

Healthy Trees in the Home Landscape

*Choosing the right tree, planting, watering and
some “other stuff”.*



Presented by ReLeaf Michigan
Celebrating 32 years of
“Healthy Trees, Healthy Communities”
1998-2020



Sponsored in part by ReLeaf Michigan and the MDNR Urban and Community Forestry Program with thanks to Gary Eichen of SavATree, Tree, Shrub & Lawn Care

November 17, 2020



ReLeaf Michigan

We plant trees to rebuild Michigan's urban and rural canopies.

We educate the public on the value of trees and the need to properly select, plant, and maintain them.

We partner with community groups on local tree related projects such as tree plantings and educational workshops.



30 YEARS

30,000
TREES PLANTED

400+
COMMUNITY PARTNERSHIPS

There's only one Michigan.
Help us keep it healthy.
Volunteer at ReLeafMichigan.org

Planting Trees, Growing Communities

Forest vs. Urban Forest



Soil Test!!!!!!!!!!!!!!!!!!!!



<http://www.spnl.msu.edu/>

MICHIGAN STATE UNIVERSITY

Department of Plant, Soil and Microbial Sciences
Soil and Plant Nutrient Laboratory

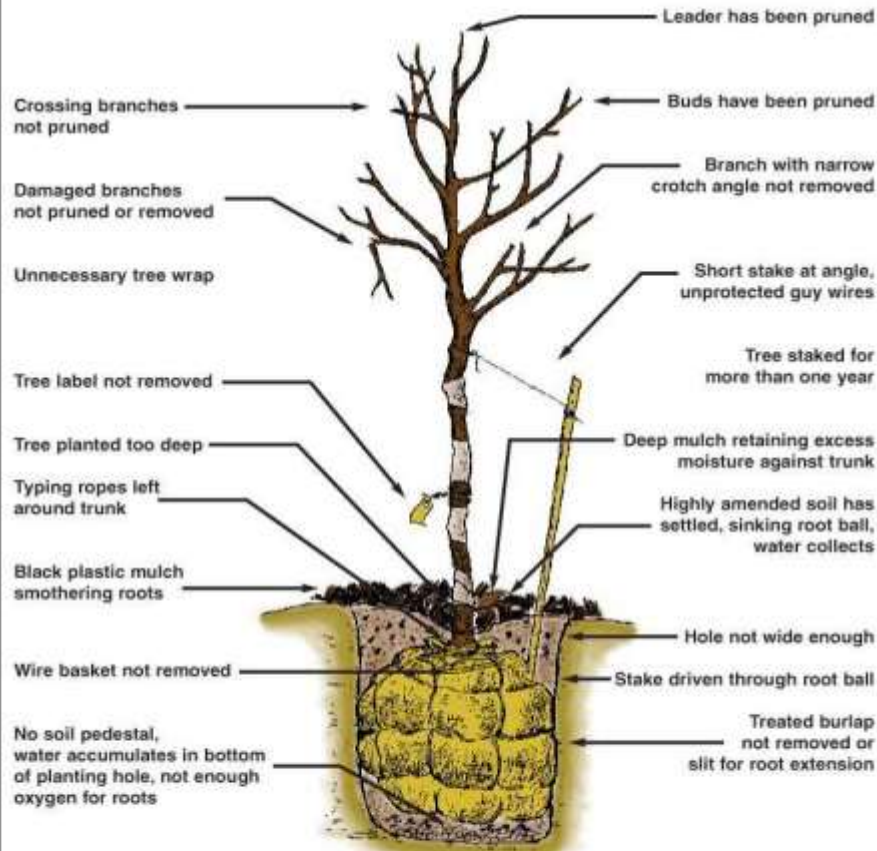


Click on:
Soil Test for Home Lawn / Garden

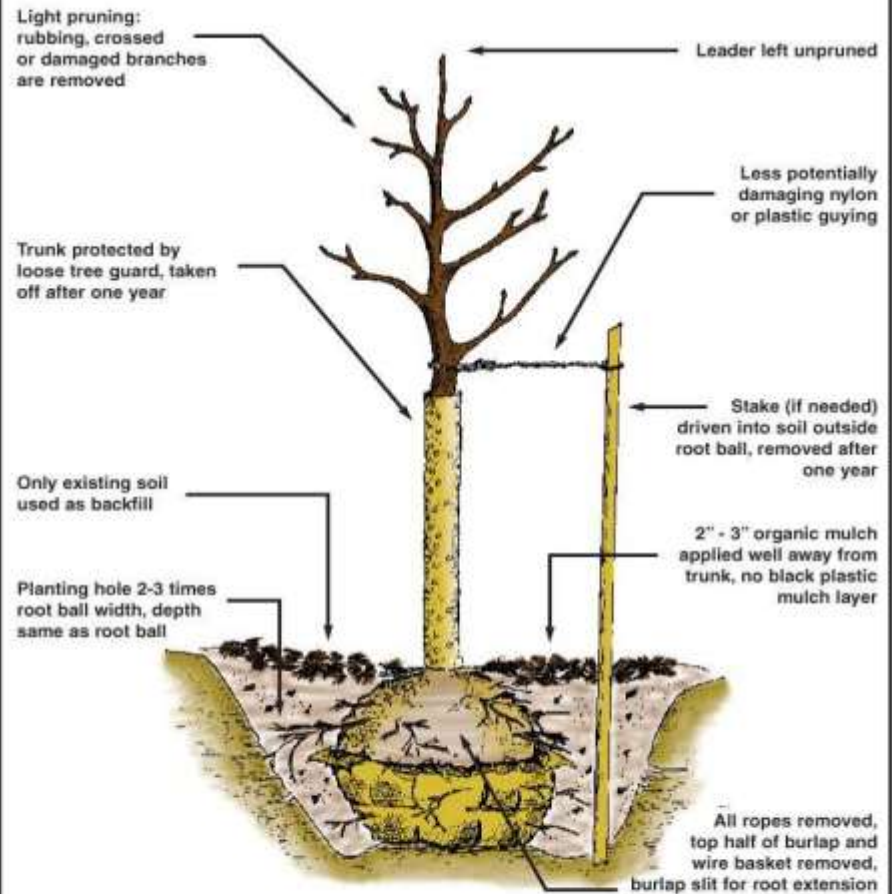
Tree Planting

To ensure healthy trees, start with Right Tree/Right Location.
Once you select a tree suited for your site and its microclimate, be sure to plant the tree correctly!

