

## WI Master Gardener Conference-2018

### Growing Healthy Plants Basics in Plant Disease Management

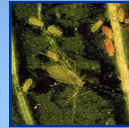
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## Plant Disease Management Definition

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



## Plant Disease Management Diagnosis

- First step in successful management
- Recognition that something is wrong



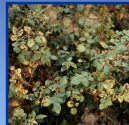
- Detective work to figure out what happened and why something happened

## Plant Disease Management R-E-P-E-A-T

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

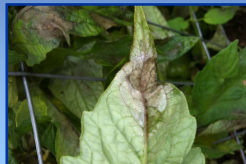
## Plant Disease Management Resistance

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



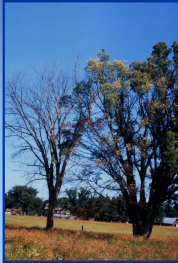
## Plant Disease Management Resistance

- Resistance is NOT universal!



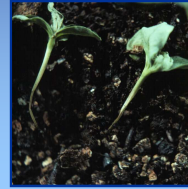
### Plant Disease Management Resistance

- 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!



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### Plant Disease Management Resistance

- Resistance may not be equally effective in all locations!

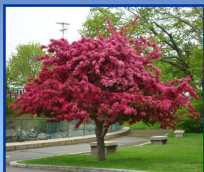


vs.



### Plant Disease Management Resistance

- Resistance is sometimes NOT forever!



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### Plant Disease Management Resistance

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



### Plant Disease Management Resistance

- *Resistance is not always good!*

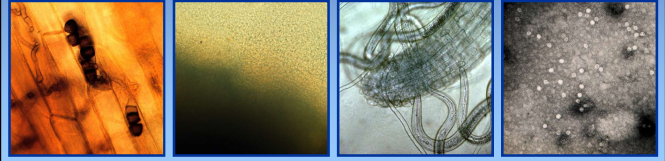


vs.



### Plant Disease Management Exclusion

- *Preventing introduction of pathogens into you garden*



### Plant Disease Management Exclusion

- *Buy healthy plants!*



### Plant Disease Management Exclusion

- *Buy healthy seeds!*



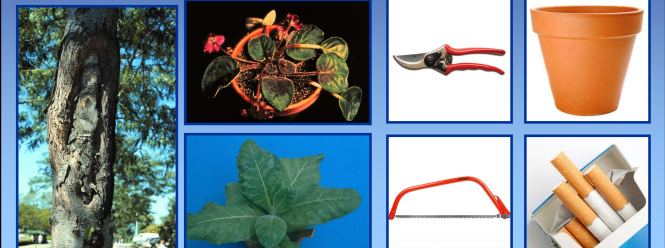
### Plant Disease Management Exclusion

- *Limit soil movement!*



### Plant Disease Management Exclusion

- *Limit other pathogen introductions!*





### Plant Disease Management Exclusion

- Decontaminate, decontaminate, decontaminate!



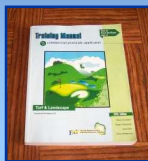
### Plant Disease Management Protection

- 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



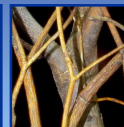
### Plant Disease Management Eradication

- Do good fall clean-up!



### 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!



### 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!



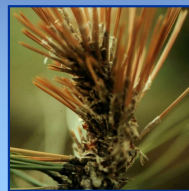
### Plant Disease Management Avoidance

- **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  
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University of Wisconsin-Madison  
1630 Linden Drive  
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