

## NEWS FROM THE WONDERFUL WORLD OF SOIL AND PLANTS

By John Ferguson

**A** question I often get asked when giving tours of my facility is: "What happens if a herbicide is present in the feedstock?"

Several years ago, a few composting operations around the country were forced to close due to herbicide residuals in the compost, causing the compost to kill plants.

At Nature's Way Resources, TCEQ tested our compost and found no detectable herbicides or residual breakdown products. As a result, I wrote a paper summarizing all the data on this issue. It can be found at: www.natureswayresources.com

Another study was recently published in the Journal of Environmetal Quality (2022) on glyphosate. They found that even in conventional composting (windrow methods) glyphosate was broken down after only 112 days. However, most composters using windrow methods only compost for 30-60 days or less.

We avoid many problems by not accepting any feedstock believed to have chemical contamination to begin with. Then at NWR we use static pile methods with very long-time frame composting. This ensures even larger levels of bio-degradation of any complex chemical (pesticides, herbicides, etc.) that might have been present in the feedstock (if any). This is the reason we had no detectable residuals.

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**W**e often hear a lot about climate change these days. A study from Duke University published in The Proceedings of the National Academy of Science journal (2022) confirms a lot of other published research.

One of the largest contributors to global warming is the chemical methane (CH<sub>4</sub>). When we place organic material into a landfill it produces large amounts of methane. Landfill companies often boast about capturing the methane produced, however what they do not tell you is that 80-90% of all the greenhouse gasses including methane are released to the atmosphere before the landfill is closed, capped, and methane recovery systems installed.

When a gardener uses compost or native mulch made from organic waste diverted from landfills, you are being part of the solution to avoid climate change.

Additionally, these amendments can provide the nutrients plants need, eliminating the need for artificial fertilizers. They also feed the microbes required for good plant health.

Artificial fertilizers both in their production and, usage generate extremely large amounts of greenhouses gasses like ammonia, nitrous oxides, etc. which are hundreds of times more damaging than carbon dioxide to global climate.

Hence by using compost, native mulches and organic fertilizers, one gets better results, at lower costs, use less water, AND reduce greenhouse gasses!

Also, when one uses re-mineralizer for trace elements, numerous studies have shown that the basalt rock dust greatly increases the rate and amount of carbon (humus) stored in the soil by microbes and other soil life.

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**T**alking about the health and environmental damage caused by toxic agricultural chemicals, the non-profit organization GMOFREEUSA had a good summary of all the highly dangerous chemicals produced by Bayer-Monsanto, besides the herbicide glyphosate. The report was titled "Bayer-Monsanto's Sinister Seventeen".



www.gmofreeusa.org

Another reason to grow our own food (especially organically) is all the toxic chemicals found in food packaging (thousands of dangerous chemicals).

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The non-profit organization "EcoWatch" had a recent article in their newsletter on toxic chemicals in food packaging titled:

"3,240 Potentially Harmful Chemicals Found in Food Packaging" which can be found at

www.ecowatch.com



A lot of the data was from a study published in the journal Critical Reviews in Food Science and Nutrition (2022)

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**W**ith fall around the corner, it is time to start thinking about our fall vegetable garden. Some of the vegetables that do better in the cool damp weather of fall are the cruciferous vegetables like cabbage, broccoli, cauliflower, kale, brussels sprouts, collard greens, Bok choy, Arugula, Watercress, and radishes.

This group of vegetables produce chemicals called sulforaphane and DIM which are the cancer fighting chemicals we get when we eat the raw vegetables. There is a nice summary of the benefits of cruciferous vegetables in the health magazine "Life Extension", (August 2022).

When these vegetables are organically grown in fertile microbially rich soil they have higher levels of these important nutrients.

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