

Tea Time



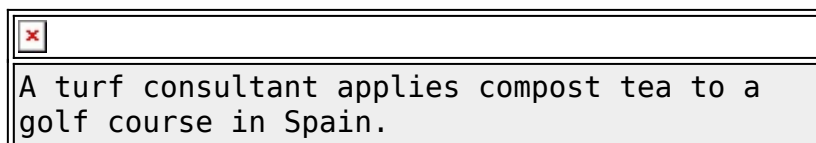
Source: www.TurfMagazine.com

A twist on classic compost

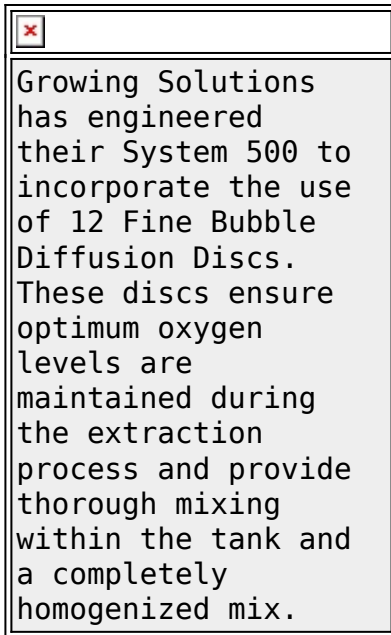
Anyone who works with plants knows that compost is the key to nourishing a poor soil. There are shortcuts, of course, but if you are an organic landscaper, you rely heavily on compost—teeming with organic matter and beneficial microorganisms—to enrich soil and keep plants healthy, which, in turn, helps keep pests and diseases at bay.

Landscapers with customers who request organic landscape management know that while compost does have its advantages, it can be bulky and unwieldy to add to acres of turf.

As homeowners, businesses and municipalities demand more natural methods of landscape management, more landscapers are turning to a practical and economical way to add nutrients to the soil: compost tea.



Compost tea is a liquid extract made from compost. This tea is created by brewing compost in water under controlled temperatures (70 to 75 degrees), adding microbes and making sure the solution has enough oxygen to keep the microbes alive for 24 hours. The finished product is a dark brown liquid, with an earthy, compost-like smell. Compost tea has a relatively short shelf life and needs to be used within four hours after it is removed from the brewer, although keeping it oxygenated with a pump will preserve it longer.



Compost tea in the turf industry

Kevin Bryant, owner of Turf Doctor, Inc. (www.turfdoctorinc.com), with 30 employees and 10,000 residential and commercial clients throughout Birmingham and Huntsville, Ala., has been in business 14 years; for five of those years he has used compost tea as part of the company's biological lawn program, which does not eschew chemicals completely, but tries to keep them to a minimum.

"I've used compost tea solely for disease control. I haven't used a fungicide in five years," said Bryant, who added that compost tea is not meant to replace either pesticides or fertilizers, although organic fertilizers can be added to the tea.

Bryant said that compost tea has also worked well to control weeds. "Wild onions are turfgrass' number one nuisance in our region during the winter," he said. "We used to get 100 to 200 calls a week complaining about wild onions. Now that we are using compost tea, that number is down to 10 a week, which is incredible when you consider that how many customers we service," said Bryant.

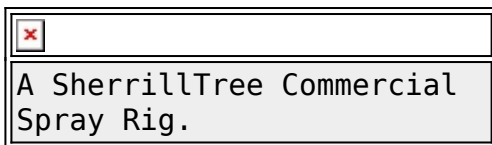
Bryant is quick to point out that compost tea is certainly not a magic bullet, but it can be a significant boost for landscapers who are strictly organic, or those who are transitioning to organic services.

Inexpensive to make and apply

Compost tea can be brewed for about 50 cents to \$1 per gallon, and can save money in reducing chemical costs. Recent surveys of golf courses using compost tea have found that it has reduced inorganic fertilizer and fungicide applications by 50 to 90 percent. Bryant says that he has cut his chemical costs by about 50 percent by using compost tea, a savings of about \$250,000 a year. "I've poured all that money back into upping the nutrients in the soil," he added. He mineralizes and adds expensive custom-blended fertilizers

to his customers' soils. He has to make this investment in order to prove that biological controls could work as well as conventional methods.

"In this region of the country, people don't have the patience to go organic," he said. "What people want are no weeds, greener lawns than their neighbors." Bryant made the business change to biological controls under the radar screen of many of his clients, who he said, could not tell the difference between the biological controls he used and the chemical treatments used previously. He transitioned into using compost teas and other biological methods for a year, and only then alerted customers through a letter telling them about the transition. "Customers loved the fact that we were doing it, just as long as the lawn was greener and more weed-free than their neighbors', and more importantly, there wasn't a price increase."



Brewing your own

Bryant brews his own compost tea in a 500-gallon Earth Tea Brewer. His company brews over 20,000 gallons a year. While he could easily create his own compost to make the tea, he says that he purchases vermicompost from a vendor who supplies him with high-quality compost with thousands of species of microbes, and guarantees against plant, animal or human pathogens in the compost. "I can't create that kind of high-quality compost... with consistent bacteria to fungi ratio that's needed for the tea," said Bryant.

The compost tea brewer consists of a tank that holds water with a filter where the compost is placed. The tank has an aeration device that creates high levels of oxygen within the water. A nutrient source (usually provided by the brewer manufacturer) is also placed in the mix to feed the microorganisms during the 24-hour brewing process. A 100-gallon machine takes about 20 pounds of compost, creating 100 gallons of high-concentrated compost tea. About 10 to 20 gallons are applied per acre, diluted with a water solution when it is sprayed.