Incorrect



Correct



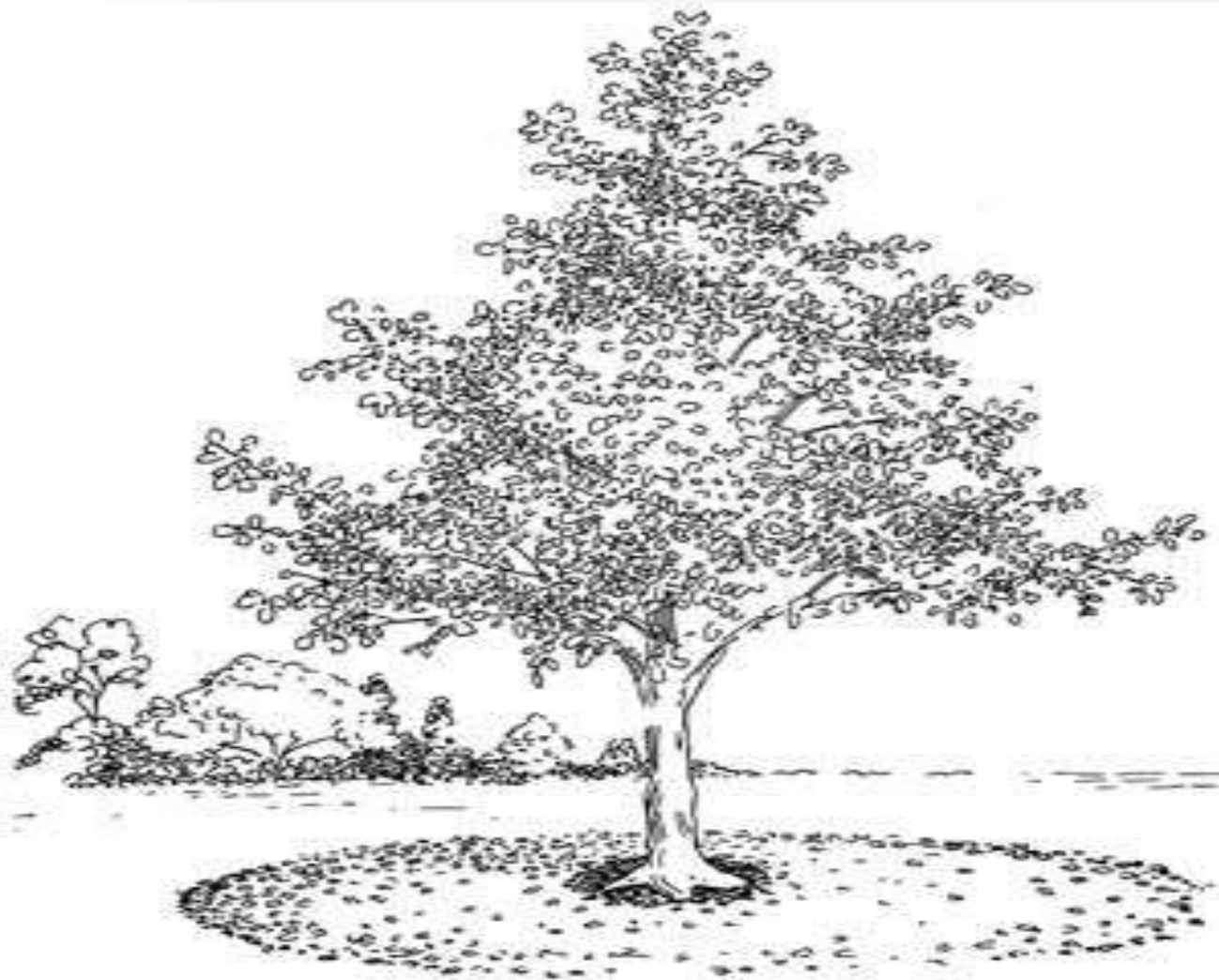
Improper planting can cause problems down the road...

Girdling Roots



Trunk Rot (Improper Mulching)





Mulch wide—not deep.

Over watering is one of the leading causes of plant decline...

