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## About Trees: Simple dig can unearth facts on soil, drainage

By Fred Morgan

Friday, August 14, 2009

While that unusual July weather was a rare treat for Mid-Southerners and a regular topic of conversation, it also had some adverse effects on ornamental trees, both above and below the ground.

Many who live on suburban lots use installed irrigation on a regular basis. I have talked to more than a few folks who did not think to turn off their irrigation during the very wet weather.

Very often their trees were installed in clay subsoil that is not only deficient in nutrient and organic content, but tends to drain poorly and hold water too long. This excess water prevents normal healthy soil respiration and can rot roots, causing mechanical (stability) issues along with function and health issues.

One simple way to determine the approximate porosity and water handling character of your soil is to select a site where tree roots should be located and dig a hole there about 1 foot deep and 10 to 12 inches across. Be careful to keep this excavation at least 4 feet away from your tree trunk and farther out for larger trees. For this purpose, a spade or posthole digger will do nicely.

Then fill the hole with water and check to see how long it takes for the water to disappear. If it is more than 1 hour, you have a problem.

Also, if the removed dirt is not too wet and sloppy, before you replace it, take another few minutes to crumble it and look for the fine lacy root hairs that should be there. These belong to your tree and should be approximately blond in color. If they are brown, brown-gray or black, the roots are likely partially or entirely rotting and dysfunctional.

If the tree is located in a low area or in an area that typically stands water after a rain, some additional work might be needed to eliminate or reduce that ponding effect. Construction of a simple but strategically located and periodically maintained swale can be helpful.

A more sophisticated French drain may be necessary, but can work wonders over time

with your tree's performance.

Another result of unrelenting wet weather is the appearance of leaf spots and in severe cases, leaf cast. In this case the leaves just begin to fall off the tree in mid-summer.

Warm, wet conditions are a prime incubator for fungal leaf spots that can appear either as round or free-form brown dead spots on the leaf or as larger dead areas originating along the blade and at the tip (extremity) of the leaf.

While these flaws can mimic more serious conditions, such as anthracnose in oaks and sycamores, they are not usually fatal and will disappear with the leaf in the fall. And if the dead spots follow along the leaf vein, it is not likely related to excess soil water.

If the tree is still basically green in appearance and looks OK when viewed as a whole from a distance, this kind of damage is not likely serious. If the leaves are cupping/rolling, they will often correct when the weather dries out and the soil has another chance to breathe.

Of the two problem areas (roots and leaves), the one most likely to be most long-term damaging is usually below the ground.

Over a normal, dry summer period, an established tree prefers its ration of supplemental water in weekly doses of slowly applied 2-hour applications, rather than for 20 minutes every other morning. This weekly supplement should be roughly equivalent to about an inch of rain per week.

After a good rain, wait six to seven days before watering. As a result nearby grass may look a little wilted, but will usually recover rapidly after watering. Most lawns are over-watered anyway.

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