The cost for a brewing machine can range from about \$1,500 for a small 25-gallon brewer to \$3,500 for a 100-gallon brewer up to \$8,000 for a 500-gallon brewer (usually used by large vineyards, municipalities, golf courses and those who have added a tea compost service as a side business).

Growing Solutions of Eugene, Ore. (www.growingsolutions.com), which designs, builds and distributes compost brewers, has seen an increased demand brewers in the past several years—the highest increase in sales have been to landscape, turf and shrub maintenance services. "We originally just sold our brewers to small organic farmers, now that makes up only 5 percent of our volume of sales; we're now selling them to serious home gardeners, garden centers and to professionals in the landscape industry," said Michael Alms, president of Growing Solutions, who added that most of the growth in compost tea use has been concentrated in the Seattle, San Francisco and Phoenix

areas.

Alms, and others interviewed for this article, noted that compost tea has been an entirely customer-driven product. “Many of the landscapers contacting us have no background in organic or sustainable turf management; they are getting demands from their customers to go organic.” Alms said that even a national landscape franchise called to include compost tea in its offerings, which would put the compost tea on trucks in 20 states.

How compost teas work

Compost tea works to nourish the plant by feeding the soil and the root system of a plant. Healthier root systems will support the plant during drought, excessive foot traffic (as in golf courses) and when diseases strike. Proponents of compost tea are quick to point out that it is not a replacement for a typical NPK fertilizer, but it supports what is missing in a fertilizing program. “It allows synthetic fertilizers to be more efficient, it takes those nutrients and makes it available to the plant,” said Alms. This is particularly appealing to the turf market because compost tea does not promote top growth, the growth all happens in the rootzone, which is the opposite of fertilizers. “This is why golf courses are becoming very interested in compost tea,” said Alms.

While the scientific research to support the benefits of compost tea is still in the early stages, the anecdotal evidence has been overwhelming. “The city of San Francisco’s golf courses are all managed organically (under a city mandate to reduce pesticides),” said Alms. “Because the courses are managed using compost tea, the golf course managers were able to cut back on fertilizers—and cost—and the turf has not been compromised.”

	
Growing Solution's Compost Tea Brewer System 500.	System 500 airstone manifold, which is used to ensure optimum oxygen levels within the compost filter baskets.

Compost tea can also be applied as a foliar spray for trees, which can absorb the micronutrients through the leaves and bark. In vineyards, for example, compost tea has been used to effectively manage powdery mildew. The tea provides a protective barrier for disease prevention in other woody plants, as well.

Application can be done during the growing season in 14 to 30-day intervals. It can be applied using backpack sprayers, but larger turf companies use tractor-mounted sprayers for more efficient applications. No special equipment is needed, says Tom Duffy, spray equipment manager for SherrillTree (www.sherrilltree.com), an arborist and turf industry supply company that sells spray rigs, including those made for compost tea. However, if a company is doing both conventional and organic, they do need to keep a dedicated organic tank, engine, pump and hose reel, because compost tea is easily contaminated. Spray rigs for compost tea also need to be used with lower

pressure than for traditional applications—at about 10 to 15 gallons per minute—since high pressure will kill the spores in compost tea.

Duffy noted that he, too, has seen a huge increase in the demand for spray rigs dedicated to compost tea, because of the demand among homeowners and commercial properties to go natural. “There are areas where landscapers are getting huge demands from their customers for organic lawn and tree care, and these customers don’t care about the price,” said Duffy.

The author is a freelance writer from Keene, N.H.

Compost Tea Brewing Equipment

Growing Solutions, Inc.

Eugene, Ore.

888-600-9558

info@growingsolutions.com

www.growingsolutions.com

Growing Solutions carries the System25 (25-gallon), System100 (100-gallon) and System500 (500-gallon) models. Each model consists of a tank, pump, aeration device and a compost leachate basket. Growing Solutions also makes a prepackaged microbial food/catalyst source for compost tea brewing (dry mix), and also carries a specialized 27-gallon sprayer to handle the larger particulate matter found in compost teas.

Soil Soup, Inc.

Seattle, Wash.

877-711-7687

soilsoup@soilsoup.com

www.soilsoup.com

The Soil Soup system features a polyethylene mixing tub, a synthetic felt compost bag, the BioBlender aeration pump and the Soil Soup Nutrient Solution containing a microbial food/catalyst source (liquid mix). The regular systems come with 6.5, 12 and 30-gallon tanks, but they also make 175, 500 and 1,050-gallon tanks.

EPM, Inc.—Earth Tea Brewer

Cottage Grove, Ore.

800-779-1709

sales@composttea.com

www.composttea.com

EPM, Inc. carries the Earth Tea Brewer in 100 and 500-gallon tank sizes; each model consists of a tank, a pump and a compost leachate basket, and features two aeration devices for diffusion of oxygen. The company also makes a prepackaged microbial food/catalyst source for compost tea brewing (dry mix). EPM is a sister company to Worm Wigwam, and promotes vermicompost for the production of compost teas.

Other Compost Tea Sites:

Nature’s Needs (organic compost): www.naturesneeds.com

Earth Angel Worm and Garden (vermicompost): www.buyworms.com
Desperate Ag (compost tea consulting): www.desperateAg.net
International Compost Tea Council: www.intlctc.org

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