Volume 4, Issue 2

Spring 2009

MORGAN TREE SERVICE, INC.
THE "VITACARE" COMPANY

Tree Times

Our Springtime Ritual

I'm not totally sure yet but I think that Spring is almost here. It seems to like to play "Hide and Seek" with us for a while here in Memphis. In any case, in the process of it's arrival we have again endured another of the Mid-South's wild roller coaster temperature rides that have made most of our flowering trees only "okay" this year, especially the pears and the crabapples. The cherries seem to have done a little better.

And for those who enjoy and appreciate the value of our trees, springtime is often thought of as the traditional time to fertilize. But a caveat should go right here. Many folks still hold to the false notion that the generic cure for almost any real or supposed tree problem or deficiency is to throw some fertilizer at it. The truth is that sometimes indiscriminant fertilization can do more harm than good. As an example there is one root rot disease called Phytophthora that frequently afflicts mature oaks and that also thrives on nitrogen almost in the same way that fire thrives on gasoline.

"springtime is often thought of as the traditional time to fertilize. But a caveat should go right here."

HOW FERTILIZER WORKS

So it's helpful to understand a bit about how to read the fertilizer bag and what each of those elements do for you. For starters, almost all fertilizer formulas are identified by a three-number designator, identifying the amounts of Nitrogen (N), Phosphorous (P), and Potassium or potash (K) and in that order. Remember "N-P-K". For example, the commonly used fertilizer "Triple 13" contains thirteen pounds of Nitrogen for every 100 pounds in the bag, ie. 13%. And the same for phosphorus and for potassium. But there are several more things to keep in mind at this point.

Some minerals are primarily utilized in the spring of the year while others are mostly beneficial for fall functions such as root growth. In Memphis, so long as the soil temperature stays above 40 degrees roots continue to grow even through the winter months. That's why fall is a better time to plant here, giving the new transplant a head-start before it has to use sugar energy to produce leaves and stem growth.

Then there's the issue of mineral availability. Different minerals hang around in the soil for varying periods of time. Nitrogen is usually the first to disappear (leach out). For that reason a slow release form of nitrogen (N) is frequently preferable, dispensing its benefits over a longer span of time in the spring.

When it comes to longevity (staying power in the soil) potassium (K) is in the middle range. And Phosphorus (P) can be stable in the soil for years. The other thing about phosphorus is that it can become excessive and work against you. So you may not need to apply additional amounts at all. But how can you know?

USING A SOIL REPORT

That's where the information from a soil test can be helpful before trying to fertilize. Not only will a complete soil report tell you about pH values, it will also give you the estimated rate of nitrogen release and the levels of macro-elements in the soil (Phosphorus, Potassium, Calcium, and Magnesium). It will also advise you about the organic content of your soil. Organic content is important because clay soils with low organic content tend to aerate poorly and drain slowly, creating a possible toxic anaerobic (oxygen void) condition that can rot roots.

While you cannot usually change the nature of your soil, the best response to an anaerobic soil condition may not be fertilizing at all. It may be more helpful to consider mulching, (*see Spring 2006 Newsletter*) organic soil amendments, mycorrhizal spore inoculations (*Summer 2005 Newsletter*) or even installation of vertical columns to assist in soil aeration and water dispersal.

If the pH of your soil is not right; that is, if it's too high or too low, even plenty of important mineral presence (fertilizer) in the soil does not help because particular minerals may be bound up chemically with other elements, making them insoluble and therefore unavailable to the plant or tree. A value between 5.6 and 6.2 is good for most deciduous trees.

In summary, it is always best to get a soil report from a sample taken near your trees. This can provide important diagnostic and management advice before "slinging fertilizer" or coming to any other off-the-cuff conclusions about what your trees may need. Call me if you'd like to get some help with doing this right.