

NEWS FROM THE WONDERFUL WORLD OF SOIL AND PLANTS

By John Ferguson

Subject: straw mulch glyphosate food contamination seaweed extracts cover crops and tarping birds and metal health

A study in the journal HortScience (2022) on onion yield and quality, found that when the beds were mulched with straw compared to other mulches and methods, it gave the best results. The study was done over several years and on several varieties of onions.

The bulbs were larger, lowest internal decay, and fewest problems as compared to other treatments.

Round-up - update 14 – A massive study by researchers at Duke University have found a strong link to exposure to glyphosate the active ingredient in the herbicide Round Up, and chronic kidney disease.

Glyphosate was originally patented as a demineralizer to clean pipes (US Patent # 3,160,632) as it would remove various mineral scales of calcium and magnesium from the walls of the pipes as it would bind tightly to them.

The researchers found that when glyphosate is exposed to minerals that makes water hard, like magnesium (Mg) and calcium (Ca), it forms metal ion complexes. These



associations were found to persist up to seven years in water and up to 22 years in the soil! *It did not degrade as we have been led to believe.*

Many of us around Houston and in Texas have hard water full of calcium and magnesium carbonates. Environmental Science and Technology Letters (2023)

You will not see it on the nightly new as they do not want to lose advertising dollars, however the Epoch times newspaper reported a that animal contraceptives and antibiotics have been found in ten popular fast foods. This study was funded by Moms Across America.

Another reason for gardeners to grow as much of our own vegetables and fruits as we can, or at least buy organic foods from local farmers markets to get the best tasting and most nutritious foods.

Most experienced organic gardeners could have told them this. Researchers at Virginia Polytechnic Institute and State University found that seaweed-based extracts helped turf grass (Bermuda) tolerate heat stress better and grow stronger.

The biweekly applications of seaweed consistently improved turf quality and leaf color. It also increased leaf chlorophyll and carotenoid concentrations, root growth and other desirable functions. HortScience (2022)



We have an excellent seaweed-based product produced locally called "Super Seaweed" by MicrolifeTM that I use regularly when a plant needs a little extra TLC.

Weeds are a constant problem for gardeners. For decades tilling was used to help control weeds, however we now know that tilling the soil is very damaging to the soils long-term health which then encourages other weed species to germinate and grow, hence new techniques are being investigated.

A study found the usage of no-till, cover crops (a living mulch) and tarping to be very effective at controlling weeds. It also increased the quality and yield of cabbage plants.

When it was time to terminate the cover crop (helps build organic matter and soil quality) rather than tilling they covered it with a tarp to kill the cover crop. HortScience (2022)

More and more gardeners are putting in bird gardens. These gardens are designed to provide food, shelter, nesting sites, etc. for birds. Many trees and shrubs produce berries or nuts that birds need. Other plants are host plants for caterpillars that are essential for birds when they have chicks in the nests.

When I am at the farm, I love to get a cup of coffee and sit on the porch before sunrise and listen to the life wake up to start the day from the birds to the insects. A beautiful symphony of sound.



A study from Kings College London has found that seeing or hearing birds is associated with an improvement in mental well being that can last up to eight hours.

This improvement was also found to help those folks diagnosed with depression which is the most common mental condition. This indicates the potential role of birdlife in helping those with mental health issues.

The researchers showed that the links between birds and mental well-being were not explained by co-occurring environmental factors such as the presence of trees, plants, or water ways. Scientific Reports (2022)