *Aphanomyces* and other oomycetes?
9. What type of symptoms did *Aphanomyces* induce on Amazon sword plants? Terrestrial plants such as peas and beets?
10. Regarding the Amazon sword plant scenario, what method was used to finally eliminate the disease from his plantings? Was it successful? Why was the grower originally so very reluctant to resort to this technique?

### Key Words

Abiotic disease  
Agar medium (-ia)  
Antheridium (-ia)

*Aphanomyces*  
Asexual stage  
Bacteria  
Biotic disease  
Blight symptoms  
Chromistic algae (i.e. Oomycetes)  
Coenocytic mycelium  
Damping off symptoms  
Distortion symptoms  
Dwarfing symptoms  
Fungi  
Gall symptoms  
Host range  
Hypha (-ae)  
Index of Plant Diseases  
Mollecutes (phytoplasmas)  
Mosaic symptoms  
Mottle symptoms  
Mycelium (-ia)  
Necrosis symptoms  
Nematodes  
Oogonium (-ia)  
Oomycetes (i.e. Chromistic algae)  
Oospore  
Ooze  
Pathogen  
Physiological processes  
Phytoplasmas (mollecutes)  
Rot symptoms (crown, root, fruit)  
Septate mycelium  
Sexual stage  
Signs  
Spot symptoms  
Stunting symptoms  
Symptoms  
Viruses  
Wilts  
Witches' broom symptoms  
Zoospore