West Side Garden Club
Growing Healthy Plants
Basics in Plant Disease Management

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Plant Disease Management
Definition

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

Plant Disease Management
Definition

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

Plant Disease Management
The Disease Triangle

Susceptible Host
Pathogen
Favorable Environment

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

Plant Disease Management
Resistance

- Using a plant's natural ability to fend off disease
• 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!

Resistance is not always good!

Preventing introduction of pathogens into your garden

Buy healthy plants!

Buy healthy seeds!

Limit soil movement!
**Plant Disease Management**

**Exclusion**
- Limit other pathogen introductions!

**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!
Plant Disease Management Eradication

• Prune diseased branches!

Plant Disease Management Eradication

• Remove entire plants!

Plant Disease Management Eradication

• Control alternate hosts!

Plant Disease Management Eradication

• Control weeds!

Plant Disease Management Eradication

• Rotate, rotate, rotate!

Plant Disease Management Eradication

• 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!
Plant Disease Management
Avoidance

- DO NOT water, heat or nutrient stress plants!

Plant Disease Management
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
(608) 262-2863
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