




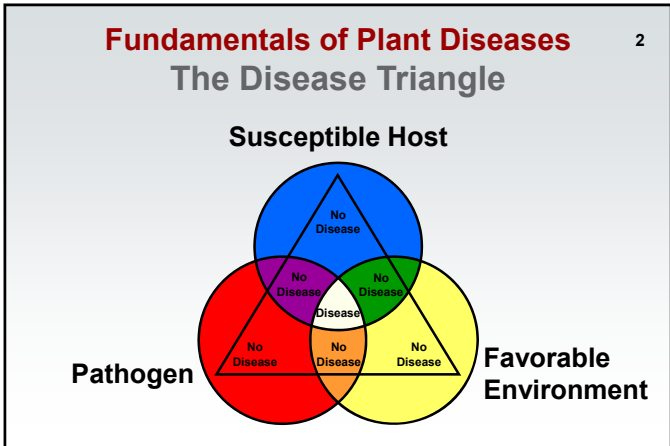
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Talks for the General Public

Fundamentals of Plant Diseases

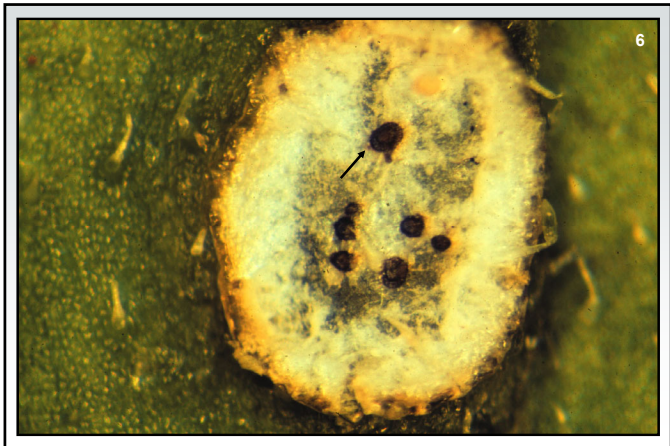
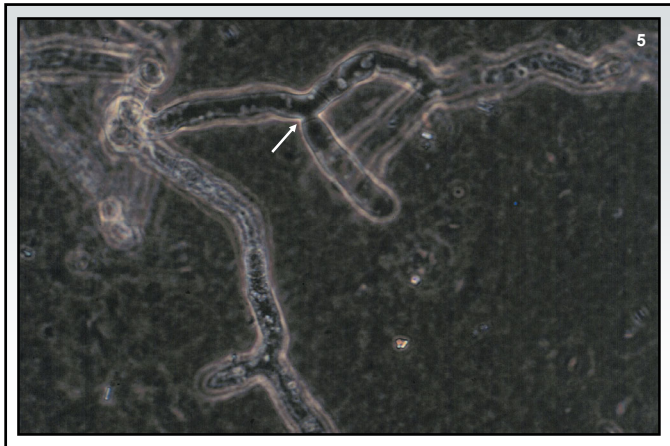
Brian D. Hudelson
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 Madison/Extension

