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Compost Tea and Turf Management: Ask the Superintendent

While university researchers say the jury is out, golf course superintendents say, “Compost tea works and it’s cutting our costs.” Compost tea is a liquid solution which is produced by extracting beneficial bacteria, fungi, protozoa, and nematodes from compost or vermicompost. Brewed over 24 hours under an aerated process, and activated with microbial foods, the resulting aqueous solution is a prolific source of beneficial microbes—with disease suppressive capabilities.

Just ask Kirk Carls, golf course superintendent at Spring Lake Country Club near Lake Michigan. “We’ve been conducting compost tea trials on our fairways and in several flower beds for two years now. Early results are promising: dollar spot (*Sclerotinia homoeocarpa*) is down, flower blooms are up, and our pesticide and fungicide costs have decreased.”



Ecological management for next generation golfers

A longtime composter, Spring Lake produces compost on-site from a blend of food waste, turf clippings, and leaves. Carls then uses the compost to brew batches of compost tea in a *GEOTEA Compost Tea Machine*. “We selected the GEOTEA brewer because it’s extremely well made and its extraction system really does produce a superior quality tea,” says Carls. The resulting brew is tested on-site for microbial count and diversity. To stimulate microbial activity, Carls uses a recipe with humic acid, hydrolyzed fish, seaweed, and molasses. To brew a more fungally dominant batch, he pre-activates the compost with oats. In either case, the compost tea is applied as a turf drench or foliar spray on garden beds.

Spring Lake has been named a Certified Audubon Cooperative Sanctuary and is committed to continually minimizing environmental impacts. “Our goal is to restore the soil’s biology so nature can get back to work in preventing disease,” says Carls.

Compost tea is a highly efficient strategy for building soil biology so Mother Nature can take charge of nutrient cycling and sequestration. Compost tea has been effective in supporting root growth, building water retention, minimizing compaction, and suppressing diseases, such as Brown Patch (*Rhizoctonia solani*), Snow Mold (*Fusarium nivale*), and Dollar spot (*Sclerotinia homoeocarpa*).

Another GEOTEA Compost Tea Machine Project—Compost tea for Spring Lake Country Club is brewed with the 250-gallon GEOTEA Compost Tea Machine. The GEOTEA is also used at The Meadows of Sixmile Creek (Waunakee, WI) and River Hills Golf & Country Club (Little River, SC). For more information on using compost tea as part of your ecological turf management program, email TheCompostTeaLady@gmail.com.

Compost Tea – Say What?

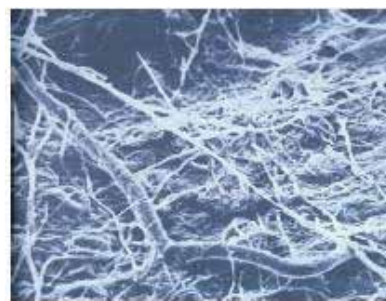
Whether you're managing turf, tulips, tomatillos, or trees, compost tea is increasingly recognized as a valuable practice in building soil fertility and plant health. From university trials to commercial applications, results show that by sufficiently restoring soil biology, Mother Nature does a darn good job cycling nutrients, suppressing disease, and promoting plant growth.

What is compost tea? Compost tea is an aqueous solution produced by extracting beneficial microorganisms from compost or vermicompost. High-quality compost contains soluble nutrients and literally trillions of beneficial bacteria, fungi, protozoa, nematodes, and other organisms that would normally be in the most healthy, natural ecosystem. The compost tea process extracts and enhances these micro-populations so they can be put to immediate use in building soil biology and plant health.

Why compost tea? Conventional pesticides, fungicides, and herbicides destroy many of the beneficial microorganisms that exist naturally to promote plant nutrition, plant growth, and disease suppression. Compost tea, on the other hand, inoculates your soil and foliage with abundant beneficial microorganisms. Put simply, compost and compost tea re-establish soil biology so Mother Nature can do its job in nutrient cycling and sequestration.

What are the benefits of compost tea? Based on university trials (e.g., Cornell University & Ohio State University) and commercial applications in agriculture, horticulture, and turf, compost tea promotes plant growth, suppresses soil-borne diseases and insect pests, and is resulting in reduced chemical inputs and water usage. Specifically, compost tea:

- Protects plant surfaces with beneficial microbes in sufficient numbers to outcompete disease-causing organisms.
- Improves root structure which increases drought and other stress tolerance.
- Improves the water-holding capacity of soil so you can reduce water usage.
- Improves soil structure, which helps transform poor, compacted anaerobic soils into healthy soil.
- Improves soil nutrient retention so plants have ready access to food, when and where they need it.



An electron microscope photo of the surface of a healthy natural leaf. It is covered by beneficial microbes! A micro-fortress to protect the plant!



GEOTEA™ Compost Tea Machine with high-efficiency extraction system

How do you make it? To brew high quality compost tea, you need four components: 1) first and foremost, high quality compost or vermicompost that has been tested to exceed minimum criteria for microbial count and diversity; 2) the correct mix of microbial foods to stimulate growth and reproduction during the brew process; 3) dechlorinated water; 4) a high-performing brewer—the *GEOTEA Compost Tea Machine*—to efficiently extract and aerate, without damaging, the compost's microbial population, so you realize maximum benefit.

How do you apply it? Compost tea is typically applied in one of three ways: 1) soil injection equipment, which allows you to inoculate the rhizosphere of tree roots; 2) turf spray equipment, for drenching large areas of turf and soil; and 3) foliar spray equipment, which allows you to introduce abundant beneficial microbes directly onto the phyllosphere.



Why does the GEOTEA Compost Tea Machine stand out? Put simply—it's designed better so it brews a better quality tea. The patented *Extractor Dome Technology* efficiently dislodges microbes from the compost, maximizing your microbial concentration and diversity. The machine is durable so you can put it to work as hard as you need it to work. And not insignificant, it's easy to clean which minimizes anaerobic organisms. Bottom line: brew after brew, the **GEOTEA Compost Tea Machine** delivers a consistent and high quality product.

What does the research say? For a list of publicly available research on compost tea in your sector, or for questions about putting compost tea to work toward soil and plant health, email TheCompostTeaLady@gmail.com.