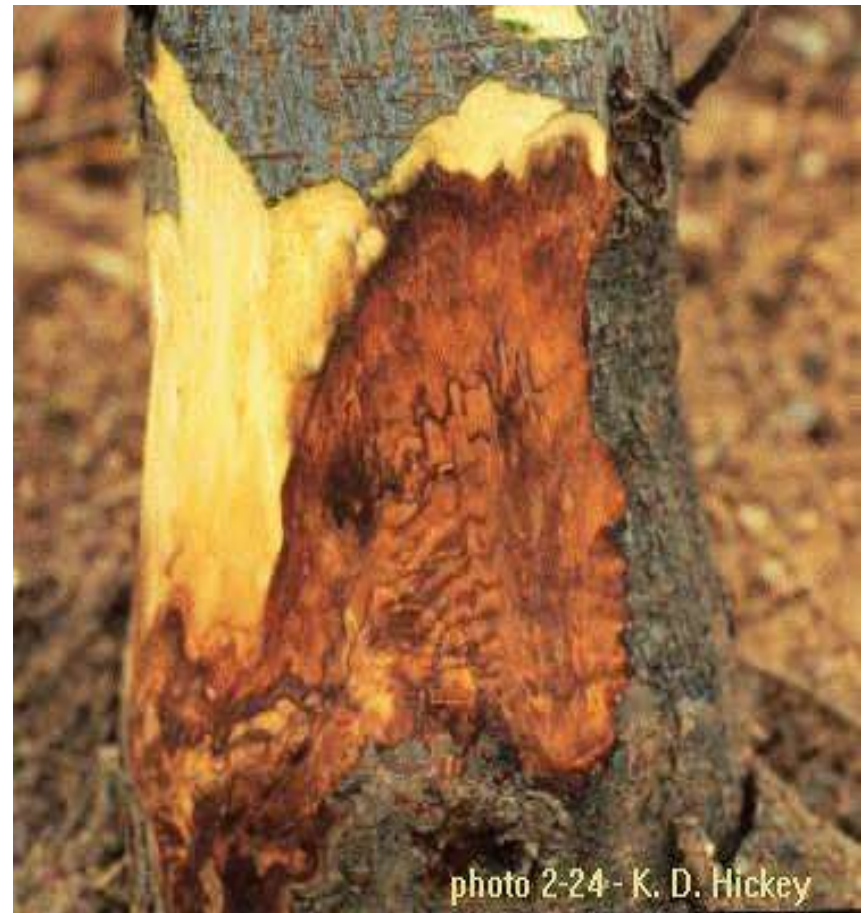
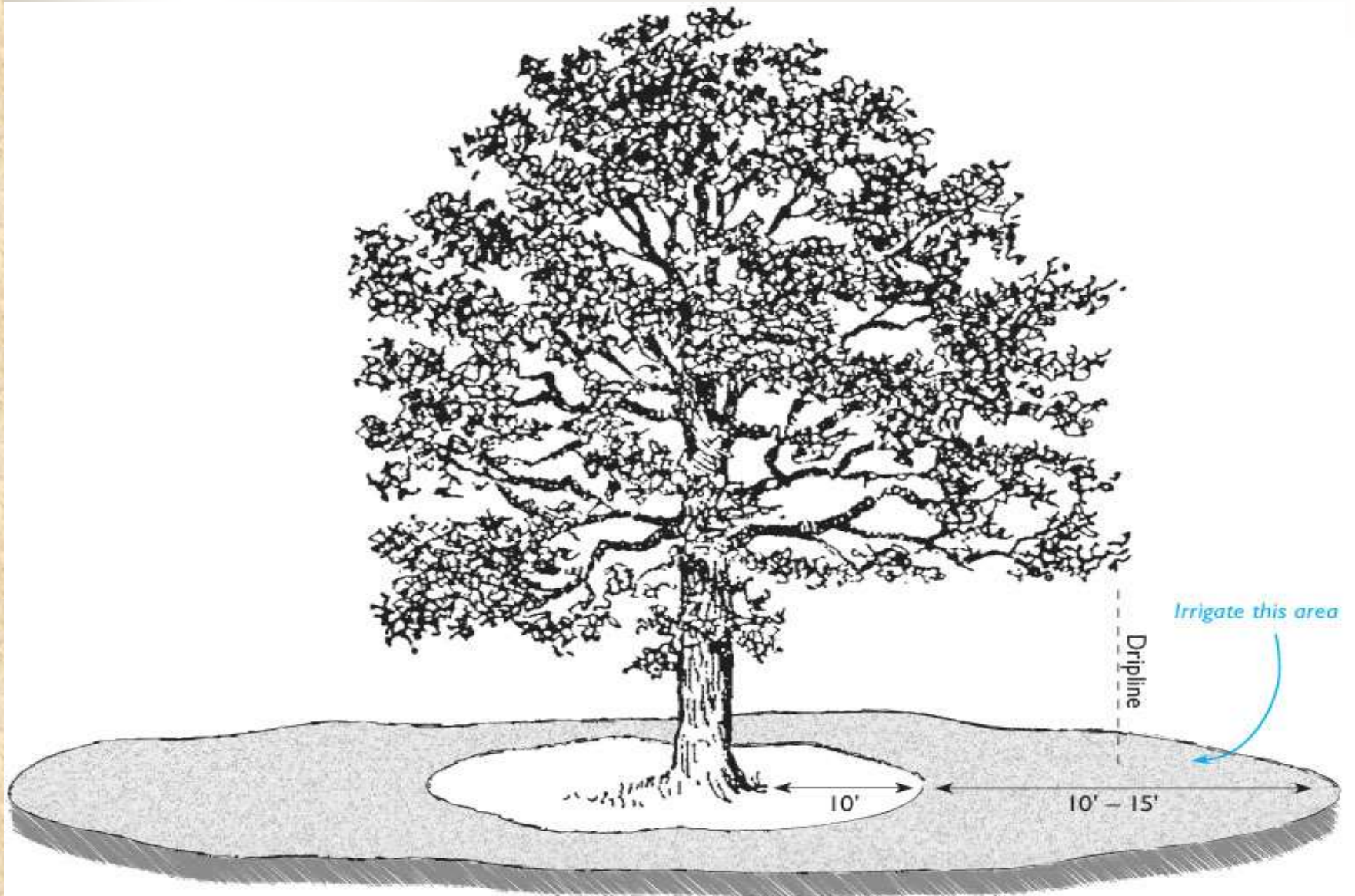


photo 2-24 - K. D. Hickey



Trees for the Urban Landscape





Conifers

- Larger Trees
 - Norway Spruce
 - Serbian Spruce
 - White Pine ?
 - Concolor Fir
 - Douglas Fir
 - White Spruce



