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NEWS FROM THE WONDERFUL WORLD OF SOIL AND PLANTS

By John Ferguson

Subject: Biocontrol, Stratification, Compost and Clay, DNA Damage and Glyphosate, Chemicals and Bad Health.

An article in the journal HortScience (2022) found that root rot in Boxwoods, which is caused by a pathogenic fungus called *Phytophthora nicotianae*, could be effectively controlled by the fungi *Trichoderma harzianum* and *Trichoderma virens*.

These good fungi will colonize plant roots and help protect them. These good fungi require highly organic slightly acidic soil for best results. These beneficial fungi are found in leaf mold compost **if** it is made correctly. Additionally, there are many brands of biological control products that have these good fungi in them.

Since they work best in acidic conditions, over watering with chemical treated municipal water, that is often alkaline, may kill off these beneficial microbes.

There is a new technique of weed control being studied for use in containers. Researchers found that by using substrate stratification with different materials or different physical properties in a container, it reduced water requirements and weed growth of several species of weeds.

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The weed reduction effect of this layering can be improved by mixing the fertilizer into the lower substrate, and not using any fertilizer in the top 2–3-inch layer. Journal HortTechnology (2022)

I have been using a version of this technique for years with very good results. I apply 2-3 inches of aged native mulch in the bottom to encourage aeration, drainage and attract earthworms. Next, I always mix in some Microlife organic fertilizer and re-mineralizer into my soil mix which is added to the container on top of the mulch in the bottom. Then I apply a couple inches of Aged Native Mulch to the top of the soil layer and around the plant.

Another study in the Journal HortTechnology (2022) I found to be somewhat humorous. The researchers found that plants grow and establish faster in clay soils when they are amended with compost.

I expect any serious gardener in the last 100 years or so could have told them that.

A new report by the National Institute of Health (2023) found that there was DNA damage to men spraying Roundup and other glyphosate-based herbicides. The DNA damage was in chromosomes that are associated with blood cancers (lymphoma, myeloma, and leukemia) as well as Alzheimer's disease.

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Another study by College of Public Health at George Mason University (2023) found a strong association between insecticide exposure and lower sperm concentrations in men globally.

They did a meta-analysis of 185 studies of 45,000 health men over the last 50 years and found Western men have experienced a 50% reduction in sperm counts over the past 40 years.

Additional research results are described in a book by the researchers called "COUNTDOWN". They found "environmental chemicals may be blurring gender and affecting sexual preference," women were also effected as were babies by these chemicals.

[Count Down: How Our Modern World Is Threatening Sperm Counts, Altering Male and Female Reproductive Development, and Imperiling the Future of the Human Race](#) by Shanna H. Swan and [Stacey Colino](#)

The reasons to only use organic methods in our lawns and gardens, and eat only organic foods continue to increase.

A marketing study in the Journal of Environmental Horticulture (2023), found that people with more environmental knowledge are more likely to purchase Native plants.

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