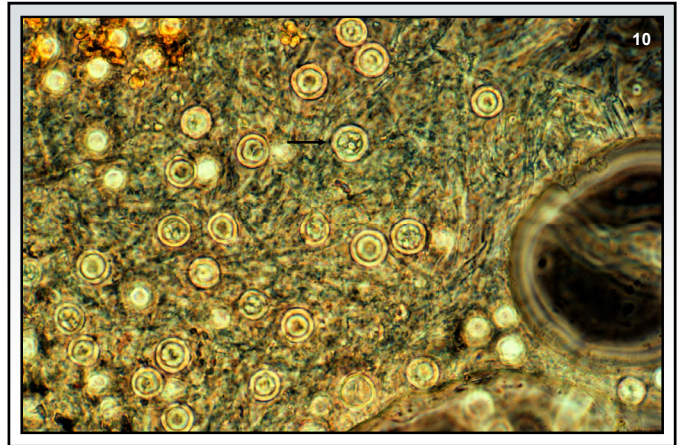
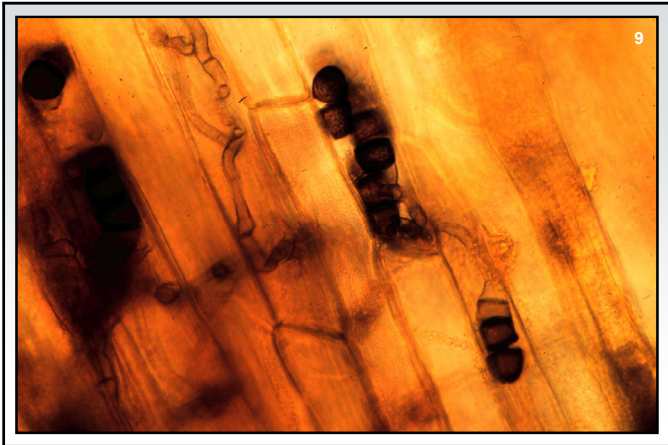
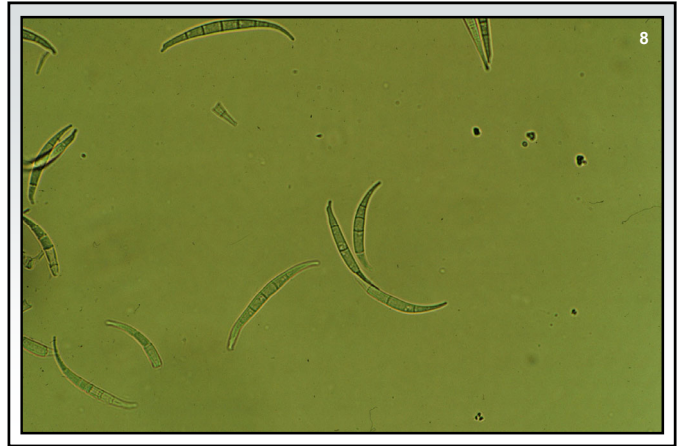






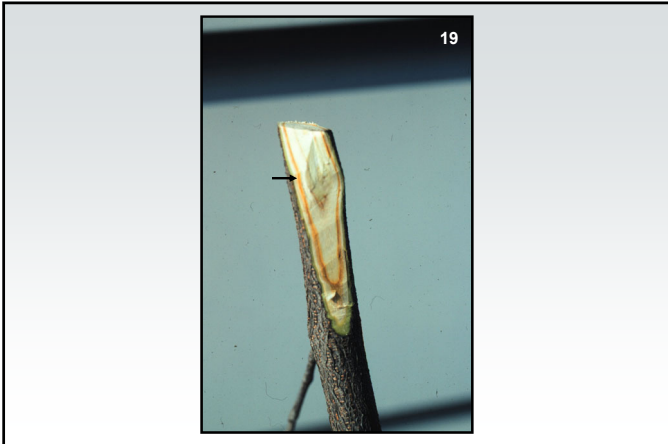
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- Fundamentals of Plant Diseases**
Causes of Plant Diseases
- Fungi/Fungi-Like Organisms
 - Bacteria
 - Viruses
 - Nematodes
 - Phytoplasmas
 - Abiotic factors

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- Fundamentals of Plant Diseases**
Fungi/Fungi-Like Organisms
- Largest pathogen group
 - More than 8000 pathogenic species
 - Can be seen with the naked eye
 - Vegetative growth through production of multicellular fungal threads (hyphae)
 - Reproduce via spores





