

Sizing up trees for possible dangers

**If you say a tree is safe,
and it falls apart, there's
hell to pay.**

by James E. Guyette

■ Let's say you and your crew are on a property thinning shrubs and pruning dogwoods. The homeowner comes out to ask about the big maple in the back corner; he's concerned about that overhanging branch. It's probably human nature to take a stab at assessing the risk, but if you're not trained in this type of work, you could bring a major financial problem on yourself and your business.

Landscape managers who give advice to customers on whether a certain tree represents a hazard can face serious legal and liability problems if they are incorrect in their assessment.

Although you may be tempted to help out—or you at least want to avoid sounding ignorant—it's often better to resist the urge. The experts say it's best to back off if you lack formal training in risk assessment.

"If I were in that type of situation, I'd get to the point where I'd have no opinion," says Dr. Kenneth C. Miller, a tree pathologist with Miller and Associates, Ravenna, Ohio.

Legally, someone offering an opinion can be considered an "assumed professional."

"The assumed professional is the semi-qualified tree worker, whether a public employee, a utility forester or a private arborist," says Miller. "It is *assumed* that a



The owner of this house in the Cleveland area wasn't very happy with a tree that succumbed to high winds earlier this year.

person who works with trees every day should know everything about them. Increasingly, these individuals are becoming the target of legal liability in hazard tree cases. They are held to a higher level of responsibility than an ordinary citizen."

Even an entry-level ground person can get snagged if an opinion is offered "because you are 'the expert,'" Miller explains. "If you say the tree is safe, the tree is safe. If it falls apart, there's hell to pay.

"Leave it to the arborist with the liability insurance."

Business owners need to warn their crews, Miller advises. "The employees are going to have to be cautioned by the employers not to make any definitive statement.

"And it's not the easiest thing to do. You either have to come up with a statement or tell them you don't know. Either way, that's not something you really want

to do. I know of no way to get you gracefully out of that situation."

Make a referral—For bracing, cabling or work other than a simple takedown, making a referral to a local firm that belongs to the National Arborist Association may be a good place to start, says Paul McFarland of McFarland Landscape Services, Philadelphia, Pa.

"That's a good thing to look for: the NAA (membership) or a company with a certified arborist on staff who would supervise the job."

A call to the NAA, a local arboretum, your county agent or a city arborist should be able to get this information.

"If anyone should get into the business of assessing trees," says Dr. Alex Shigo, noted arbor-author, "they should be top-of-the-line. This is not something that you read in a book. Those who don't under-

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stand trees will get themselves in trouble."

Potential risk—Shigo suggests changing the term "hazard tree" to determining "degree of potential risk."

Step one in this process involves asking "if this structure tree failed, is it really a hazard?" Are there people or homes around, or is it in a field?

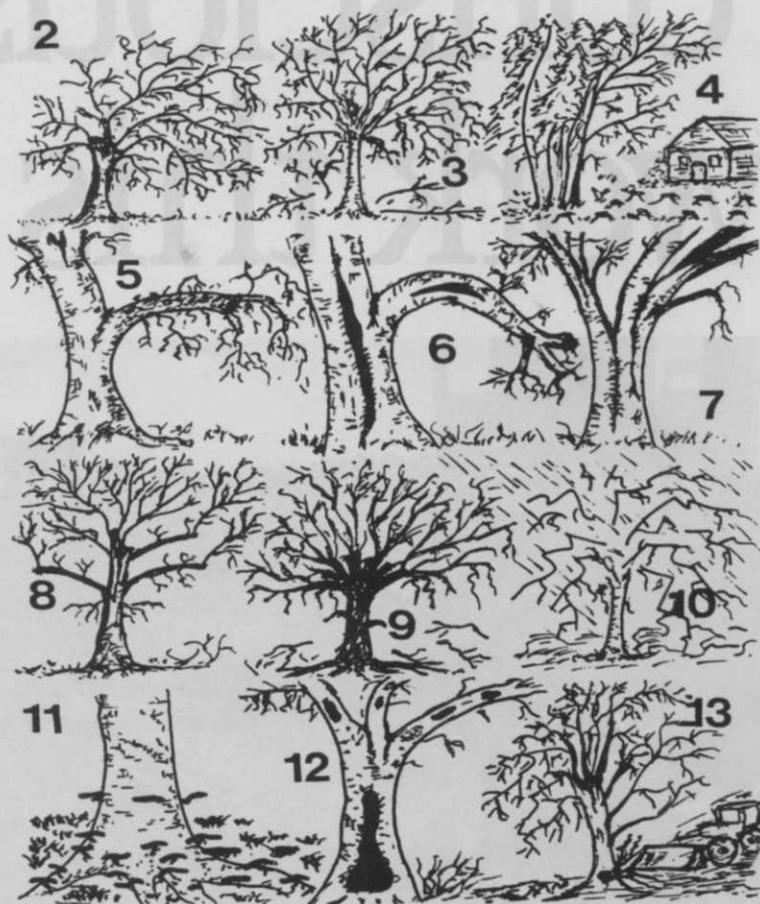
Step two is to use common sense. "The same tree in the same (tree care) manual can be left for a hundred years or be cut tomorrow," Shigo observes. "If we did everything our manuals say, we'd clear-cut our cities."

