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Compost Tea Analysis

Client: Keep It Simple
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Report

Sample Received: 4/1/03
Tea recipe: see below
Invoice #: 5795
Grower:

Date Mailed: April 10, 2003

Organism Biomass Data

Sample #	Treatment	Tea Volume (mL)	Active Bacterial Biomass (µg/mL)	Total Bacterial Biomass (µg/mL)	Active Fungal Biomass (µg/mL)	Total Fungal Biomass (µg/mL)	Hyphal Diameter (µm)	Protozoa Numbers /mL Flagellates	Amoebae	Total Ciliates	Total Nematode Numbers (#/mL)
95956	331	1.00	461	11648	206	337	3	13,863	13,863	**3**	**1.17**
			Excellent.	Excellent.	Excellent in 331	Excellent in 331. None in 331 Was 331 inoculated with fungi?	Disease suppressive fungi being extracted in 331.	Good protozoa numbers. Nutrients will be cycled and made available to plants.			Low numbers and diversity.
	Desired Rang	1	10 - 150	150 - 300	2 - 10	2 - 20	(A)	1,000	1,000	20-50	2 - 10

Bold means low

(A) Hyphal diameter of 2.0 indicates mostly actinomycete hyphae, 2.5 indicates community is mainly ascomycete, typical soil fungi for grasslands, diameters of 3.0 or higher indicate community is dominated by highly beneficial fungi, a Basidiomycete community.

Temperature of brewing, type of water (chlorine will kill organisms), type of compost and type of brewer used must be considered in determining the set of organisms in the tea. See the Compost Tea Manual for complete information. Tea assessment should be accompanied by leaf organism assessment to see if there were effects of spraying or diluting in the sprayer. Pesticide use, fertilizer use, tillage, irrigation, etc., affect soil and foliar effectiveness. One report is sent to the mailing address on the submission form.

12 hour brew in KIS machine from 6oz compost & 4oz food, reached 70F. Teas smelled pleasant & earthy.

Organism Ratios

Sample #	Treatment	Total Fungal to Total Bacterial Biomass	Active to Total Fungal Biomass	Active to Total Bacterial Biomass	Active Fungal to Active Bacterial Biomass	Plant Available N Supply from Predators (lbs/ac)	Root-Feeding Nematode Presence
95956	331	0.029	0.61	0.040	0.45	300+	None detected. NR
		Strongly bacterial tea but excellent fungi as well in A	Good fungal growth in tea: many germinated spores observed. Good initial extraction, too: large mats of hyphae seen.	OK, high bacterial biomass achieved.	Good balance for most plants.	OK nutrient cycling.	
Desired Range		(1)	(2)	(2)	(3)	(4)	(5)

(1) For example, for soil drenches, with the following plants, Grass:0.5-1.5; Berries, Shrubs, grape: 2-5; Deciduous Trees: 5-10; Conifer: 10-100. For foliar sprays, ratio should be 0.01 to 0.05 because foliar sprays are typically best strongly bacterial-dominated.

(2) Teas in general have high ratios of active to total fungi, since what fungi are present are actively growing, but with low total biomass. In general, fungi don't like to grow suspended in liquid unless a solid surface is present. Bacterial activity must be high, above 25%.

(3) Teas generally have lower fungal biomass than bacteria, so this value is typically less than 10%. It is desirable to make this ratio as high as possible.

(4) Based on release of N from protozoan and nematode consumption of bacteria and fungi. Often protozoa and nematodes compete for food resources. When one is high, the other may be low. Also, if predator numbers are high, the prey may have low numbers

(5) Identification to genus. For species identification of root-feeders, send samples to local parasitic nematology lab.

Fungal foods are humic acids, woody mulch, fungal compost, fungal compost tea.