

Oak Diseases & Decline



Oak Families

White Oak and Red Oak families have different mechanisms for fighting disease.

White Oaks

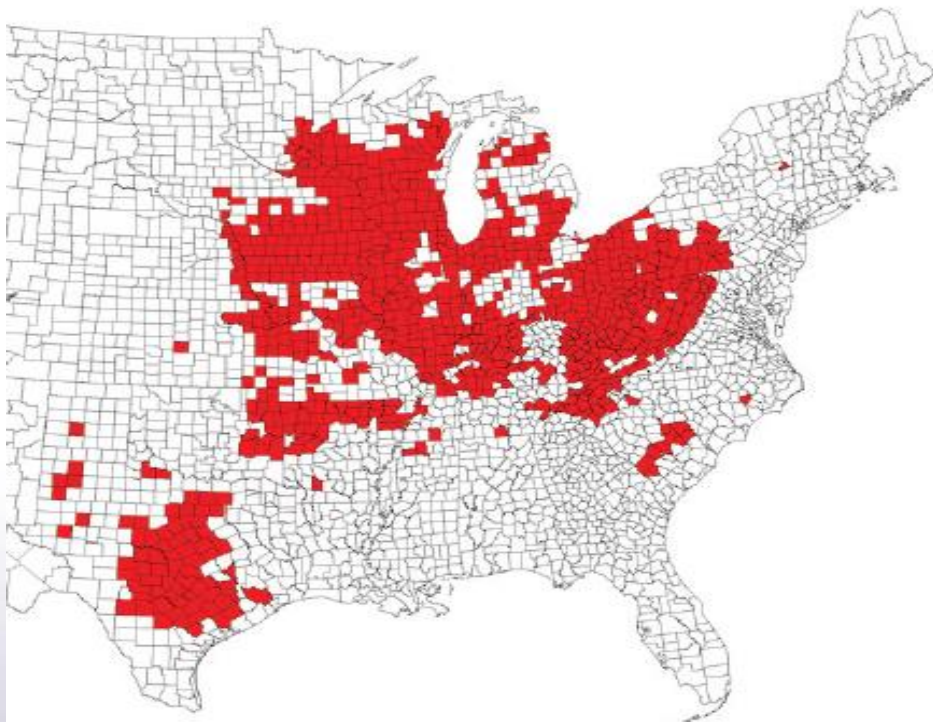


Red Oaks



Oak Wilt & Distribution

- Caused by fungus *Bretziella fagacearum*.
- Invades tree water pathways.
- Leaves wilt and drop and tree dies in one year.
- Serious issue but not all that common.



Bur Oak Blight (BOB)

- Caused by fungus *Tubakia iowensis*.
- Invades tree water pathways.
- Leaves develop wedge shaping lesions.
- Not typically lethal unless secondary invaders: two-lined chestnut borer or Armillaria root disease



Bacterial Leaf Scorch

- Caused by bacteria *Xylella fastidiosa*.
- Invades tree water pathways.
- Leaves develop marginal browning.
- Tree is symptomatic for years before potentially dying.



Anthracnose

- Caused by fungus *Apiognomonia quercina*.
- Develops after extremely wet spring.
- Leaves develop patchy browning & drop.
- Not typically lethal unless secondary invaders: two-lined chestnut borer and Armillaria root disease



Oak Decline Syndrome

- Multiple long-term stresses (climate, age, & site) combined with short-term stresses (defoliation, drought, flooding, & frost).
- Often followed by insect and fungal issues such as the two-lined chestnut borer and Armillaria root disease.
- Rapid leaf “scorch” but leaves retained.
- Red oak can die in one year; white oak over several years.



It is Difficult to ID Problem w/out a Test



Arborist Misinformation



- Multiple Arborists informed residents that oaks were declining from “oak wilt” & quoted \$\$\$ to address.
- Residents contacted Village for advice; Village recommended testing.
- Contractors disagreed.
- Bartlett Tree performed tests.
- Tests negative for oak wilt.



Species Tolerant & Not Tolerant to Decline Factors

Tolerant:

- Swamp White Oak
- Shagbark & Bitternut Hickory
- Common Hackberry

Not Tolerant:

- Birch
 - Ironwood
 - Sugar Maple
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- 2015-2018 < 5% TRPA includes oak species.
 - 2019-2020 > 50% TRPA include oak species.

What Can Be Done

- Test before implementing action plan
- Experienced/Trusted Arborist
- Reduce “Oak Decline Factors”
- Maintain healthy woodland ecosystem
- Prune infected branches and dead branches during dormant season.
- Fungicide treatments when appropriate (FYI- Expensive and not always successful).

***** Plant for future*****