

NEWS FROM THE WONDERFUL WORLD OF SOIL AND PLANTS

By John Ferguson

From the book "Unlocking the KETO Code" by Steven Gundry, MD there are a few tidbits for gardeners:

Another study has found more damage from eating foods with glyphosate (Roundup) on them. Glyphosate harms our microbiome and causes what's known as "leaky gut". It was also found to disrupt the uncoupling mechanism which impairs our mitochondria's ability to repair itself (in other words it is linked to causing an increased rate of aging in humans).

Reactive oxygen species (ROS) cause damage to our cells, contribute to cancer, and damage our mitochondria. The body uses healthy fats and melatonin to prevent the damage.

The following foods are high in melatonin with organically raised vegetables having the highest levels: pistachios, mushrooms, black pepper, red and black rice, mustard seeds, olive oil, brewed coffee, red wine, cranberries, almonds, basmati rice, purslane, tart cherries, strawberries, and flaxseed.

An international team of scientists published a study in the journal I-Science (2022) on insect repelling chemicals in plants. They found that when plants like catnip (*Nepeta*



cataria) and silver vine (*Actinidia polygama*) have their leaves crushed they emit chemicals called iridoids which are natural insect pest deterrents.

When the leaves are crushed, silver vine emits 10 times more of these chemicals and catnip 20 times. This is why when cats play with a leaf it starts emitting these chemicals which then sends them into a leaf tearing frenzy. These emissions then encourage cats to role on the leaves to coat themselves with these chemicals as part of their pest deterrent system.

The researchers also found that both of these plants repel mosquitos.

A study published in the journal Frontiers in Sustainable Food Systems (2022) has found that meat and milk from pasture raised animals have much higher levels of health promoting phytonutrients – terpenoids phenols, carotenoids and antioxidants.

These beneficial compounds become concentrated in their meat and milk, and they are known to have anti-inflammatory and anti-carcinogenic effects.

I am reading an excellent new book called "What Your Food Ate – How to Heal our Land and Reclaim our Health" that goes into more detail as to how and why this is true. I will review the book in future newsletters.

Remember the gardening proverb: "Healthy Soil = Healthy Plants = Healthy Animals and People".



Every day we learn more and more the importance of soil biology and how it relates to plant and animal health. The June 2022 issue of Acres, USA magazine had a nice article by Steve Diver whom is the horticultural research farms manager for the University of Kentucky.

In modern soil science we often talk about soil biology and fungal to bacterial ratios (F:B) and how they affect plant growth. We now know that invasive weeds require bacterial dominated soil, improved pastures and grasses are slightly bacterial dominated, while native grasses, vines, shrubs and trees are strongly fugal dominated.

This is one of the reasons our famous leaf mold compost is so effective on turf grass as it is almost F:B of 50:50. Our fungal compost for perennials, shrubs, and trees is a F:B of 80:20.

As I explain when I give talks to garden clubs, when we apply a chemical fungicide to our yards to control diseases like brown patch, we kill off all the fungi in the soil both good and bad. This leaves the soil very bacterial dominated, hence this is why the weed problems always get worse after using a fungicide.

A good introductory video on soil biology titled "Life In The Soil" can be found on U-Tube at:

https://www.youtube.com/watch?v=m20-t7bnsVw

Another good video titled "Living Soil" is at:

https://www.youtube.com/watch?v=ntJouJhLM48



I often talk about the importance of minerals (more correctly called trace elements) and how they benefit our plants and our health. From out study of all the elements a while back we learned that small amounts of aluminum (AI) are good for soils and plants. However, large amounts create many problems from disease in the soil and in our plants, to several human health problems like Alzheimer's disease.

The newspaper the Epoch Times (June 22-28, 2022) issue had a nice article on aluminum and how we are exposed to it. It also covered how to protect ourselves from excess aluminum (AI) and clear our bodies of it.

https://www.theepochtimes.com/avoiding-the-toxic-effects-ofaluminum 4521599.html