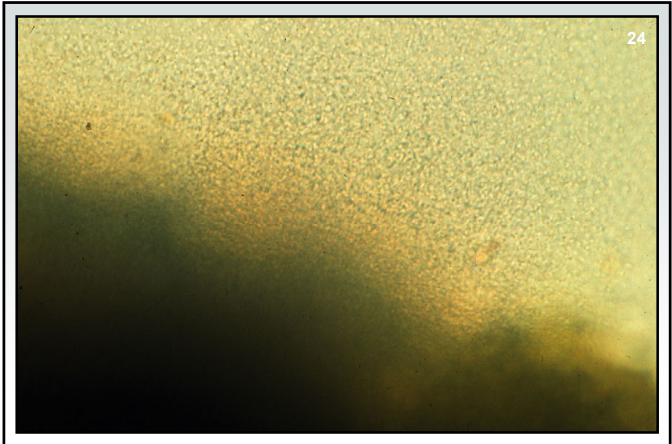
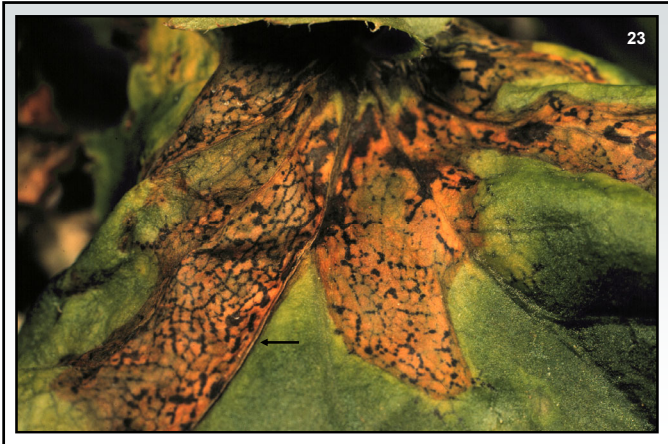
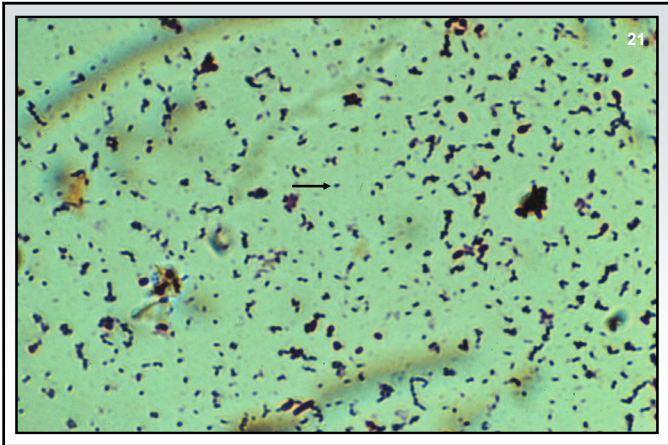


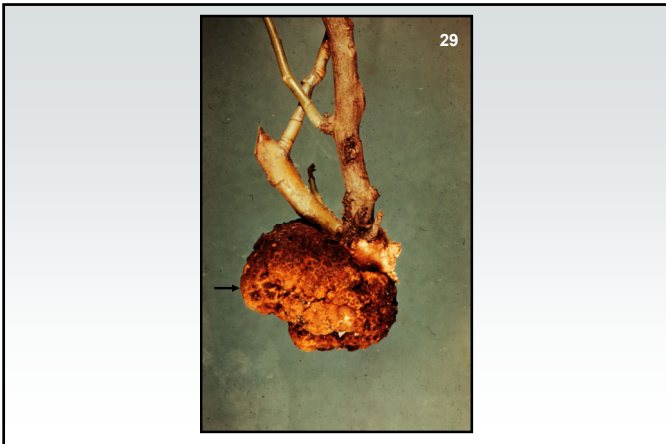
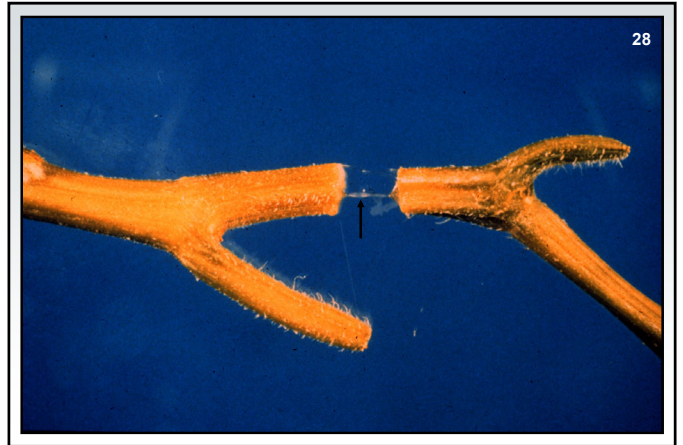
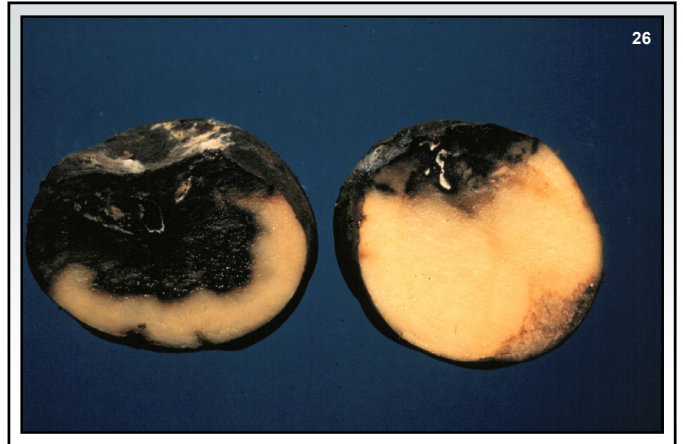


