

Plant Lover's Almanac

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Summertime...and plant problem diagnosis is easy? Well, not exactly, although much of the current angst of plant lovers can be attributed to a simple fact – many areas of northeast Ohio received less than one inch of rain in August. This is not exactly “man bites dog” level news; August is often dry and hot, with lawns going dormant and trees showing early fall coloration. With such a lovely and mild and wet summer until August though, it came as a bit of a shock, just in time in fact, for the opening of many non-air-conditioned schools. Full disclosure: my wife teaches second grade, school started in mid-August, and more than usual I think of her every day trying to un-wilt young minds.

As for plants, those bluegrass lawns will recover if all other factors are positive. Same too for trees with reddened, yellowed and scorched leaves, especially tuliptrees, maples and dogwoods, about which many an OSU Extension Office has received countless calls. After all, the time for full fall dormancy is not far off, and these trees will soon lose those leaves in due course anyway. This is not to say that more serious problems do not lurk out there, of course.

Emerald ash borer. The emerald ash borer continues to cut a wide swath across northeast Ohio. If it has not reached your yard or street yet, take a drive along the turnpike and I-76/224 a little west of us. The synchronized death common to this deadly pest of ash trees, and ash trees alone (with a few white fringetrees thrown in), is what you are seeing when you see almost all of the barren trees. It just goes to show, insects can make you crazy!

Manganese Deficiency of Maple. This is one of the exceptions to simple dry conditions when it comes to leaf discoloration on trees right now. Manganese deficiency on red maple trees results in what is known as “interveinal chlorosis”, a fancy way of saying, “yellowing between the veins”. Hey, I just noticed that the fancier phrase is 20 characters compared to 24 of the simpler words. Highfalutin' words are not all bad.

Anyway, unlike the general yellowing and browning of leaves of tuliptree right now simply due to dry conditions, this yellowing between the veins on red maples is due to inadequate manganese availability to plants in high pH (basic as opposed to acid) soils, occurring because the soil manganese is bound to other soil materials in high pH soils. Red maples are just especially sensitive to these available manganese levels.

Interveinal chlorosis is related to the fact that manganese is essential to the process of photosynthesis. Photosynthesis is that life-giving process in which carbon dioxide and water, in the presence of chlorophyll pigments in plants, excited by light energy, produce carbohydrates that start the food chain, as well as give off oxygen. To put this into perspective, the Royal Society of Chemistry notes:

“One of the most important reactions in biology, photosynthesis, is completely dependent on Manganese. It is the star player in the reaction center of photosystem II where water molecules are converted to oxygen. Without Manganese, there would be no photosynthesis as we know it and there would be no oxygen in the atmosphere.”

Sanitation in the Garden. Though Autumn has not yet arrived, it is not too early to start removing or composting diseased plant material. Earlier in the season, for example we had plenty of rain, and plant diseases such as black spot of rose, leaf blotch and measles on peonies, and black rot on grapes were plentiful. These become perennial problems on these perennial plants, simply because the fungal pathogens overwinter on diseased plant tissue; so remove the diseased material from your gardens and landscapes. It is a very simple way, though it can be a lot of work, to make a major dent on otherwise very hard to control diseases.

So, here we are...September. The season is about to change, but as ever, John Updike said it best:

**"The breezes taste
Of apple peel.
The air is full
Of smells to feel-
Ripe fruit, old footballs,
Burning brush,
New books, erasers,
Chalk, and such.
The bee, his hive,
Well-honeyed hum,
And Mother cuts
Chrysanthemums.
Like plates washed clean
With suds, the days
Are polished with
A morning haze."**

- John Updike, *September*