

JOHN'S CORNER:

NEWS FROM THE WONDERFUL WORLD OF SOIL AND PLANTS

by John Ferguson

A question we often get asked is about removing grass and planting drought tolerant and low maintenance plants. Often the customer tells us, their HOA prevents them from practicing environmentally-friendly landscaping like xeriscaping.

If one hears this from a HOA representative, they are either ignorant of the law or not telling you the truth. As a result of the benefits of environmentally friendly landscaping, the State of Texas passed a law a few years ago preventing HOAs from keeping folks from practicing conservation, rainwater harvesting, and recycling.

Texas is considered a drought-prone state and we are also running out of cheap water from our aguifers. To protect our future, we need to conserve water and use other environmentally friendly options. That's why just a few years ago the State of Texas passed a law that gives homeowners living in an HOA community more control over landscaping their yard with water-saving alternatives.

Below are a few links to the statutes itself and a few articles on the subject one might find interesting:

CHAPTER 202. CONSTRUCTION AND ENFORCEMENT OF RESTRICTIVE COVENANTS

Xeriscaping and Your Texas HOA

Xeriscaping can no longer be prohibited by homeowners associations

Xeriscaping no longer prohibited by homeowners associations in Central Texas



Senate Bill 198 (2013) – Protection of Drought-Resistant Landscaping and Water-Conserving Natural Turf (also HB 449 – 2013)

"SB 198 modifies Section 202.007 of the Texas Property Code. Section 202.007 restricts HOAs from enforcing a provision of a Dedicatory Instrument that would prohibit or restrict a Homeowner from using drought-resistant landscaping or water-conserving natural turf on his or her property. A HOA may still require a Homeowner to obtain pre-approval of such landscaping or turf from the HOA to ensure, to the extent practicable, maximum aesthetic compatibility of such landscaping or turf with other landscaping in the subdivision, but a HOA's approval may not be unreasonably denied or withheld".

It amazes me how many of our local politicians, bureaucrats and HOA boards are so ignorant of these issues. For example, I read the other day that the state of Minnesota is now paying homeowners up to \$500 per home to remove their lawn grass and plant Urban Meadows (native grasses, forbs and wildflowers).

Woodlands Water Rebates

A few weeks ago, we talked about the importance of the simple plant we call algae from improving soils and sequestering carbon to the tremendous nutritional benefits that algae can provide. I even did a book review on a book about algae called "Slime".

Researchers have found another use for algae (that thin soft slimy green stuff we see in ponds). Thomas Brück of the Technical University of Munich, Germany, and his team developed a process that uses algae oil to create carbon fibers. These fibers can be used to develop industrial-strength material that's as hard as steel but only a fraction of the weight. These lightweight materials can then be used in making cars, airplanes and buildings.



The creation of these carbon fibers uses far less energy and produces far less carbon pollution than making concrete or steel. But that's not its only climate benefit. Algae absorb CO 2 as they grow, so when algae oil is used as a raw material for carbon fibers, the CO 2 gets locked inside. At the end of the products life when those carbon fibers need to be disposed of, they can be ground up and permanently stored underground where the carbon is locked up indefinitely.

The researchers stated that scaling up production will require big investments in algae cultivation. But once that's in place, this new technology could create strong industrial materials that also benefit the climate.

A mega study by the University of Nebraska and the Union of Concerned Scientists analyzed 89 studies from 6 continents and found that having a high plant density to create continuous roots, were the most effective in helping the soil absorb water. This simple practice performed better than other techniques like no-till, cover crops, crop rotations, perennial plantings, and crop land grazing. They also were able to withstand heavy rainfall better and were more resistant to drought or flooding.

Along the same lines Louisiana State University found that when warm-season grass was over seeded with cool-season annual cover crops, it greatly increase soil organic matter along with improved nitrogen management, fixed carbon, increased enzyme activity and soil microbial activity creating a healthier soil. A study published in the Journal of The Soil Science Society of America, 2019 has found that cover cropping annually, no matter the species of plant grown, greatly provides benefits to the soil.



Bottom line, if we want to have a very healthy soil, we need to have lots of plants growing in it. Contrary to what we used to think, the more plants the better.

The Dr. Mercola newsletter had a good article on how a corrupt marketing agency is changing its name after being fined for money laundering. The Grocery Manufacturer's Association (GMA) was the brazen trade and lobbying group for junk food makers and biotech and GMO seeds companies. They were also responsible for the DARK act (Deny Americans the Right to Know) a few years ago to prevent the labeling of GMO products.

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An excerpt from "Health Newsletters" is interesting. "Over 250 million pounds of weed killer (herbicides) is used on American produce each year. These toxic chemicals make their way into American homes through the food supply and affect families across the country. Urine samples collected between 1993 and 2016 showed weed killer toxin levels in Americans had gone up 1,208%.

