Plant Disease Management

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

**The Disease Triangle**

- Susceptible Host
- Environment Favorable
- Pathogen

**R-E-P-E-A-T**
- Resistance
- Exclusion
- Protection
- Eradication
- Avoidance
- Therapy

**Resistance**
- Using a plant’s natural ability to fend off disease
Plant Disease Management

Resistance

• Resistance is NOT universal!

Plant Disease Management

Resistance

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

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Resistance

• Resistance may not be equally effective in all locations!

Plant Disease Management

Resistance

• Resistance is NOT immunity!

Plant Disease Management

Resistance

• Resistance effectiveness can depend on the weather!

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Resistance

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

Resistance is not always good!

Preventing introduction of pathogens into your garden

Buy healthy plants!

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

**Protection**
- Applying materials to prevent infections by pathogens from occurring
  - **Baking Soda**
  - **Soap**

**Eradication**
- Getting rid of pathogens once they have arrived in your garden

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**Plant Disease Management**

**Exclusion**
- Decontaminate, decontaminate, decontaminate!

**Protection**
- 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**
- Do good fall clean-up!
**Plant Disease Management Eradication**

- 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!

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

Therapy

- Eliminating pathogens from infected plants

Plant Disease Management

Where to Go for Help

Plant Disease Diagnostics Clinic
Department of Plant Pathology
University of Wisconsin-Madison
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