Plant Disease Management

**Definition**
- Anything that you can do to reduce the impact of disease
- Integrated with other types of management

**Diagnosis**
- First step in successful management
- Recognition that something is wrong
- Detective work to figure out what happened and why something happened

**Resistance**
- Resistance
- Exclusion
- Protection
- Eradication
- Avoidance
- Therapy

**The Disease Triangle**
- Susceptible Host
- Pathogen
- Favorable Environment
- Resistance is NOT universal!

- Resistance is NOT immunity!

- Resistance can depend on plant “age” and plant part!

- Resistance effectiveness can depend on the weather!

- Resistance may not be equally effective in all locations!

- Resistance is sometimes NOT forever!
Resistance is not everything you may need in a plant!

Preventing introduction of pathogens into your garden

Buy healthy plants!

Buy healthy seeds!

Limit soil movement!
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**Exclusion**
- Limit other pathogen introductions!

**Decontamination**
- Decontaminate, decontaminate, decontaminate!

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**Protection**
- Applying materials to prevent infections by pathogens from occurring
  - Use as a last resort!
  - Read pesticide labels!
  - Use proper rates!
  - Apply at the right times!
  - Wear appropriate clothing!
  - Alternate active ingredients!
  - Get training!

**Eradication**
- Getting rid of pathogens once they have arrived in your garden
  - Do good fall clean-up!
• Prune diseased branches!

• Remove entire plants!

• Control alternate hosts!

• Control weeds!

• Rotate, rotate, rotate!

• Decontaminate, decontaminate, decontaminate!
Manipulating how you grow your plants to prevent conditions favorable for disease

DO NOT plant susceptible plants where a known disease exists!

DO NOT plant too early or too deeply!

DO NOT plant too densely!

DO NOT water too much!

DO NOT use sprinklers to water!
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Avoidance

- DO NOT water, heat or nutrient stress plants!

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Therapy

- Eliminating pathogens from infected plants

Plant Disease Management
Putting It All Together

- Figure out what diseases you have
- Figure out what management techniques work
- Integrate your disease management with other management needs
- DO NOT expect perfection
- Enjoy your garden (including the diseases)

Plant Disease Management
Where to Go for Help

Plant Disease Diagnostics Clinic
Department of Plant Pathology
University of Wisconsin-Madison
1630 Linden Drive
Madison, WI 53706-1598
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