
Urban forests often suffer from lack of tree root fungus

By Fred Morgan

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Mycorrhizae is a Greek word that translates as "fungus roots." But it's not just in the Greek isles that it occurs.

Mycorrhizae is worldwide in undisturbed soil environments. It is the primary reason that native forests are typically so lush.

Studies have shown that association with mycorrhizae can in some cases expand a plant root system's capacity to take up water and nutrients by as much as 700 percent.

This results in enhanced vitality, appearance and elevated resistance to soil stress factors, mechanical disturbances and environmental issues, like drought.

When it comes to trees, the problems and issues that are persistent and most serious originate in the soil.

A plethora of growing-season leaf problems can be dramatic and they can cause some alarm. But leaves come and go with each season, and with a few rare exceptions, the issues that show up on those leaves come and go with them.

That's not typically true with soil-borne or soil-originated problems.

When it comes to the long-term health and vitality prognosis for an important tree on an important site, a close look at the bottom is a critical first step.

Unfortunately, most of us live on urban or suburban sites. This means that it's a good bet that the original native topsoil is no longer present or has been damaged.

If you grow grass (or even try to grow grass) under your trees, and if you dutifully clean up the fallen leaves every year, it's unlikely that you've actually done much to encourage improvement in your soil condition.

Extensive use of properly applied good mulch (as an option to turf), used over wide areas can help over time. But who does that?

So in a typical yard around the Mid-South, the lack of organic material in our clay soil and the increased compaction and competition that goes with it means that mycorrhizal spore presence is very likely deficient.

Trees on these sites can struggle in a less-than-optimum, even a hostile environment. This is especially true for new transplants that have not yet developed an extensive root system.

The good news is that mycorrhizal spores can be put back into suburban soils through an injection process.

This injection process into the soil requires special equipment and must usually be done by a commercial tree care company.

Because soils typically remain hostile to these beneficial amendments, restoration may need to be repeated every year.

A soil test that measures organic content will tell you if this is necessary.

A test can be done through the Agricultural Extension office, or with a local agricultural testing service.

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