Branch "loading factors"—the amount of stress placed on a branch that may be prone to failure—are an important consideration.

"Is it a hurricane, a windy day or a sunny day?" asks Shigo. "It's not trees that kill people, it's the (branch) fractures that take place during moderate loads that kill people."

Snow and foliage are other loading factors to note, says Shigo, adding that some loads can actually amount to less of a risk factor when the entire picture is examined. For example, during a hurricane, people usually have enough sense to leave the area.

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Tree hazards: 13 questions that could save a life (see illustrations above)

1. **TARGET** (page 22): If the tree falls, will it hit cars, houses, power lines or people?
2. **ARCHITECTURE**: Has the tree grown beyond its normal form into a dangerous form?
3. **HISTORY**: Has the tree lost large branches lately?
4. **EDGE TREE**: Were neighboring trees cut away recently, leaving tall trees at the edge?
5. **DEAD BRANCHES**: Are there dead tops or branches? Is the tree dead?
6. **CRACKS**: Are there deep, open cracks in the trunk and branches?
7. **CROTCH CRACKS**: Are there deep, open cracks below joining stems?
8. **LIVING BRANCHES**: Do living branches bend abruptly upward or downward where tips of large branches were cut off—tipping?
9. **TOPPING**: Are large branches growing rapidly from topping cuts on big trees?
10. **STORM INJURY**: Are there broken branches, split trunks or injured roots? Are branches close to power lines?
11. **ROOT ROT**: Are there fungus fruit bodies—mushrooms—on roots? Were roots injured by construction?
12. **ROTS, CANKERS**: Are there hollows or cankers—dead spots—some with fungus fruit bodies? Is the tree leaning?
13. **CONSTRUCTION INJURY**: Have roots, trunk or branches been injured? Is there a new lawn or garden over injured roots?

Source: 'Tree Hazards' by Shigo & Trees, Associates

Green up your turf with iron

Using this micronutrient for rapid color enhancement is making turf and turf managers look good.

■ The chlorophyll molecule in the turf-grass plant is responsible for plant color. Iron is required for the photosynthesis which produces the chlorophyll—thus, iron can help enhance the green color which clients most desire in good-looking turf.

There is an obvious need for iron supplementation
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plementation where iron chlorosis or plant yellowing occurs, a condition common to calcareous or alkaline soils (pH 7.0 or higher), as well as sandy soils. Today, however, most professionals applying iron are after cosmetic results rather than preventing or correcting chlorosis.

Iron can be used to make the turf (and the turf manager) look good.

Most soils contain abundant supplies of iron, but due to its limited solubility, this trace element is seldom taken up in sufficient quantities to meet the demands of high-grade ornamental turf.

Research has shown that, in addition to the effect of soil types and pH levels, iron uptake can be reduced by:

- cool soil temperatures,
- excessive moisture,
- micronutrient imbalances and
- high soil phosphate levels.

