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NEWS FROM THE WONDERFUL WORLD OF SOIL AND PLANTS

By John Ferguson

Subject: Sewage Sludge and PFAS, Trace Minerals and Health, Glyphosate

Over the last few months there has been a lot of information and discussion about micro plastics, the forever chemicals in them, and how they harm human health.

These are per- and polyfluoroalkyl substances called PFAS for simplicity. Over the last few years new diagnostic techniques have been developed that reveal these chemicals cause many health problems.

For gardeners whom use fertilizer made from human sewage sludge like Milorganite or Houactinite or compost made from sewage sludge (aka Biosolids), this is a major source of exposure.

Note: We have several companies in the greater Houston area that use sewage sludge to make their compost and sell for use in gardening and landscaping.

Often famers use these biosolids (sewage sludge) to fertilizer their fields. One study stated that over 60% of the sludge produced is applied to farm land. These dangerous chemicals are picked up by plants growing in them and become concentrated as we go up the food chain. When one eats the food, these particles enter our bodies and accumulate.

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The only way to protect yourself and your families is to purchase organic certified foods where sewage sludge is not allowed or best yet, to grow ones on fruits and vegetables as possible.

To make health concerns worse, some are now suggesting using water treatment residuals that are high in aluminum, and apply to the soil, to slow the absorption of these PFAS chemicals. High levels of aluminum have been linked to many forms of dementia.

We often talk about the importance of trace elements sometimes called micronutrients. There is a group of 17 elements that are called rare earth elements (REE).

On several occasions we have talked about secondary plant metabolites. These are chemicals plants produce to protect themselves from insects and disease. These same chemicals provide many health benefits to humans from fighting cancer or viruses, to helping with cardiovascular issues to liver disfunction and many more.

Studies have shown that vegetables that have been eaten (holes in the leaves) have much higher levels of these beneficial chemicals. A new study has found that when plants are grown with REE supplementation it also increases the concentration of some of these good chemicals.

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This is why gardeners need to fertilize with rock dusts that provide a good trace mineral package like Re-Mineralizer. Seaweed and fish emulsion products also provide small amounts of these trace elements. Journal HortScience 2020

There has been a large increase in Childhood Leukemia and in young adults over the last 50 years.

A multi-institutional study from over a dozen universities was called the Global Glyphosate Study (GGS) was on the glyphosate used in herbicides like Round-Up, was released last fall.

It has been known for some time this rise in Leukemia was due to environmental exposure. This study found that exposure to glyphosate is a major reason of this increase. The researchers found that rats exposed to glyphosate at levels far less than allowed by the EPA caused Leukemia in rats.

They also found that glyphosate caused endocrine and reproductive toxicity in rats, at levels considered safe by USA regulatory agencies.

Note: The study was crowd funded to prevent anyone from using money to influence the results.

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