

BE AN URBAN TREE TROUBLESHOOTER



There could be several reasons why grass isn't growing under a tree, but knowing what they are and how to address them will please your customer.

Solve your clients' tree/landscape problems by understanding how they interact

BY LEONARD PHILLIPS

Being able to identify and diagnose common tree-related problems on clients' properties will help you to retain these customers. It will also provide you with opportunities to offer additional services.

Here are some of the most common questions that customers ask about their trees, and answers to help you diagnose and solve their problems.

Question – *Why is the grass dying under the tree?*

Answer – The answer isn't always clear. Is the grass always in the tree's shade or just for a couple of hours a day? If it's always in shade, remove the lower branches and/or thin the canopy to allow more sunlight to reach the grass. If shade is present for four hours or less each day, it's probably not the problem. Chances are that the grass is a general-mix turf, and four hours of shade isn't a hindrance to most grass cultivars. If the grass is a sun-loving variety, several hours of shade would be a problem.

Look at the tree's roots. If they are shallow, determine if the tree is a variety that's suited for the site. Examine the quality and structure of the soil.

If the tree isn't suited for the site, recommend replacing it with a more desirable species. If the customer isn't happy with this, cover the roots with a couple inches of sandy loam and re-seed the area with a shade tolerant seed mix.

Conditions caused by poor or compacted soil can be improved by deep-tine aeration followed by a topdressing of sharp sand. After topdressing, add a couple inches of sandy loam and re-seed with a shade tolerant grass mix. Your goal is to loosen the soil and add loose topsoil to improve drainage and oxygen penetration to the tree roots. Bedrock issues require a massive amount of money and professional expertise.

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URBAN TOLERANT TREES

BOTANICAL NAME

- *Abies concolor*
- *Acer campestre*
- *Acer x freemanii*
- *Acer griseum*
- *Acer nigrum* 'greencolumn'
- *Acer rubrum* 'franksred'
- *Acer saccharum*
- *Acer tataricum*
- *Acer truncatum x platanoides* 'warrenred'
- *Amelanchier x grandiflora* 'autumn brilliance'
- *Betula utilis* var. *jacquemontii*
- *Betula nigra* 'heritage'
- *Carpinus betulus* 'fastigata'
- *Cercidiphyllum japonicum*
- *Cladrastis lutea*
- *Cornus hybrid*
- *Cornus kousa* 'Milky Way'
- *Corylus colurna*
- *Eucommia ulmoides*
- *Ginkgo biloba* 'PNI 2720'
- *Gleditsia triacanthos inermis*
- *Halesia tetraptera*
- *Kalopanax pictus*
- *Koelreuteria paniculata*
- *Lagerstroemia indica*
- *Maackia amurensis*
- *Magnolia hybrid*
- *Magnolia virginiana*
- *Malus species*
- *Metasequoia glyptostroboides*
- *Nyssa sylvatica*
- *Ostrya virginiana*
- *Oxydendrum arboreum*
- *Parrotia persica*
- *Phellodendron amurense* 'macho'
- *Pinus parviflora*
- *Platanus x acerifolia* 'columbia'
- *Prunus subhirtella* 'rosy cloud'
- *Pseudotsuga menziesii*
- *Pyrus calleryana*
- *Pyrus calleryana* var. *fauriei*
- *Quercus bicolor*
- *Quercus rubra*
- *Sophora japonica* 'PNI 5625'
- *Syringa reticulata* 'ivory silk'
- *Taxodium distichum* 'mickelson'
- *Tilia tomentosa*
- *Ulmus americana* 'princeton'
- *Zelkova serrata* 'village green'

VARIETY

-
- 'Evelyn'
- Autumn blaze/celebration
-
- Greencolumn
- Red sunset
- Fairview, legacy, green mountain
-
- Pacific sunset
- Autumn brilliance
- Whitebarked Himalayan
- Heritage
- Pyramidal
-
-
- Aurora, celestial, stellar
- Pink constellation, Ruth Ellen, star dust
- Milky Way
-
-
- Princeton sentry
- Moraine, shademaster, skyline
-
-
-
- Apalachee, biloxi, Byers white, centennial spirit
-
-
-
- Adams, centurion, golden raindrops, prairifire, sugar tyme
-
-
-
-
-
- Macho
-
- Columbia
- Rosy cloud
-
- Capital, Cleveland select, Edgewood, redspire
-
-
-
- Regent
- Ivory silk
- Shawnee brave
- Green mountain, sterling
- Princeton
- Village green

