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JOHN'S CORNER:

NEWS FROM THE WONDERFUL WORLD OF SOIL AND PLANTS

by John Ferguson

Something to think about, I know I did not. I was reading a research article published in the journal Environment International (May, 2020) by the University of Stirling in the U.K, that may affect some gardeners.

They found that the COVID19 virus can be spread by sewage sludge (also called biosolids for marketing purposes). This virus has been found in human feces or sewage up to 33 days after a patient has tested negative.

For gardeners, several compost companies in our area use sewage sludge in their products. The researchers also believe that the virus could be transmitted in the waste water from sewage treatment plants. This wastewater is sometimes used to water gardens, golf courses, sports fields, etc. and is commonly referred to as "purple pipe water".

We have often talked about the use of cover crops to improve soils, control weeds, control erosion, and provide habitat from insects to birds. Another 5-year study by New Mexico State University has confirmed these benefits even in a hot, dry, semiarid environment.

For homeowners, if one has an area with very poor soil, where one eventually wants to build a garden, they can use a version of cover cropping to improve the soil. Why not plant a native wildflower garden for a few years and let the plants build humus in the soil, breakup up hardpan, increase microbial life, etc. While the plants are doing their work, one has a beautiful wildflower meadow to enjoy and a habitat for the butterflies, birds, and other life.



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We have talked about the problems caused by tilling the soil many times in this column. Tillage destroys organic matter, kills off soil life, creates erosion, and destroys soil structure. The only time tillage should be used is to mix materials together in a brand-new garden bed.

The results of another study continue to support the advantages of not tilling. The University of Nebraska has an ongoing study for the last 40 years. They have found that No-Till farms have the highest yields and are the most profitable.

I love a good cup of organically shade grown coffee. Studies have shown that not only do they taste better, shade grown coffees have more bioactive chemicals that help our health. A study published by the American Phytopathological Society in the journal Phytobiomes found that coffee plants have a core microbiome. They discovered that coffee plants have 26 bacterial and 31 fungal species in their biome. Many of the species have been previously recognized as having plant beneficial properties. It is suspected that this biome influences the coffees flavor.

In previous issues I have mentioned that gardeners have more vitamin-D in their bodies than non-gardeners.

Several previous studies have shown high levels of this vitamin are inversely related to the severity of covid-19 infections. Two more studies have been published on this issue. A group led by Northwestern University did a statistical analysis from 10 countries and found that countries with high mortality rates had low vitamin-D levels compared to those with lower death rates.

Another study in the Journal Aging Clinical and Experimental Research by Anglia Ruskin University has found an association between low average levels of vitamin-D and high numbers of covid-19 cases across 20 European countries.



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These are great reasons to get outside, work in our gardens and enjoy the sunshine!

A nother study that supports the health benefits of being a gardener and raising one's own food has been released by Tufts University Health Sciences Department published in The American Journal of Clinical Nutrition (2020).

The study conducted over 20 years found that older adults whom did not consume enough flavonoid rich foods had increased risk of Alzheimer's and dementia.

Flavonoids are natural substances found in plants such as fruit and vegetables and in some plant-based beverages like tea and wine.

Many flavonoids are produced by microbes living in the soil and on the roots of plants. Mycorrhizal fungi on the roots of grape vines have been found to produce flavonoids that the grape vines absorb and is transported into the grapes giving them a better flavor.

Standard toxic chemical agriculture kills off much of the good biology needed to produce the health benefits. This is another reason to be an organic gardener and grow one's own vegetables, fruits and berries.

Gardeners in Houston and along the Gulf Coast are blessed with a climate that will allow us to grow a wide range of fruits and vegetables. The best source of information for those wanting to start their own food gardens and fruit orchards is the book by Dr. Bob Randall titled "Year-Round Food Gardening for Houston and Southeast Texas".

