

Ash Homeowner's Seminar

Diseases of Ash

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



Diseases of Ash Anthracnose

- **Causes**
 - Gloeosporium spp.
 - Collectotrichum spp.
 - Discula spp.
 - Other fungi
- **Hosts**
 - Ash
 - Oak
 - Maple
 - Many other trees
- **Favorable environment: Cool, wet weather**



Diseases of Ash Anthracnose

- **Control**
 - **DO NOT panic**
 - Remove/destroy diseased leaves
 - Burn (where allowed)
 - Deep bury
 - Hot compost

Diseases of Ash Anthracnose

- **Control**
 - Use fungicides to prevent infections
 - Copper-containing fungicides, chlorothalonil, mancozeb, thiophanate methyl
 - Alternate active ingredients (FRAC codes)
 - Apply at bud break, 1/2 expansion of leaves, full leaf expansion

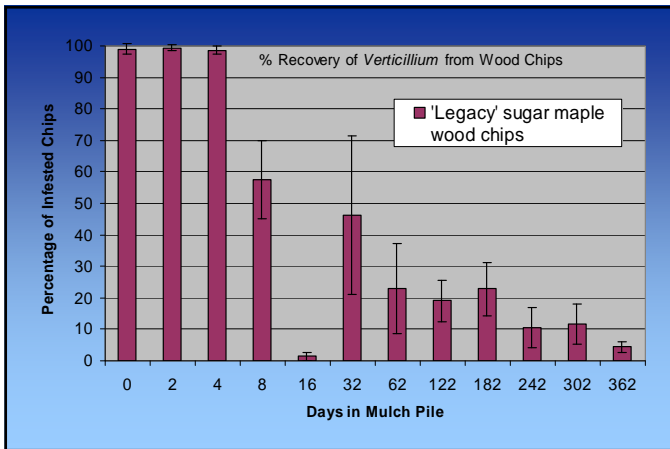
Diseases of Ash Verticillium Wilt

- **Causes: Verticillium dahliae (Other species)**
- **Hosts**
 - Many woody ornamentals
 - Common: Ash, maple, redbud, smokebush
 - "New": Seven son flower, wafer-ash, buttonbush
 - Many herbaceous plants
 - Many vegetables (tomato, potato, eggplant)
- **Favorable environment: Cool, wet weather**



Diseases of Ash Verticillium Wilt

- **Control**
 - Pretest soils/mulches/composts for the presence of Verticillium
 - Keep broad-leaf weeds under control
 - Avoid municipal mulches



- **Wood Chips as an Inoculum Source**
 - **Amur maple**
 - 30.0%/25.0% (Trted)
 - 0.0%/0.0% (Non-Trted)
 - **Green Ash**
 - 23.7%/10.5% (Trted)
 - 0.0%/0.0% (Non-Trted)
 - **Redbud**
 - 10.7%/13.3% (Trted)
 - 0.0%/0.0% (Non-Trted)

Diseases of Ash Verticillium Wilt

- **Control**
 - Prevent plant stress
 - Prune diseased (wilted) areas
 - Decontaminate pruning tools
 - 70% alcohol
 - 10% bleach
 - Make infected trees comfortable until they die

Diseases of Ash Verticillium Wilt

- **Control**
 - Remove diseased plants
 - Destroy infected materials
 - Burning (where allowed)
 - Landfilling
 - Hot composting?

Diseases of Ash Verticillium Wilt

- **Control**
 - Avoid susceptible plants in Verticillium-infested areas
 - Use “resistant” plants
 - **CONIFERS:** Pines, spruces, firs, junipers
 - **DECIDUOUS TREES/SHRUBS:** Beech, birch, ginkgo, hackberry, hawthorn, hickory, honey locust, mountain ash, white oak, bur oak, poplar, serviceberry, sycamore, willow

Diseases of Ash Ash Yellows

- **Cause:** Candidatus *Phytoplasma fraxini*
- **Hosts**
 - White ash
 - Green ash
 - Other ash
 - Lilac
- **Favorable environment**
 - High leafhopper populations (Scaphoideus)



Diseases of Ash Ash Yellows

- **Control**
 - Make infected trees comfortable until they die
 - Remove infected trees
 - Avoid growing susceptible trees and shrubs

Diseases of Ash Root/Crown Rots

- **Pathogens**
 - Phytophthora spp.
 - Rhizoctonia solani
 - Cylindrocarpon spp.
 - Pythium spp.
 - Fusarium spp.
 - Thielaviopsis spp.
- **Hosts**
 - Ash
 - Anything and everything
- **Favorable environment:** Cool, wet soils



Diseases of Ash Root/Crown Rots

- **Control**
 - **Moderate soil moisture**
 - Grow ornamentals in well-drained sites
 - Use a soil with adequate drainage
 - Improve drainage in poorly drained soils
 - Add organic matter to improve drainage
 - Use raised beds
 - DO NOT overwater
 - DO NOT overmulch

Diseases of Ash Root/Crown Rots

- **Control**
 - DO NOT move contaminated soil or plants to non-infested areas
 - Decontaminate infested tools, pots, work areas
 - Pretest soils/mulches/composts for the presence of root rot fungi
 - Be careful of your water source

Diseases of Ash Root/Crown Rots

- **Control**
 - Use fungicides to prevent infections
 - Etridiazole, metalaxyl, mefenoxam, fosetyl-AI, PCNB, thiophanate-methyl, fludioxonil
 - Alternate active ingredients (FRAC codes)
 - Use granular formulations if possible
 - Apply during periods of wet weather

Diseases of Ash Armillaria Root Disease

- **Pathogen:** Armillaria spp.
- **Hosts**
 - Ash
 - Many deciduous trees and many conifers
- **Favorable environment**
 - Drought stress
 - Stress due to defoliation
 - Other stresses



Diseases of Ash
Armillaria Root Disease

- **Control**
 - Reduce tree/shrub stress where possible
 - Water adequately
 - Fertilize properly
 - Control foliar pathogens
 - Control foliar insect pests
 - **DO NOT** wound trees
 - Remove Armillaria-infested materials

Diseases of Ash
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@plantpath.wisc.edu
<http://pddc.wisc.edu>
Follow on Twitter @UWPDDC*