COMMON NAME

- White fir
- Queen Elizabeth hedge maple
- Freeman maple
- Paperbark maple
- Black maple
- Red maple
- Sugar maple
- Tatarian maple
- Shantung maple
- Serviceberry
- Birch
- River birch
- European hornbeam
- Katsura tree
- Yellowwood
- Stellar series
- Kousa dogwood
- Turkish hazelnut
- Hardy rubber tree
- Ginkgo
- Honeylocust
- Carolina silverbell
- Castor-aralia
- Goldenrain tree
- Crape myrtle
- Amur maackia
- Galaxy magnolia
- Sweetbay magnolia
- Crabapple
- Dawn redwood
- Black tupelo
- American hop hornbeam
- Sourwood
- Persian parrotia
- Amur corktree
- Japanese white pine
- London planetree
- Cherry
- Douglas fir
- Callery pear
- Pea pear
- Swamp white oak
- Northern red oak
- Scholar tree
- Tree lilac
- Bald cypress
- Silver linden
- American elm
- Zelkova



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The best solution to the shallow root problem may be to replace the struggling grass with mulch. If your customer doesn't like this approach, recommend a ground cover. Select the best plant for the site and make no guarantee of survival. It will take several years for a ground cover such as vinca minor or pachysandra to establish itself

while competing with vigorous tree roots.

Consider buying ground covers in nursery pots and planting them pot and all in between the tree roots to delay tree root competition with the ground cover and speed up the ground cover establishment period.

Question – *What causes some sidewalks, streets or driveways to crack and lift up?*

Moving a walk further away from a tree's root flare is one way to reduce cracking and lifting.

Answer – Shallow roots are again the problem because they try to penetrate the soil beneath the pavement. The impervious surface prevents groundwater from evaporating, so it accumulates under the pavement. The tree roots seek the water and grow in the narrow band of moisture just under the pavement.

■ Remove and replace the trees with deep-rooted trees, or plant the trees further from the pavement.

■ Replace the sidewalk, street or driveway with a higher surface.

■ Relocate the pavement further away from the tree's root flare.

■ Add a bituminous ramp over the raised pavement to eliminate any tripping hazard.

■ Improve soil conditions to encourage roots to grow deeper.

■ Use physical root barriers or herbicide-treated fabric after careful root pruning to prevent the roots from growing under the pavement. Make sure that removing any root over two inches in diameter will not affect tree stability and increase your personal liability. This approach is best done with a new planting so the barrier does not harm the tree's structure.

Question – *The tree is dropping branches.*

How can it be stopped?

Answer – Assess the tree's condition. If it's in good health, check for animals in the tree. If you see stubs, broken branches and deadwood, consider pruning.

Check the tree's vigor for the past five years by measuring the distances between the terminal bud scars on a branch. If there is a steady decrease in the distance, the tree is in decline. Check the soil for insects or disease problems, and obvious problems around the trunk or on the leaves.

Has there been construction around the tree in recent years? Is there evidence of root damage? If the tree is old, recommend that a

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new tree be planted nearby so that when the old tree dies, the new one is established and the loss will be less severe.

Don't rule out environmental damage such as air pollution, road salt damage or drought stress, even from several years ago.

Ron Despres, municipal arborist for Wellesley, MA, is often called to a residence where a sugar maple is showing signs of decline. He tells the resident that the sugar maples were planted 40 to 80 years ago when the air was cleaner, and since the trees can't



Adding a bituminous ramp over pavement raised by roots will reduce tripping.

get up and move to New Hampshire or Vermont where the air is still clean, they're dying.

Too many crowns?

Despres recommends replacing the trees with urban tolerant ones, such as the Green Mountain sugar maple. This variety's waxy leaves allow rain to wash pollution away and prevent the tree from being poisoned.

While at your customer's yard, look at the tree's crown. Does the tree have two tops? Homeowners rarely notice this and hardly ever perceive it as a problem. Removing one of the co-dominant leaders will allow the tree to do better, and the customer will be relieved that the tree was saved and a potential hazard eliminated.

If you can see a problem and can't figure out the solution, bring in a professional, certified arborist. Once you notice the problem and bring it to your customer's attention,

you must be sure the tree is safe and you're not liable if anything happens to it. **LMI**

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