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JOHN'S CORNER:

NEWS FROM THE WONDERFUL WORLD OF SOIL AND PLANTS

by John Ferguson

A study published in the journal *Microbiome* (2019) has found that it is the lactic acid bacteria used to ferment dough used in making rye bread, that modify bioactive compounds in the rye, making them easily absorbed by our bodies. Our gut microbes also modify these compounds in rye partially the same way, this process gives the rye bread so many of its health benefits. Maybe this is one of the reasons I enjoy a good Rubeen sandwich on rye bread with sauerkraut that is loaded with pro-biotics.

Researchers at Penn State University have discovered a mechanism of how plants protect themselves from insect predators called "leaky gut syndrome". On maize plants they found several types of bacteria that when the leaves are eaten by insects, the bacteria on the leaves then cause the insects gut to let microbes into the insect body through their gut wall causing septicemia which kills the insect. *Proceedings of the National Academy of Sciences*, (July 2019).

A study from Ohio State University has found that the biodiversity of microbes that strengthen our immune system from babies growing up in rural communities was far greater than babies from urban environments. The found evidence that this led to a more robust respiratory immune system. This has led to a new health theory called "hygiene hypothesis". This is built upon the idea that hyper-clean modern life with antibacterial soaps, hand sanitizers, and



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scrubbed clean homes and offices has led to an increase in autoimmune and allergic diseases, by killing good microbes . They found it was the association with farm animals that provided the extra microbes needed for good health. This is another reason for creating a habitat garden as it attracts all types of animals that can provide the good microbes. Having a few pets around the home will also prove beneficial. *Frontiers in Immunology* 2019.

In the American Chemical Society's "Journal of Natural Products" (2019) the researchers have identified a chemical called pericosine-A, that is produced by fungi. They found that when this chemical is mixed with the stinky chemicals from Skunk spray, it converted them into stable odorless compounds! They also determined by eye and skin tests that the fungal chemical is non irritating to humans. This should lead to new natural products to eliminate skunk odors from being sprayed.

One of the reasons to switch to organic gardening or regenerative agriculture is water savings. The University of California at Santa Barbara analyzed data from 12 million wells across the USA going back decades. The study strongly confirms we are running out of groundwater across the country. It also found that wells are now being dug deeper which is more expensive and not solving the problem "Journal of Nature Sustainability" (2019). The Bible states that we are to conserve and protect natural resources (be good stewards of the environment) and one of the best ways is to use organic methods which require far less water.

Speaking of water, an article in the *Journal Environmental Science & Technology* (2019) by researchers at Washington University in St. Louis found that the chlorine added to public



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water systems changes lead carbonate (a common scale deposit in lead pipes) into a different chemical form called lead oxide which is insoluble, reducing the amount of dissolved lead in drinking water. However, when chloramine was used (mandatory in many states like Texas) it dissolved the lead oxide which then generated high concentrations of lead in the tap water. If the element manganese is also present, it accelerates the process creating even higher lead levels. Many cities use lead-based service lines to deliver the water which allows lead to get into our drinking water.

It has been known for decades that lead negatively affects behavior and causes a dumbing down of people whom consume it. Numerous times in this newsletter I have discussed how chemically treated public water hurts microbes, soils and plants. If one is growing food crops from vegetables to fruits another reason to filter the water especially in older areas of the city where it is likely that lead based pipes were used.

Research confirms that fluoride lowers children's IQ. Many times, over the last few years in this newsletter we have talked about how fluoride damages soil, microbes and plants.

A new study by a combination of Canadian and USA researchers published in the Journal of The American Medical Association Pediatrics (August 19, 2019) has found that ingesting fluoride significantly lowers children's IQ .

There are now over 2,700 studies showing the dangers of fluoride. Dr. Paul Connett has stated "You can repair a child's tooth; you cannot repair a child's brain." We now know that the studies showing the benefits of fluoride on tooth decay were falsified as they were designed to take a hazardous waste and get rid of it.



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So how does this relate to gardening? It turns out that the majority of fluoride produced today comes from the artificial fertilizer industry production of phosphate. It is often contaminated with lead, arsenic, uranium, radium, aluminum and other industrial wastes. "At the fertilizer company it is classified as a hazardous waste then suddenly it is turned into a health product when it is added to water".

Ohio State and Miami Universities have a joint publication on this issue called: "Toxic Treatment: Fluoride's Transformation from Industrial Waste to Public Health Miracle" in the March 2018 issue of Origins.

To learn more the Fluoride Action Network has a lot of information on the dangers of Fluoride at <https://fluoridealert.org/>

When one purchases an artificial fertilizer, you support the polluting of our water and soil by toxic chemicals.

Other artificial fertilizer companies often deliberately dispose of hazardous waste in their fertilizers. A book exposing this unethical process is:

Fateful Harvest by Duff Wilson, Harper Collins Publisher, ISBN 0-06-019369-7, A history of how hazardous waste is disposed of in synthetic fertilizers and ends up contaminating the food supply. Wilson was an investigative reporter for the Seattle Times Newspaper and published a series of articles in July-August 1997-1999.

This is another reason to only use good organic fertilizers besides them providing better results. I only use organic fertilizers in my yard, my farm and my business. As a soil scientist and having used and tested many brands over the years, my personal favorites are the Microlife™ family of products.



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By the way the only groups saying fluoride is safe are the front groups funded by the toxic chemical industry and the ADA (American Dental Association) whom does not want to be sued like Monsanto for lying to the public.

If you want to do something, below is a link to a non-profit organization trying to get the toxic chemicals out of our drinking water: [Read More](#)

YOU ARE WHAT YOU EAT: Do you ever wonder why health problems are sky rocketing? There is a good article by Dr. Mercola on the connection of our health and our soil. [Read More](#)

Along the same lines there is a new product called the Impossible burger that is extremely bad for the environment despite the advertising. For a discussion on how damaging it is to ecosystems see: ecofarmingdaily.com

Lastly, I found a new web site that helps with insect identification called whatsthatbug.com