Conifers

■ Smaller Trees

Weeping Nootka Cypress



Hinoki Cypress







Large Shade Trees

- Oaks (White, Red, Swamp White, Bur)
- Tulip Poplar
- European Beech
- Hackberry
- Hybrid Maples ('Red Sunset', 'Autumn Blaze')
- London Plane
- Dawn Redwood & Baldcypress
- Sweetgum
- Ginkgo
- Kentucky Coffee Tree

European Beech



Hackberry



Kentucky Coffee Tree





Medium shade trees

- Horse-chestnut
- River Birch
- Yellowwood
- Zelkova
- Paperbark Maple
- Hornbeams (American & European)
- Katsura
- Blackgum
- Persian Parrotia
- Stewartia

Zelkova



Paperbark Maple



Black Gum (Tupelo)



Persian Parrotia



Stewartia





Small trees

- Cornelian Cherry
- Serviceberry
- Redbud ('alba') (NOT 'forest pansy')
- Pagoda Dogwood
- Kousa Dogwood
- Magnolias
- Crabapples (scab-resistant varieties only)
- Japanese Tree Lilac

Cornelian Cherry



Japanese Tree Lilac



Species to avoid...

- Austrian Pine
- Blue Spruce
- Scots Pine
- Bradford Pear
- Crabapples
(certain varieties)



Blue Spruce...

Cytospora Canker



Needlecast



Austrian / Scots Pines...

Over **12** Insects / Diseases affect these trees



UGA0718024

UGA1306041

Bradford Pears = Storm damage



UGA1237069





Trellis Rust – Fungal Disorder (All Ornamental Pears)



Certain varieties of Crabapples have
NO resistance to Apple Scab



<http://www.ipm.iastate.edu/ipm/hortnews>
In search box type: Resistant Crabapples

Oak Wilt

(Bretziella fagacearum)





A MAJOR Concern...

- When Dutch Elm Disease hit in the 60's American Elm accounted for .5% of Michigan's trees
- Oaks account for 30% of Michigan's trees.