While all the side effects are not yet fully known, experts believe the rise of issues like diabetes, bloating, diarrhea, constipation, weight gain, and fatigue may be related to the increase of these toxic products. The worst part is that almost nobody knows about it, even most doctors".



A nother problem with glyphosate has been discovered by researchers at the university MIT. They discovered that glyphosate causes a sulfate deficiency and impairs the heme pathway. Sulfates are used in many biological processes such as building amino acids and proteins. A functioning heme pathway is required for healthy blood. Another reason not to eat GMO's plants which are high in glyphosate (Round-Up) if one wants to be healthy.

The reasons to start your own fruit and vegetable garden or at least purchase organic foods increase almost daily.

N atural News has tested a common soil amendment called "Leonardite" which is often found near coal deposits. It is often crushed up and sold as a source of humates in gardening. It is also used in dietary supplements like probiotics as it has a high humic acid content. They tested one brand of probiotics that uses Leonardite purchased on Amazon and found that it contains over 5,000 ppm lead (Pb) and over 3 million ppb Aluminum (Al) which was not disclosed.

A story from Sustainable Pulse reports that the FDA (Food and Drug Administration) regulators have approved a new type of GM cotton, the seed of which is to be used for human and animal consumption. The cotton was developed by researchers at Texas A&M University. As a society we really do not need more health destroying GMO plants that require even more glyphosate or other toxic chemicals.

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New research from the advocacy organization <u>Healthy Babies Bright Futures</u> (HBBF), which bills itself as an alliance of scientists, nonprofit organizations and donors trying to reduce exposures to neurotoxic chemicals during the first three years of development. The researchers commissioned by HBBF looked at 168 different baby foods that spanned 61 brands commonly found on grocery store shelves. From that large sample, 95 percent were contaminated with one or more of four toxic heavy metals — arsenic, lead, cadmium and mercury. The high prevalence of the toxic metals meant that 26 percent of the foods tested had all four of the heavy metals. "Arsenic, lead and other heavy metals are known causes of neurodevelopmental harm." Heavy metals that may damage a developing brain are present in 95 percent of baby foods on the market. The reasons to grow our own food or purchase from organic farmers markets continue to increase daily.

R esearch from the research-based Aarhus University in Denmark has found that ants inhibit at least 14 different plant diseases. The ants secrete antibiotics from glands on their bodies. This supports other studies that found that when wood ants were added to apple plantations, the major diseases like scab and apple rot were reduced.

In past issues of this newsletter we discussed the culinary benefits of Elderberries. The article below from the Dr. Mercola website discusses the health benefits and why elderberries are considered one of the super foods. They are rich in many nutrients like zinc, full of vitamin-C, and the flavonoid anthocyanin known for its ability to boost immune function and prevent or at least inhibit colds and flu.



Elderberries are beautiful plants, bloom with large clusters of edible white flowers and they attract many pollinators and others that eat pest insects. They are drought tolerant and will grow well in moist areas. Our native (local) elderberry can thrive in full sun, laughs at heat and humidity, and does not have any significant disease or pest problems. Note: At Nature' Way Resources we propagate native elderberries but call for availability as they sell out quickly.

The demand for elderberries is high and growing, hence this plant can be grown as a cash crop which is an opportunity for market growers.

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We have talked about regenerative agriculture many times in the past from our farms to our backyard gardens. Below is an excerpt from an article by David R. Montgomery, PhD.

"Regenerative agriculture is not just about restoring the life of the soil. By making smaller farms profitable once again, it could bring more people back to the land and thereby boost the economy in small towns across America.

For each field, LaCanne and Lundgren measured the amount of organic matter in the soil, pest insect populations, corn yield, expenses, and profit. What they found directly contradicts key tenets of conventional agriculture. They found that pest insects (such as corn rootworms, European corn borers, Western bean cutworm, other caterpillars, and aphids) were 10 times as abundant on conventional farms that used insecticides than on farms that relied on regenerative, pest-resilient cropping systems with no insecticides.



The lower pest abundance in regenerative fields was likely due to competition from greater insect diversity, and because insecticide use kills predatory insects (like ladybugs) capable of keeping pests in check. This becomes a problem because pest populations rebound before their predators.

LaCanne and Lundgren also found that regenerative corn fields were almost *twice as profitable as conventionally managed corn fields* due to lower seed and fertilizer costs, a price premium if the crops are organic, and the added value of cover crop grazing for meat production on the regenerative fields. The profitability was unrelated to grain yield, but positively correlated with soil organic matter. In other words, restoring soil paved the way to restoring farm profitability. A profitable farm was less about how much the farmer grew and more about how they treated their soil".

For the full article see:

Regenerative agriculture: merging farming and natural resource conservation profitably