Fundamentals of Plant Diseases

Bacteria

- About 200 pathogenic species
- Can be seen with a light microscope
- Simple, unicellular
- Reproduce by binary fission

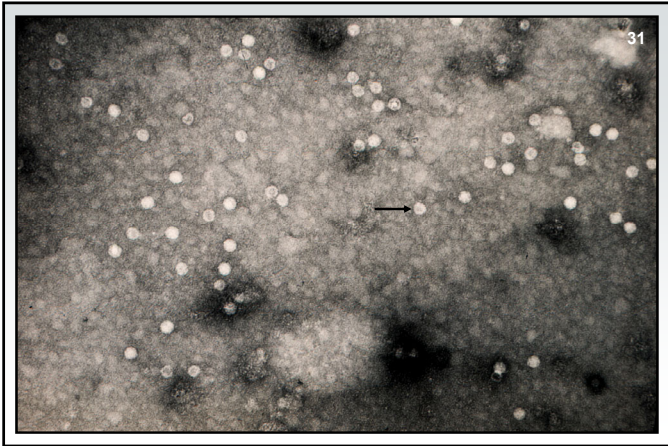




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Viruses

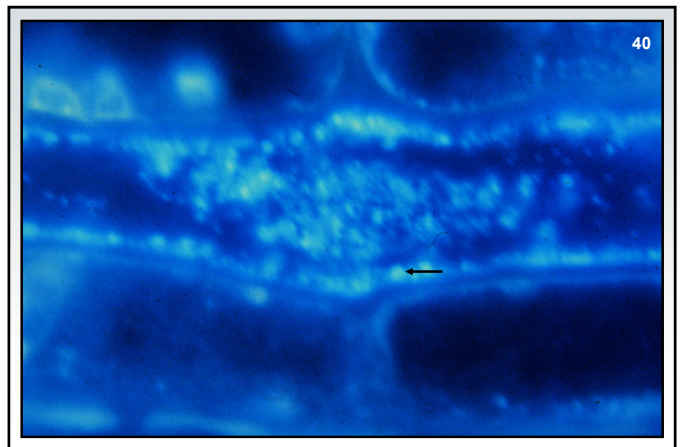
- Can only be seen using an electron microscope
- Extremely simple - nucleic acid with a protein coat
- Reproduce by taking over host reproductive machinery
- Often associated with insect vectors





