Winnebago County MGV's

Growing Healthy Plants
Basics in Plant Disease Management

Brian D. Hudelson
Department of Plant Pathology
University of Wisconsin-Madison/Extension

Plant Disease Management
Definition

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

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

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
Plant Disease Management
Resistance

• Resistance is NOT universal!

Plant Disease Management
Resistance

• Resistance is NOT immunity!

Plant Disease Management
Resistance

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

Plant Disease Management
Resistance

• Resistance effectiveness can depend on the weather!

Plant Disease Management
Resistance

• Resistance may not be equally effective in all locations!

Plant Disease Management
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!

Buy healthy seeds!

Limit soil movement!
Plant Disease Management

Exclusion

• Limit other pathogen introductions!

Plant Disease Management

Exclusion

• Decontaminate, decontaminate, decontaminate!

Plant Disease Management

Protection

• Applying materials to prevent infections by pathogens from occurring

Plant Disease Management

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!

Plant Disease Management

Eradication

• Getting rid of pathogens once they have arrived in your garden

Plant Disease Management

Eradication

• Do good fall clean-up!
Prune diseased branches!

Remove entire plants!

Control alternate hosts!

Control weeds!

Rotate, rotate, rotate!

Decontaminate, decontaminate, decontaminate!
Plant Disease Management Avoidance

- Manipulating how you grow your plants to prevent conditions favorable for disease

Plant Disease Management Avoidance

- DO NOT plant susceptible plants where a known disease exists!

Plant Disease Management Avoidance

- DO NOT plant too early or too deeply!

Plant Disease Management Avoidance

- DO NOT plant too densely!

Plant Disease Management Avoidance

- DO NOT water too much!

Plant Disease Management Avoidance

- 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  
pddc@wisc.edu  
https://pddc.wisc.edu  
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