NATURE'S WAY RESOURCES
an organically based service company

www.natureswayresources.com

JOHN'S CORNER:

NEWS FROM THE WONDERFUL WORLD OF SOIL AND PLANTS

by John Ferguson

A new study by the University of Iowa and the U.S. Geological Survey (2019) has found that when neonicotinoid pesticides are exposed to chlorine-based water treatment (city water supplies), they transform into chlorinated disinfection byproducts (DBPs). These byproducts are over 300 times more toxic and hazardous than the original poison.

Also, one needs to remember that neonicotinoid pesticides are 1,000 times more toxic than DDT (which has been outlawed) which makes the danger much worse.

For gardeners this means several things:

- Many bedding plants (~50%) one buys from their local nursery are treated with these poisons. When you bring them home and water them with municipal water the toxicity greatly increases.

- These poisons are often applied to plants in a systemic form so it spreads to all parts of a plant. Hence, when bees, butterflies and other pollinators visit they plant for pollen or nectar they are often killed. This is more common in the discount sellers as they purchase lower quality plants where more toxic chemicals were used. Ask your nursery if their plants were raised using neonicotinoid pesticides, if so or they do not know, then do not purchase them

.

- The research also demonstrated even higher toxicity on mammals (319 times more toxic). For the health of your children and pets avoid plants treated with these poisons. We have known for years that there is strong links to these chlorinated chemicals to cancer and birth-related health problems.

- To avoid these problems, look for organically-grown plants. As the old saying goes: "It is better to be safe than sorry".

If you want to learn more on the dangers of this class of pesticides, the Dr. Mercola newsletter has a nice article on the subject titled "**Neonicotinoids Pose Ecosystem Wide Threat**" that can be found at the link below.

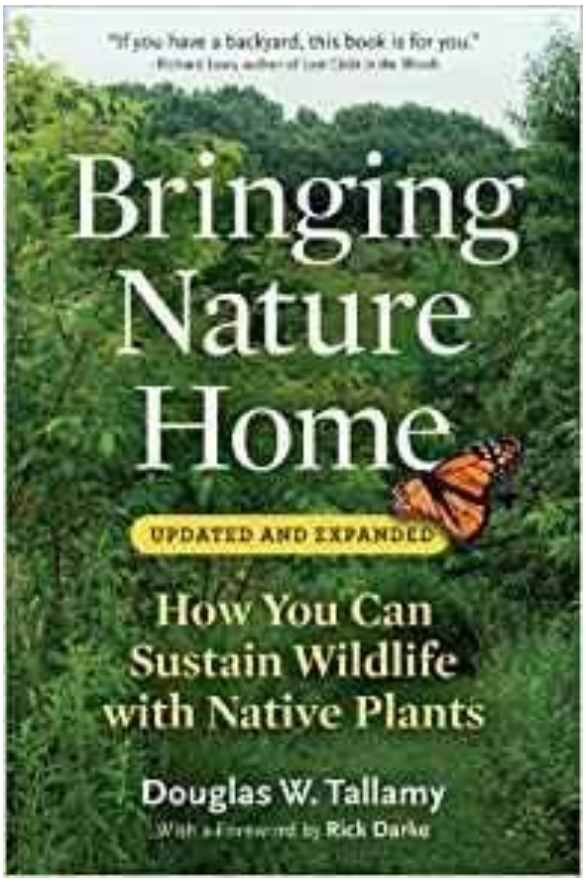
www.mercola.com

A study from the University of Stockholm has found that even small woodlands (less than an acre) can store more carbon in the topsoil layer than larger acreage and provide numerous benefits to wildlife as they naturally have more edges and which provide the environment for many plants that feed wildlife. (Journal of Applied Ecology, December 2019)

Habitat gardening is exploding across the country and now we have another reason why. A study from the University of California at UC Davis (December 2019), has found that attracting song birds to one's garden can greatly reduce pest insects. Songbirds are voracious predators of bugs, aphids, whitefly, scale, caterpillars, ants, and earwigs.

NATURE'S WAY RESOURCES
an organically based service company

www.natureswayresources.com



A great book on the subject is: "Bringing Nature Home - How You Can Sustain Wildlife with Native Plants" by Douglass W. Tallamy, Timber Press, 2014, Edith Printing, ISBN-13: 978-0-88192-992-8

.

It would also make a great Christmas gift for your favorite gardener!

Note: If insects eat plants with the neonicotinoid pesticides on them and then a bird eats the dying insect, it will die also. It is believed that these toxic pesticides have killed billons of birds in America alone.

A few weeks ago, we asked the question: "Are plants Intelligent"? The Max Planck Institute for Chemical Ecology released a new study on sweet potatoes (Ipomoea batatas) in the Journal Scientific Reports (2019). They found that when the leaves were attacked by a predator, they produced a chemical called "sporamin" that causes an insect to lose its appetite as it prevents insects from digesting their food. It also tells neighboring plants to turn on their immune system and produce this chemical. Communication and cooperation?

101 Sherbrook Circle • Conroe, Texas 77385-7750
(936) 321-6990 Metro • (936) 273-1200 Conroe • Fax (936) 273-1655

Researchers at the University of California-Berkley have found that plants have a leaf microbiome. They studied tomato plants and found that certain species of microbes were essential in protecting the plant from disease and pests. Proceedings of the National Academy of Science (2019).

Tens of thousands of organic gardeners and farmers have known this for decades and have been using compost tea to provide the microbes for the plant microbiome.

Diseases Controlled with Compost Tea (sample list)

Alternaria solani - early blight on tomatoes

Botrytis cinerea – grey mold on strawberries, geraniums, beans, tomatoes, peppers

Diplocarpon rosae – black spot on roses

Pseudomonas syringae pv. Maculicola – leaf spot

Sphaerotheca pannosa var. rosae – powdery mildew on roses

Sphaerotheca fulginea – powdery mildew on cucumbers

Uncinula necator – powdery mildew on grapes

Venturia inaequalis – apple scab on apples

Venturia conidia – apple scab on apples

Xanthomonas vesicatoria – leaf spot on tomatoes

Podosphaera pannosa var. pannosa – powdery mildew on roses

Pythium ultimum – damping off in cucumbers

Fusarium sp. – root rot in cyclamens

Fusarium oxysporum – fusarium wilt

Monilinia taxa – blossom rot on cherries

Phytophora sp – root rot on avocados

Phytophora infesttans – leaf blight on tomatoes and potatoes

The Journal Compost Science and Utilization (2002) has a very good article on this subject, “Compost Tea: Principles and Prospects for Plant Disease Control”. They found that a **properly-made** compost tea could help in the control of over 50 species of pathogens.

I was asked the other day, “Why do we not hear more about these issues on the news?" The Dr. Mercola newsletter had an article on how companies buy off reporters titled “Bayer Buys Reporters and Sprays Illegal Poison”: