



## **NEWS FROM THE WONDERFUL WORLD OF SOIL AND PLANTS**

**By John Ferguson**

**A**nother benefit of gardening has been discovered. A review of 1,279 studies has found that exercising three times per week for four months benefits one's memory. The sooner one starts and the longer we exercise the more pronounced the benefits. Communications Medicine (2022)

When we shovel soil, rake leaves, spread mulch or top dress our lawns with compost or pull weeds we are getting the required exercise.

**H**erbicides residues cause long term damage to plants especially glyphosate-based herbicides. The residues cause changes in a plant's hormone levels like phytohormone, which is found in three major crops oats, potatoes, and strawberries.

Glyphosate inhibits a specific enzyme in the shikimate pathway which is required for the creation of aromatic amino acids the building blocks of proteins. This effectively lowers the nutrient density of the food. Frontiers in Plant Science (2022).

**T**he journal PeerJ (2022) had a paper from the University of Washington that looked at regenerative farming and gardening techniques.

---

**101 Sherbrook Circle • Conroe, Tx 77385-7750  
(936) 321-6990 Metro • (936) 273-1200 Conroe**



[www.natureswayresources.com](http://www.natureswayresources.com)

Farms that combined no-till, cover crops, and diverse rotations, produced crops with higher soil organic matter levels, higher soil health scores and hence higher levels of vitamins, minerals, and phytochemicals.

Crops were also grown on the farm for animal feed. Pigs raised on the farm had higher levels of omega-3 fatty acids and 11 times more alpha-linolenic acid (ALA) than conventionally raised animals.

They researchers also looked at beef. They found that meat raised on farms using regenerative methods, when compared to conventional meat, had higher levels of good Omega-3 fats and lower amounts of bad omega-6 fats.

**A** preliminary release of an on-going study in the journal *Nutrients* (2022) has found a link between certain bacteria in our guts and certain personality traits.

The old adage: “You are what you eat” becomes truer every day.

**A** common worm called nematodes (*Caenorhabditis elegans*) is normally asexual. However, when stressed by a harsh changing environment, over several generations it begins to reproduce sexually. This is an epigenetic change that occurs by modifying the RNA fragments it releases. *Developmental Cell* (2022)

When we apply toxic chemicals to our gardens (artificial fertilizers to herbicides and fungicides, etc., even chlorinated water we create a stressful environment for soil organisms.

---

101 Sherbrook Circle • Conroe, Tx 77385-7750  
(936) 321-6990 Metro • (936) 273-1200 Conroe



[www.natureswayresources.com](http://www.natureswayresources.com)

Researchers from Exeter University published a paper titled: “How Do pathogens learn to be pathogens? Partnerships between microbes leads to human disease.”

Our environment is inhabited by trillions of microbes that are mostly good. When the fungus *Rhizopus* that lives in the soil and grows on spoiled food is attacked by an amoeba that want to eat it, the fungus must defend itself.

The fungus partners with a bacterium (*Ralstonia*) that allows the fungus to live inside its body (hide from the amoeba). In return the bacteria now produces a toxin that the fungus can use to stop the predator.

Using this same strategy is how some fungi cause disease in humans like mucormycosis. Current Biology (2022). God’s creation is amazing.

**A** study in the Journal of the American College of Nutrition examined nutrition from 43 different crops comparing present levels to those in 1950 using USDA data.

They found that protein, calcium, iron, phosphorous, vitamins B-2 and C had all dropped markedly.

“Mineral deficiency is estimated to affect 1/3 of all humanity causing health problems.”

One of the reasons is that plants have been bred to live on damaged soils, to have disease and herbicide resistance, and for yield, not nutritional quality or taste.

Many elements require a healthy soil microbiome for them to be absorbed by the plants. The use of artificial fertilizers, pesticides, herbicides, fungicides, etc. destroy the soil food web.

More reasons to grow one’s own food organically using heirloom varieties of plants.

---

101 Sherbrook Circle • Conroe, Tx 77385-7750  
(936) 321-6990 Metro • (936) 273-1200 Conroe