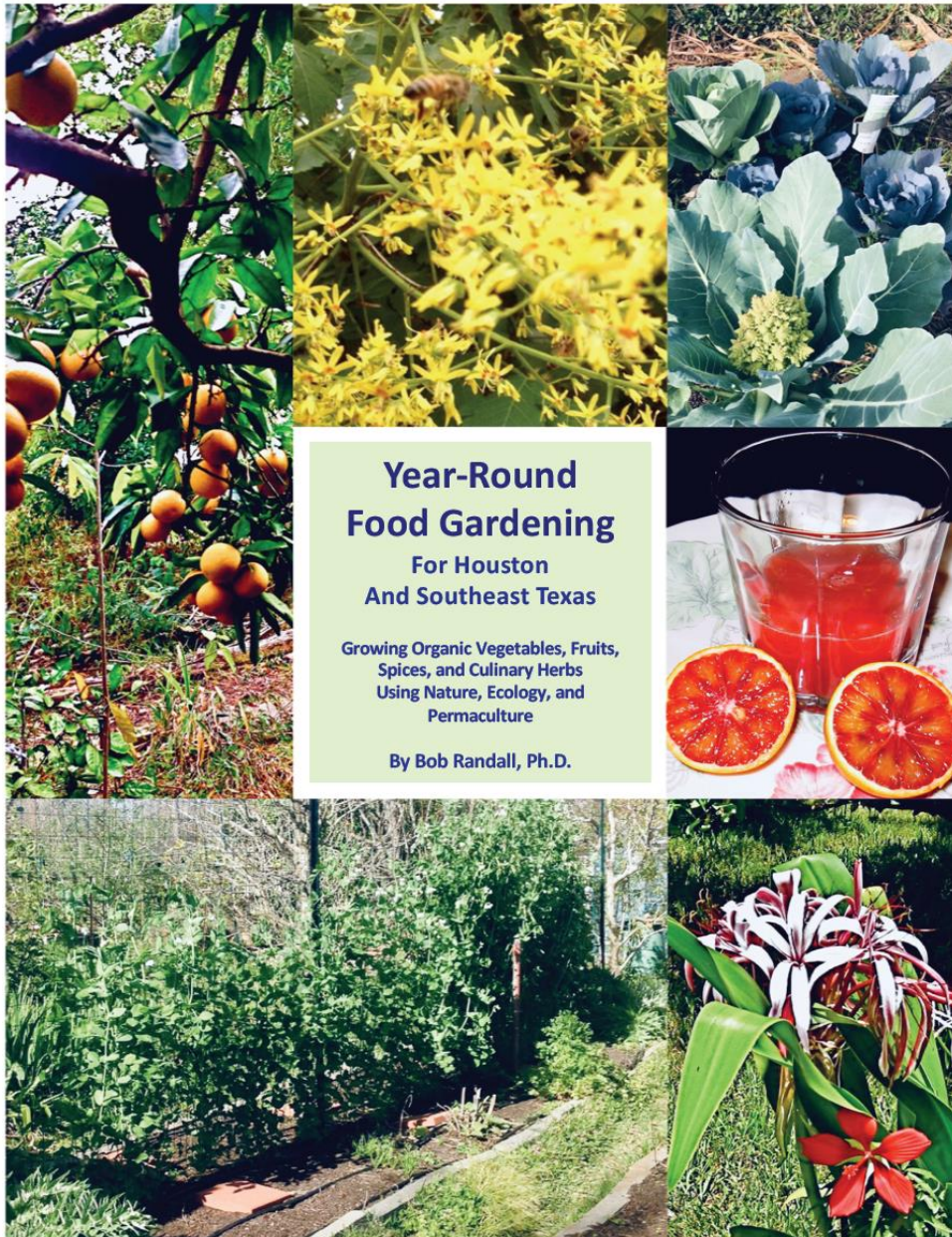
This great book is available at Nature's Way Resources and many other private nurseries.

A list of places carrying this book can be found at:

<https://yearroundgardening.me/>

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**Year-Round
Food Gardening
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