Heavy metals or high levels of nitrate nitrogen can also cause iron to become "locked up" and thus unavailable to the plant.

Supplemental iron has been available for years in many of the better grades of granular nitrogen/potassium/phosphorus fertilizers. Iron applied to the soil, however, rapidly reverts to a ferric state which is not available for plant absorption unless it is chelated. Unchelated soil-active products can get tied up with other soil minerals, decreasing the iron's solubility. And ferrous sulfate or ferrous ammonium sulfate iron in granular form must be watered in to prevent burning.

Chelated iron products, available in both dry and liquid forms, are formulated to hold iron in an available form for a more extended period of time. A chelating agent such as EDTA causes the iron to lose ionic characteristics and protects the micronutrient from soil reactions. This allows chelates to be used at lower rates and with reduced burn potential.

But chelated products are also generally more expensive to use than other irons, and may be slower in producing a visible color change. Thus, in recent years, sprayable iron sulfate products that are absorbed through the foliage have seen the most growth in the green industry.

Research has shown that foliar applications are significantly more effective and efficient. Foliar-active products not only provide a greater amount of plant-available iron, but they are taken in by the leaves, where the chlorophyll is produced.

Turf desiccation: winter's lasting gift

The biggest culprit is intense cold wind at times of low humidity. Disease comes along later.

■ Winter brings with it more than just colds and flu, mom. It can also beat up the turf until there's no turf left. They call it desiccation, and it's a lousy way to start the spring.

Turf desiccation—a.k.a. winter kill—comes in two forms: atmospheric and soil desiccation.

Atmospheric desiccation is caused by the general drier environment, accompanied by stinging wind and low humidity. The soil is unable to absorb water at lower temperatures, too, which adds to turf frailty.

Soil desiccation results in white leaves, but the leaves are more limp.

With an all-out temperature kill, turf leaves appear to be water-logged. They take on a whitish-brown color, and eventually turn dark brown. The leaves are limp and matted, and you may detect a moldy odor. This type of kill occurs when the soil temperature plummets quickly.

Look for it during late winter freeze-thaw periods.

Dr. Jack Hall of Virginia Polytechnic Institute says desiccation can occur on

sand-modified soil where there's limited moisture in the soil profile.

As Hall explains, winter desiccation is basically a function of available moisture and the extent to which the root system can absorb and store that moisture.

"Our best approach is sound management," advises Hall, "and fertilize in late fall to maximize root development."

"Our winter rainfall is generally adequate," says Hall. "The last time we lost bermudagrass to winter desiccation was in 1980-81. We had a greater kill on overseeded bermudagrass than in that which was not overseeded. The living overseeded grass continued draw down moisture."

Sodium content may cause problems. "Any time you have salt concentration in water, availability of water to plant is lessened," says Hall. "If you go into winter with high salt, unavailability of moisture is more of a problem."

● Younger turf is more susceptible to desiccation.

● Protect turf with heavier dose of top-dressing. Fabric may also work.

● Anything that promotes general plant health will reduce the threat of desiccation.

—Terry McIver

Winter brings disease

■ Snow mold invades in early spring, and lasts until June. Apply fungicide in early winter, ideally on the day before the first lasting snow.

Pink and gray snow mold occur when the temperature is just above freezing and accompanied by excess leaf moisture. The infected turf will turn flaccid and become dehydrated. Gray snow mold is differentiated by sclerotia imbedded in the leaves and crowns of the diseased plants. Look for large brown patches covered with a whitish fungal mycelium.

Cottony snow mold begins as yellow patches which become the color of straw. Look for gray mycelium on leaves.

Prepare turf for winter disease before it goes into winter with soft growth from excessive available nitrogen.

Cultural prevention—For pink snow mold:

Avoid excess nitrogen in the fall. Prevent snow accumulation on highly maintained turf. Improve air movement by pruning trees and removing brush. Remove leaves in fall and winter. Rake or spike infected areas in spring. Remove thatch build-up.

Gray snow mold: Avoid early fall nitrogen fertilizer before the first snowfall. Avoid excess lime. Keep the thatch layer to a minimum.



Pink snow mold