

# THE PURDUE LANDSCAPE REPORT

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## Tree Care; You get what you pay for!

*(Lindsey Purcell, [lapurcel@purdue.edu](mailto:lapurcel@purdue.edu))*

Our office gets hundreds of questions each year regarding tree care, such as who should I get to prune or treat my trees and who should care for my trees around my home? This is a very important consideration for managing a valuable asset to your property. Value? Sure, trees provide shade and a place to sit during hot days and they also reduce heating and cooling bills, naturally clean the air and water, add oxygen and control noise levels. However, many homeowners don't realize properly placed, maintained trees are attractive and increase property values by as much as 15%.

Unfortunately, we receive troubled callers who are left with the aftermath from hiring the "cheapest" tree trimmer or the untrained tree worker. Typically, they are left with the irreversible and often lethal damage from overaggressive pruning, topping or misapplications during plant health care treatments.

Who do you hire for your tree care work? Proper tree care by an International Society of Arboriculture Certified Arborist with a reputable company is an investment that results in positive returns. An arborist by definition is an individual who is trained in the art and science of planting, caring for, and maintaining individual trees. ISA arborist certification is a nongovernmental, voluntary process by which individuals can document their base of knowledge. Certified Arborists are individuals who have achieved a level of knowledge in the art and science of tree care through experience and by passing a comprehensive examination developed by some of the nation's leading experts on tree care.

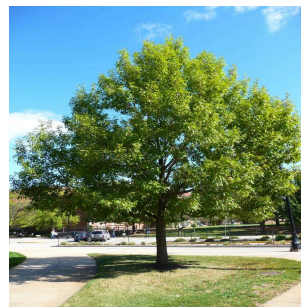


Figure 1. A well-maintained tree provides value to your home



Figure 2. Topping trees is unhealthy for trees and can be lethal



Figure 3. Look for the Certified Arborist logo

When hiring someone for tree care, treat it the same as any other skilled profession such as an electrician, plumber or contractor. Do your homework. A few of the more important steps to help insure better care for your trees include:

1. Confirm their credentials with the ISA on their website, [www.treesaregood.org](http://www.treesaregood.org). Many companies claim to be credentialed “arborists” and will often advertise inaccurately. Check to be certain they are current with their certification.
2. Verify proof of insurance to protect yourself. Tree maintenance is dangerous work and an uninsured tree care worker can make the homeowner liable for any injury. Be sure they have a current certificate of insurance.
3. Inspect their work and ask for references. Would you allow someone to remodel your kitchen without a reference or seeing examples of their work? Certainly not! This is the easiest part of the process because their tree work can often be reviewed from the sidewalk.

This process doesn’t necessarily provide any guarantee, because all businesses are different, but it can provide assurances for better work and longer-lived trees. Maintained trees are attractive and add considerable value to your property. Poorly maintained trees can be a significant liability. Pruning or removing trees, especially large trees, can be dangerous work and should be done only by those trained and equipped to

work safely in trees. Don’t just go by price alone, do some research or you’re gonna get what you pay for which may end up being even more costly and not just financially.

For more information on hiring an arborist, visit [https://www.treesaregood.org/portals/0/docs/tree\\_care/hire\\_arborist.pdf](https://www.treesaregood.org/portals/0/docs/tree_care/hire_arborist.pdf)

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## Anthracnose of Shade Trees

*(Gail E. Ruhl, [ruhlg@purdue.edu](mailto:ruhlg@purdue.edu))*

One of the most common problems of broadleaf shade trees is a group of diseases collectively known as anthracnose. Anthracnose diseases are caused by fungi and become severe when cool, wet spring weather persists as leaves are first emerging. The most commonly affected trees are ash, white oak, maple, and sycamore. Dogwood, birch, elm, walnut, butternut, hickory, and other trees may also be damaged. Each species of tree is infected by a different species of fungus, thus the fungus does not spread from oak to maple or maple to ash or ash to sycamore. These fungi are referred to as host specific.

