

JOHN'S CORNER:

NEWS FROM THE WONDERFUL WORLD OF SOIL AND PLANTS

by John Ferguson

Now that we are in the middle of summer one might be thinking about his/her fall garden. There is a natural protein found in food called NAC (N-acetylcysteine) that is a powerful antioxidant and several university studies have shown it is also effective at suppressing the growth of cancer cells. A couple of our cool season vegetables that are high in this nutrient are Broccoli and Brussels sprouts. Another study in the journal Science (2019), by researchers at Beth Israel Deaconess Medical Center has found that broccoli along with cauliflower, cabbage, collard greens and Kale contain molecules that inhibits a gene required for cancers to grow.

Note: Many beneficial chemicals found in plants quickly degrade after picking, hence to obtain maximum value we need to grow our own or at least buy from local farmers markets.

Another plant in the news is our native Tulip Tree (*Liriodendron tulipifera*). Historically this plant was used to treat infections. A recent study published in the journal Scientific Reports (2019) by researchers at Emory University Health Sciences, has found that extract from this tree have anti-microbial effects against several multi-drug-resistant bacteria. This tree also has very showy flowers that attractive to pollinators, butterflies, and hummingbirds.





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A massive research project by Stanford University and others has collected data from over one million forest plots that represent 28,000 different tree species in 70 countries. Journal Nature (May 2019). The interactions between inter kingdom collaborations such as between microbes and trees were very diverse. They studied how roots, fungi and bacteria exchange nutrients in a vast global marketplace. Each tree species was closely related to certain types of microbes in the soil. They found that ectomycorrhizal (EM) could build vast networks and were more common in temperate forests and could store more carbon in the soil. Arbuscular mycorrhizae (AM) form smaller food webs and networks and were more prevalent in the tropics. All the networks formed by fungi, bacteria and roots are now being called “The Wood Wide Web”. This is the first study of its kind to map all the relationships. I expect there will be many new understandings of how nature (God) works as all this data is analyzed.

A plant that I have often considered a weed is now being labeled as super food. This is the common purslane plant (*Portulaca oleracea*). This purslane is rich in vitamins and minerals. In addition, it has large amounts of beneficial omega-3 fatty acids. Purslane has been used for centuries as a food plant and as a medicinal plant. It can be eaten raw or used in soups, stews and salads. The [Dr. Mercola website](#) has more information on this plant.

Following last week's article on the benefits of native plants on caterpillars, the July 2019 issue of Texas Parks and Wildlife Magazine (pp. 44-49) has a good article on moths: “Like a Moth to a Flame – Caterpillars can be pesky, but their transformations into moths are worth the trouble”, by Sheryl Smith Rodgers.



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As gardeners we are becoming more aware of the need to take care of our pollinators and there are many articles and programs around the country on what plants provide for the daytime pollinators. What we forget is that many of the best pollinators work at night and that we need to provide for them also. The July/August issues of the magazine "Horticulture" (pp. 21-25) had a nice article on nighttime pollinators. "Some night-blooming plants, such as Moonflower, morning glory, evening primrose, four-o'clocks, yucca, gardenia, and nicotiana, will also attract bats, true nocturnal creatures that eat harmful beetles, other plant decimating pests and upwards of 600 mosquitos per hour (per bat). According to the U.S. Forest Service Rangeland Management Program, bats are vital for pollinating 300+ food plants, including guava, banana, mango, peach date, fig, cashew and pecan. " To learn more how one can take care of our beneficial bats go to Bat Conservation International at <http://www.batcon.org/>

A question I frequently get asked is why organic gardening and organic food?

There was a great answer in a recent Acres USA newsletter by André Leu who is the author of [The Myths of Safe Pesticides](#) and [Poisoning Our Children](#) . He previously served as president of IFOAM — Organics International and is currently the international director of [Regeneration International](#).

According to the World Health Organization (WHO), there is a global epidemic of non-communicable chronic diseases: "Non-communicable diseases (NCDs), such as heart disease, stroke, cancer, chronic respiratory diseases and diabetes, are the leading cause of mortality in the world. This invisible epidemic is an under-appreciated cause of poverty and hinders the economic development of many countries. The burden is growing — the number of people, families and communities afflicted is increasing".



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You cannot catch these diseases from other people. Their multiple causes are a result of environment and lifestyle. This means that we can prevent them by changing our habits and our food consumption so as to avoid the environmental exposures and lifestyle factors that cause them.

Pesticides and chemicals are strongly implicated in this global epidemic, but the full extent of their role is being ignored by researchers and health professionals. This is because the current best practice testing guidelines for pesticides, food additives and chemicals are designed to miss the majority of diseases. Let's look at these guidelines to understand why."

[Read the full article:](#)

Along the same lines was an article in Natural News (July 2019) titled "You think organic living is expensive? Check out the cost of a 'conventional' lifestyle that leads to cancer". Bottom line is that a conventional lifestyle that requires lots of doctor's visits, massive amount of prescriptions, hospitalizations, a degraded or limited life style, pre-mature aging and significant loss of lifespan, etc. the combined costs are hundreds of times more costly than avoiding or preventing the problems in the first place by adopting an organic lifestyle. Remember the old saying: "A ounce of prevention is less costly than a pound of cure".