Ash Homeowner’s Seminar

Diseases of Ash

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Diseases of Ash

Anthracnose

• Causes
  – Gloeosporium spp.
  – Discula spp.
  – Collectotrichum spp.
  – Other fungi

• Hosts
  – Ash
  – Maple
  – Oak
  – Many other trees

• Favorable environment: Cool, wet weather

Anthracnose

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

Anthracnose

• 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
**Verticillium Wilt**

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

**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

**Wood Chips as an Inoculum Source**

- **Amur maple**
  - 30.0%/25.0% (Treated)
  - 0.0%/0.0% (Non-Treated)

- **Green Ash**
  - 23.7%/10.5% (Treated)
  - 0.0%/0.0% (Non-Treated)

- **Redbud**
  - 10.7%/13.3% (Treated)
  - 0.0%/0.0% (Non-Treated)

**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

**Ash Yellows**

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

**Ash Yellows**

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

**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

**Armillaria Root Disease**

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

**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

**Use fungicides to prevent infections**

- Etridiazole, metalaxyl, mfenoxam, fosetyl-Al, 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

- 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

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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