While anthracnose diseases vary somewhat from one type of tree to another, they all cause death of leaf tissue and defoliation. Symptoms most often include irregular leaf spots and blotches (Figs 1,2,3, 4 ) The areas near veins are often most damaged and can lead to curled and distorted leaf growth as the leaf expands (Figs 5,6). This is in contrast to noninfectious leaf scorch symptoms which tend to be located uniformly on the edges of leaves and between

veins (Fig 7). Anthracnose fungi that survive the winter in leaf litter beneath the tree are carried by rain and wind upward in the spring to cause first noticeable symptoms in the lower branches. Often the very top portions of the tree escape infection and appear quite healthy in comparison to the lower sections of the tree. In some tree species, such as sycamore and dogwood, anthracnose fungi cause branch cankers and dieback (Figs 8,9).



Fig 1 Anthracnose symptoms on maple leaves (PPDL)



Fig 2 Anthracnose symptoms on Tartarian Maple ( PPDL)



Fig 3 Maple anthracnose (PPDL)

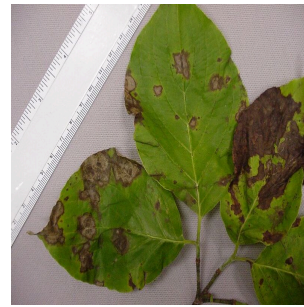


Fig 4 Dogwood anthracnose on foliage



Fig 5 Ash anthracnose(PPDL)



Fig 6 Oak anthracnose ( PPDL)



Fig 7 Noninfectious (abiotic) leaf scorch (PPDL)



Fig 8 Sycamore anthracnose branch cankers and dieback (PPDL)





Fig 9 Dogwood anthracnose branch canker and dieback(PPDL)

While anthracnose can cause premature defoliation (Fig 10), it does not result in tree death. Vigorous trees are able to withstand infection and push out a new crop of leaves and recover with no long-term injury, and so the primary control for anthracnose is to maintain good tree health. Anthracnose infected trees need to grow more actively than they normally would in mid-summer to replace lost leaves. Thus, cultural practices that include maintaining a balanced fertilization program and watering during drought stress periods are important for the active growth required in the current season and for the regeneration of carbohydrate reserves in preparation for the dormant season. Removal of infected, fallen leaves will help reduce the amount of fungal inoculum that overwinters in leaf debris beneath the tree.



Fig 10 Ash anthracnose premature defoliation (G.Ruhl)

Fungicides are generally not necessary but may be warranted to protect healthy foliage on a specimen or young tree. Thorough coverage and proper timing of the sprays are critical for adequate control. **It is too late now to apply fungicides for maximum control of anthracnose** since sprays applied after symptoms appear are of little benefit for infections that have already occurred.

Anthracnose usually occurs on the same trees each year so it may be helpful to make note now of susceptible trees if you are planning on using fungicide applications next spring, so they can be made before infections occur.

[Leaf Diseases BP-143-W](#) (pdf file)

## Beyond Roundup: Alternatives to consider adding to your weed management plan

(Kyle Daniel, [daniel38@purdue.edu](mailto:daniel38@purdue.edu))

What is your go-to Postemergence herbicide? If you answered Roundup (glyphosate is the active ingredient in Roundup), you would be in the majority for landscape and nursery professionals. Though glyphosate works very well on most weed species, there are times when other products may be more effective or offer a less phytotoxic (damage to ornamental plants) alternative. We should also keep in the back of our minds to continue rotating herbicides to prevent resistant weeds.



Figure 1. Utilizing several different modes of action in the nursery and landscape can aid in reducing resistant weeds, as well as being more effective on certain weed species.

Roundup has been a household name for over 20 years. It's most likely the only herbicide that the general public can name. For several years, the most widely used herbicide in the world has been glyphosate (many trade names). There is a reason for the popularity of this herbicide. Some of the positive attributes include non-selective/broad spectrum (kills many types of plants), systemic activity (travels in the vascular system, both xylem and phloem), low mammalian toxicity (relatively safe for humans), limited soil activity, non-volatile, low environmental impact, and the efficacy of the product (how well it kills weeds). With these attributes, it's not hard to wonder why this product has become a mainstay in the industry. Before discussing alternatives to glyphosate, always remember to utilize preemergence herbicides (fall and spring) as your primary method of weed control in nurseries and landscapes. Relying on preemergence herbicides will reduce labor, reduce the chances of phytotoxicity to ornamentals, and reduce total

herbicide usage.

