

JOHN'S CORNER: NEWS FROM THE WONDERFUL WORLD OF SOIL AND PLANTS

by John Ferguson

I had the pleasure to visit with Kim Konte of Non-Toxic Neighborhoods a few weeks ago. In Houston, her organization is working with the Herman Park Conservancy to make the park all organic so it will be safe for children and pets, as many cities around the country are doing.

Non-Toxic Neighborhood's Advisors and team believes it should be a basic human right that children are protected from harmful pesticides and chemicals where they play. Especially since a majority of the exposure is happening for purely cosmetic reasons (weed abatement).

From their website: "When we were lobbing in DC against the environmental riders in the Farm Bill, I shot a 3 min video of our landscape superintendent speaking to the benefits of switching to organic management":

https://youtu.be/4hxogS-pal8?t=56

From CA to FLA and everywhere in-between we have proven you can manage pest pressure organically:

https://www.chron.com/neighborhood/bellaire/news/article/Organic-lawn-maintenanceplanned-for-parts-of-13727177.php

Non-Toxic Neighborhoods Advisors:

Dr. Dean Baker, MD, MPH University of California, Irvine Professor and Director of UCI's Center for Occupational and Environmental Health, Professor of Medicine, Pediatrics, and Epidemiology.



Dr. Bruce Blumberg, PhD. University of California, Irvine Professor of Developmental and Cell Biology, Professor of Pharmaceutical Sciences.

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Dr. Sandy DeSimone, Starr Ranch Audubon Director

The CDC reports there is a new extremely toxic fungus (Candida auris) that is very toxic to humans and it has evolved to be very resistant to all drugs due to agriculture's mass applications of fungicides. C. auris has been around thousands of years but this new strain first showed up in 2009. Another strain of C. auris showed up in 2012 with a different mechanism for resistance. The careless use of fungicides in agriculture is creating new strains of pathogens of which there is no good treatment.

The journal HortScience, Vol. 53 had an article on the importance of trace elements in the soil. It found adding trace amounts of nickel (Ni) to the plants as a foliar spray, prevented/reduced cracking of the peel in Pomegranates. It also increased flavonoid concentrations and antioxidant capacity. Another reason to re-mineralize our soils. Another paper in the same issue found that insufficient Boron (B) resulted in poorer root growth and development as well as reproductive issues in cowpeas. These problems were corrected by foliar sprays. This one of the reasons foliar sprays of Super Seaweed from MicrolifeTM helps plants grow healthier.



The January 2019 issue of Life Extension found that sage extracts increased memory performance up to 60% compared to those taking a placebo. Another reason to have sage in our gardens. I often brush my sage plants to inhale the aroma, as it just makes me feel good.

More research at the University of British Columbia has confirmed that trees talk to each other. We have known for decades that they share nutrients and transfer them to each other by the fungal network in the ground. They found that trees can also recognize their own siblings and can nurture them hence the new term "Mother Tree". It is strongly suspected that the fungus receives a commission from the tree for providing this service in the form of carbon compounds that it requires.

Have you ever wondered why one study shows a food as beneficial and the next says it is not? In the Journal of Traditional, Complementary, and Alternative Medicines have found a possible reason. They found that aspartame may be one of the most damaging vectors for the widespread dumbing down of humanity. This toxic chemical, changes how many communication molecules in our bodies work, which then changes how we respond to different things as it destroys many of our neurotransmitter chemicals. Hence, if participants in a study use aspartame the researchers will get different results than that from those whom do not.

A large international study has found that children that have access to green spaces have fewer respiratory problems like asthma and wheezing as adults. Greenness from plants and trees produced better mental health and productivity, improved general mood and attitude, and reduced stress in adults.

Studies from Japan and Denmark have confirmed that gardeners live longer and are less stressed. Australian researchers found that gardeners had a 36% less risk of dementia. Other studies found that the social benefits of gardening also increased longevity. They did not



define it but I guess this means garden clubs, plant sales, master gardeners, master naturalists, garden tours, etc. A Harvard University study found that people surrounded by lush greenery lived longer and had a lower chance of developing cancer or respiratory illness. Doctors in Scotland have joined Japan in prescribing walks in nature to treat a variety of ailments.

A study on the wildfires in 2011 in New Mexico, published in the Journal of The American Society of Agronomy (2018), found that low to moderate intensity wildfires increase soil moisture. The reduced vegetative cover reduces evapotranspiration and allows more water to enter the soil. High intensity fires remove the duff layer leading to soil sealing, erosion, and more runoff.

The journal Biological Control (January 2019) had a paper studying harvester ants for weed control. Fields that used no-till methods had less weed pressure as it allowed larger nests of the ants whom eat many types of weed seeds. They also found that harvest or ants ate herbicide resistant weed seeds like rigid ryegrass.

A study in the British Journal of Nutrition combined the results of 67 published studies and found that organic meat had 47% higher levels of beneficial omega-3 fatty acids compared to conventional meat.

Another study in the Journal of Science of Food and Agriculture (February 2019) compared the nutritional properties of organic raised meat to conventional meat. They looked at bioactive compound's coenzyme Q10, carnosine, anserine, creatine, and taurine. The organic beef had 17% less cholesterol, 32% less fat, 16% less fatty acids, and 24% less monounsaturated fatty acids. Of the good stuff it had 170% more alpha-linolenic acid, 24% more alpha-tocopherol, 53% more beta-carotene, 34% more coenzyme Q-10, and 72% more taurine. This another study that shows even when we raise grass organically, the way God does it in nature, it affects the health of animals and the health of people that eat the animals.



I have always enjoyed a dark beer such as an ale or stout with a meal. Researchers at Oregon State University have found that a compound found in "Hops" known botanically as humulus lupulus and is used to add flavor, color, and bitterness to beer, produces a compound (Xanthohumol) and its derivative's that thwarts the growth of cancer cells. International Journal of Molecular Sciences (2019). Now I have another reason to enjoy a good dark beer...its now a health food.

I have always loved peppers from jalapenos to stuffed bell peppers. From the book "The Secret Life of Your Microbiome – Why Nature and Biodiversity are Essential to Health and Happiness", consumers whom regularly eat peppers have a 13% reduces risk of all cause's mortality. Peppers have a beneficial effect of our gut microbiome and our immune system. This fruit has also been shown to increase our lifespans. Other effects include; lowering obesity, type 2 diabetes, and cardiovascular disease risk. Capsaicin in peppers is a natural anticancer compound. Another reason to add peppers to one's garden is they are very easy to grow and a great way to introduce children to gardening. Lastly, without peppers what would salsa be?