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Phytoplasmas

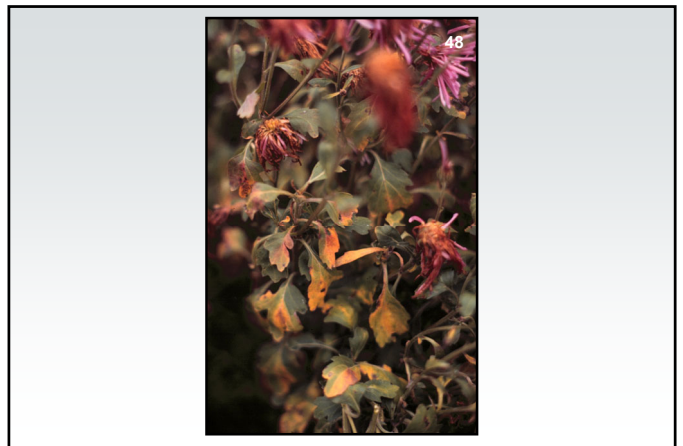
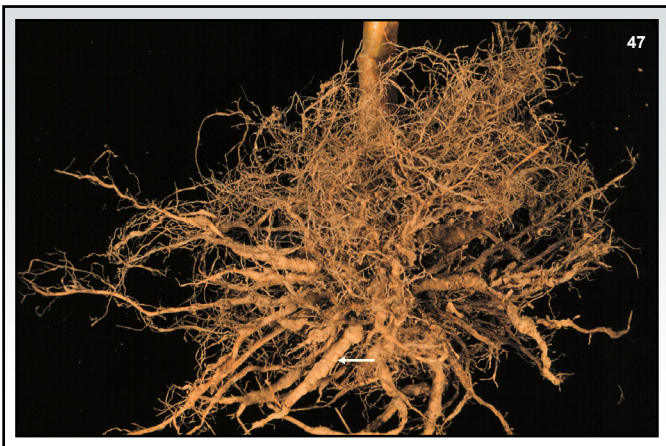
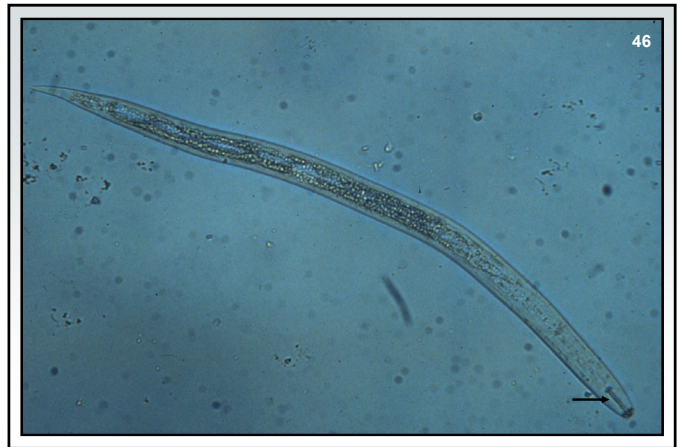
- Funky bacteria
- Small, wall-less
- Phloem limited
- Usually seen only with an electron microscope
- Reproduce by binary fission
- Transmitted by insects (leafhoppers)





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Nematodes

- Parasitic worms
- Very complex compared to other pathogens
- Usually seen only with a light microscope
- Reproduce by eggs

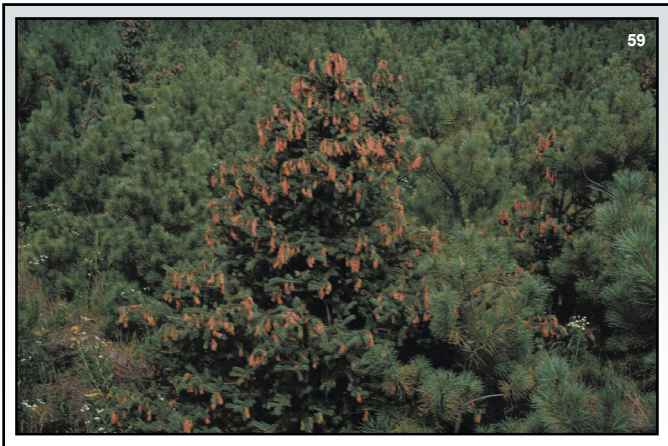
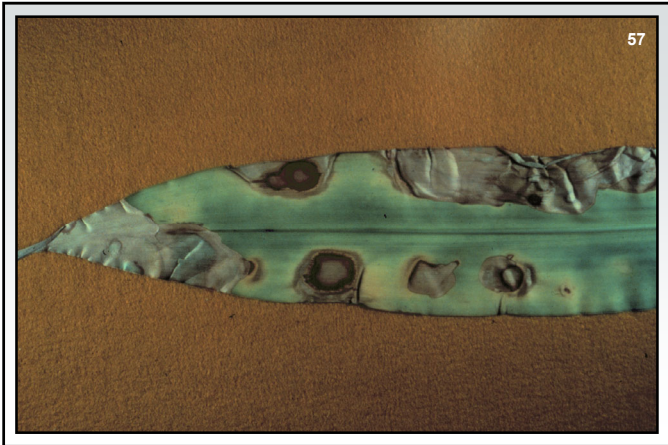


Fundamentals of Plant Diseases
Abiotic Factors

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- Nutritional abnormalities
- Pesticide exposure
- Environmental pollutants
- Adverse weather conditions







Fundamentals of Plant Diseases
Where to Go for Help

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Plant Disease Diagnostics Clinic
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Madison, WI 53706-1598
(608) 262-2863
pddc@wisc.edu
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Where to Go for Help

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UW Soil and Forage Lab
4702 University Ave.
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