Oak Wilt

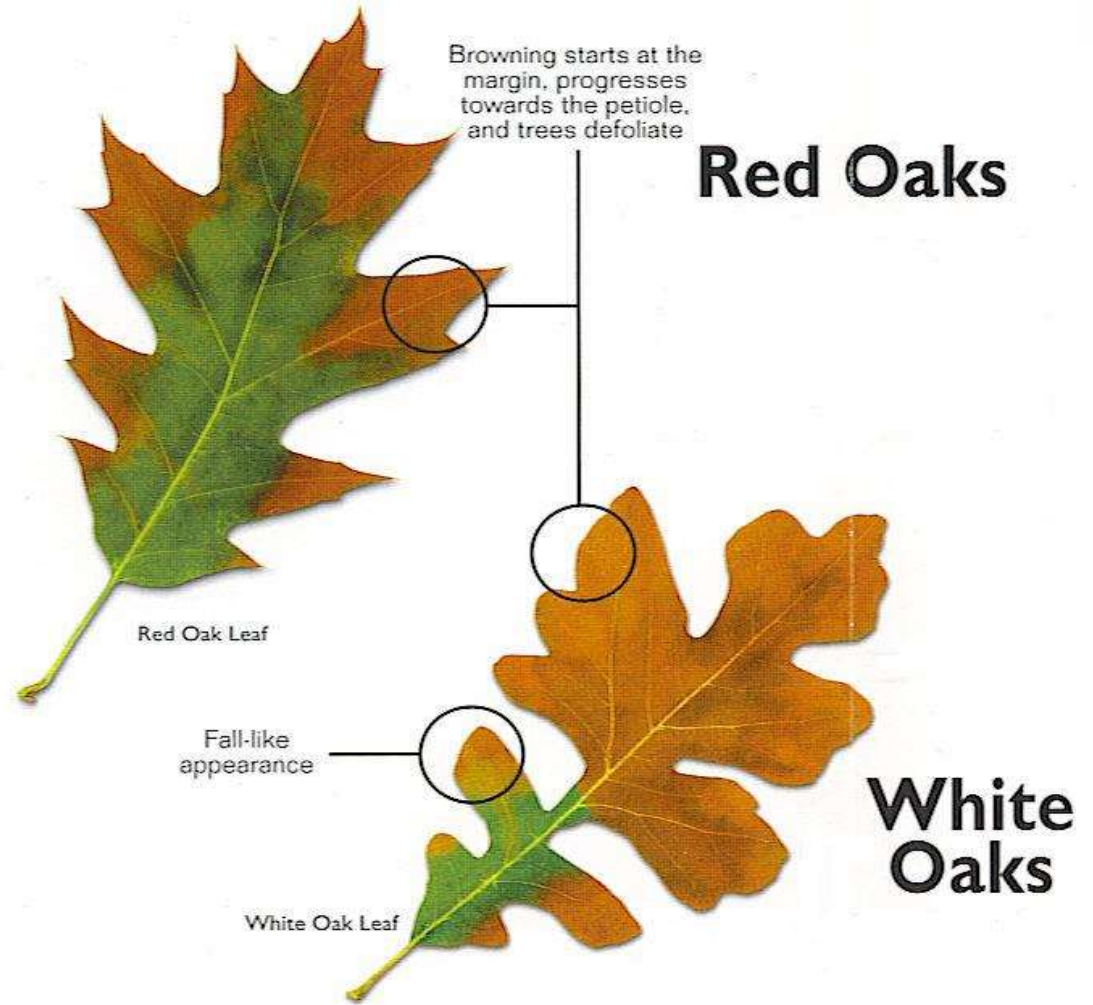
- The fungus invades areas inside the tree where water moves.
- Later, balloon-like bumps called tyloses are formed and they plug up the water's path through the tree.
- As water movement inside the tree is slowed, the leaves wilt and drop off the tree.



Oak Wilt

- Oaks in the red oak group (black, northern red, northern pin and others) get this disease most easily.
- Oaks in the white oak group (white, swamp white, burr and others) are less susceptible.

Leaf Symptoms



Find an Arborist;

<https://www.isa-arbor.com/For-the-Public>



Oak Wilt

- NEW infection centers are caused by sap-feeding beetles.
- In the spring, fungal mats develop under the bark of some trees that have died from oak wilt the year before.
- These mats force the bark to crack open. The fungus produces a sweet odor that attracts sap-feeding beetles to the mats.
- The beetles then fly to healthier oaks to feed on sap flowing from *fresh wounds*, carrying the fungus on them and thus infecting healthy trees.



Oak Wilt

- Most oak wilt moves from diseased trees to healthy trees through roots that have become interconnected (root grafts). Most root grafts form between oaks of the same species; grafts between red and white oaks are very rare. In general, red oak roots graft more than white oak roots.



Oak Wilt

- Once infected, trees in the red oak group will die within weeks. White Oaks may live longer.
- ***There is NO chemical control for infected trees.***
- The BEST defense against Oak Wilt is to not create wounds on oaks. The beetle can be drawn to a fresh wound in **5 MINUTES.**



Please...

- Do NOT allow your oaks to be pruned between MARCH 15th and NOVEMBER 15th.
- If due to storm damage or a high hazard situation you must have a limb removed the cut must be painted immediately.
- If you have to remove an oak, and the stump can not be ground out that day, it must be painted immediately.



Courtesy USDA Forest Service



Oak Wilt is **LETHAL!**

- Nearly 50% of Michigan is still covered by one of 4 forest types. (*Jack Pine, Boreal, Oak-Hickory and Northern Hardwoods*).
- Oaks comprise over **2 billion cubic feet of Michigan's forests**. If this disease is allowed to spread, the ecology of this state will be changed **FOREVER**.

Pass the word...

The End



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Thank you for Attending!
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For more information on presentations,
tree plantings, workshops:

www.releafmichigan.org

1-800-642-7353