



## Soil Foodweb NY

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## Compost Tea Analysis

Client: Paul Sachs

North Country Organics

PO Box 573

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Sample Received: 7/3/03

Date Mailed:

Tea recipe:

Invoice #:

Grower:

### Organism Biomass Data

| Sample #      | Treatment | Tea Volume (mL) | Active Bacterial Biomass | Total Bacterial Biomass | Active Fungal Biomass | Total Fungal Biomass | Hyphal Diameter (µm)                             | Protozoa Numbers /mL |         |          | Total Nematode Numbers (#/mL) |
|---------------|-----------|-----------------|--------------------------|-------------------------|-----------------------|----------------------|--|----------------------|---------|----------|-------------------------------|
|               |           |                 | (µg/mL)                  | (µg/mL)                 | (µg/mL)               | (µg/mL)              |  | Flagellates          | Amoebae | Ciliates |                               |
| 1666          | Tea       | 1.00            | 106                      | 4608                    | 15.7                  | 42.6                 | 3  | NR                   | NR      | NR       | NR                            |
|               |           |                 | Very good                | Excellent               | Excellent!            | Excellent!           | Highly beneficial community of fungi are present |                      |         |          |                               |
| Desired Range |           | 1               | 10 - 150                 | 150 - 300               | 2 - 10                | 2 - 20               | (A)  | 1,000                | 1,000   | 20-50    | 2 - 10                        |

(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.

50 gal bobolator, NCO compost, 16 oz fungi booster, 8 oz bacteria booster, 32 oz mineral booster, 22 hr brew cycle

**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 |
|---------------|-----------|---|--|--|---|--|--------------------------------|
| 1666          | Tea       | 0.01  | 0.37   | 0.02                                       | 0.15  | NR   | NR                             |
|               |           | The tea is bacterial, and has enough fungal biomass to be good for turf apps or tree and shrub apps | Very good amount of fungi present are active | Good amount of bacteria present are active | Excellent ratio of activity for foliar or soil applications |  |                                |
| 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.