When you are trying to control grasses in ornamentals, there are several options that are very safe on most ornamental plants. The grass specific herbicides, such as fluazifop (Fusilade/Ornamec), clethodim (Select, Envoy), sethoxidim (Vantage, Grass Getter), and fenoxaprop (Acclaim), can control many grass weeds effectively with little phytotoxicity to most ornamental plantings. These herbicides will only kill grass, so they can be sprayed over the top of many broadleaf ornamentals, as well as plants such as liriope and iris, since these are not grasses. Always check the label to ensure the ornamentals are labelled for over the top or directed sprays.



Figure 2. Grass specific herbicides can be utilized in nurseries and landscape to reduce the chance of phytotoxicity on ornamentals.

Contact herbicides are most effective on annual weeds, especially while small. Since contact herbicides are not translocated throughout the plant, coverage of the weed needs to be sufficient enough to kill. There are some contact herbicides labelled in nurseries and landscape, including Scythe (pelargonic acid), Reward (diquat), and Finale (glufosinate). These products are broad-spectrum, so damage can occur if applied on ornamental plantings. Basagran (sodium salt of bentazon) is a contact that is effective on nutsedge, as well as many broadleaf weeds.



Some alternative postemergence herbicides that translocate include, Lontrel (clopyralid) and Sedgehammer (halosulfuron-methyl). These products each control hard to control weeds, such as thistle (Lontrel) and nutsedge (Sedgehammer). The label must be followed carefully when using these products around ornamental plantings.



Figure 3. Some weed species, such as nutsedge, are better controlled with herbicides other than glyphosate.

Glyphosate is a product that is effective in many applications in your weed program, but there are alternatives. Using these alternatives will aid in the reduction of resistant weed populations, can be safer around ornamentals, or are more effective on some weed species.

Almost 1,400 herbicide labels can be found at <http://www.cdms.net/Label-Database/Advanced-Search#Result-products>.

Remember to always check labels prior to making any herbicide application.

*Reference in this publication to any specific commercial product, process, or service, or the use of any trade, firm, or corporation name is for general informational purposes only and does not constitute an endorsement, recommendation, or certification of any kind by Purdue University. Individuals using such products assume responsibility for their use in accordance with current directions of the manufacturer. Always*

*refer to the label prior to making any pesticide application.*

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## Japanese Beetles Are BAACK

*(Cliff Sadof, csadof@purdue.edu)*

After over a decade of low numbers, Japanese beetles have once again become one of the more important problems in Indiana landscapes. Although the reasons for this resurgence is unclear, part of the story is that for the past few years there has been enough moisture in the soil during the mid summer egg laying period to allow most of the beetle eggs to hatch into grubs. These grubs flourished and grew into the adult beetles that emerged the following year. Over the past few weeks, the warm wet weather has created ideal conditions for last year's grubs to become adult beetles and crawl out of the ground. By now, you should be seeing damage from Japanese beetles if they are going to cause a problem this year.

Japanese beetles rarely if ever uniformly infest a landscape. There are always areas with heavy damage and areas with light or no damage at all. You can determine if Japanese beetle will be a problem in your area by inspecting their favorite plants, like roses, grapes, elms, crabapples and flowering plums to see if they are in your area.



Japanese beetles feeding on flowers of rose- Click picture to play video

Your first sightings are likely to be on the flower or a susceptible plant. If no flowers are available the beetles will start feeding on plant tops.



Japanese beetles defoliate plants from the top down-

[Click picture to play video](#)

If adult beetles emerge from the soil, why do they defoliate plants from the top down?

Adult beetles will usually fly after they leave the soil to look for leaves and flowers of host plants. When close to an attractive plant they land on

the tops of the plant and begin feeding and eventually work their way to the bottom leaves. Other beetles in the area are attracted to the scent of a feeding beetle. This causes beetles to feed in groups. In Indiana, the peak flight lasts for about 6 weeks.

### **What to do about Japanese beetles?**

There are quite a few insecticides that can be used to protect plants against Japanese beetle adults. It can be difficult to kill the beetles without harming pollinators that visit flowers because most insecticides that kill beetles will also kill pollinators. One of the best ways to protect pollinators and your flowers is reduce the number of times you spray your flowers. Rather than apply an insecticide when you see the first beetle, wait until you see some beetles starting to feed. Then wait until more enough beetles arrive before you apply your second spray. This should reduce then number sprays during the spray period. For more details please see our [Japanese Beetles in the Urban Landscape](#).

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