THE PLANT KINGDOM GREENHOUSE & NURSERY, INC.
620 FIDELER ROAD
FAIRBANKS, ALASKA 99712
907-45-PLANT (907-457-5268)
OPEN 10AM-7PM EVERYDAY OF THE SUMMER!

A NEW BREW FOR FAIRBANKS!

Compost tea can be defined as a liquid extract of compost containing any nutrients, microorganisms, and organic materials that are either soluble or capable of being held in suspension. There has been increasing interest in the last few years in the use of compost teas in organic and conventional farming operations, vineyards, orchards, nurseries, landscapes, and home gardens.

There are many different compost sources and methods of brewing compost tea. Sources of information range from anecdotal accounts to controlled research. Research is currently ongoing both in the field and in laboratories. The major benefits can be categorized as follows:

1. Imporved nutrient cycling due to the increase in population density and diversity of soil microbes which convert nutrients into forms available to plants.
2. Faster decomposition of plant material because of the increase in soil microorganisms.
3. Soil remeditation where excessive and long-standing use of chemical fertilizers and pesticides have lowered the microbial component of the soil.
4. Disease suppression. The beneficial microorganisms in compost tea accomplish this in several ways. The metabolic by-products of the beneficial microbes inclue antibiotics and enzymes which are harmful to pathogens. Beneficial microbes compete with pathogens for food and space. Benficial microbes may prey on and/or parasitize pathogens. A current area of interest involves the apparent ability of some beneficial microbes to stimulate a plant's natural immune systems including such structural defenses as actually walling off invading pathogens.

The end result is that comost tea has both soil fertility and plant disease resistance benefits which interact synergistically to improve plant growth and production.

Compost tea may be brewed with or without aeration during the fermentation process. The most common method of brewing it in the U.S. today includes aeration and often also invoves the incoporation of nutrients to favor desired microbial populations. A general guideline is that plants prefer a soil that is either fungally dominated or bacterially dominated. Vegetables and annual garden soils are usually on the bacterial end, lawn and perennial garden soils may prefer a balance, and forest soils are more fungal. The soil type can influence the point on the fungus-bacteria spectrum that a plant prefers.

Our compost source for our tea is Alaska Humus. This is dug in Anchorage and is a natural composted material found in shallow wetlands and commonly give the generic label “peat”. An advantage of the local compost source is that it is rich in microbes adapted to northern soils. The Alaska Humus suppliers also market two nutrient catalysts. One encourages more fungal growth; the other encourages bacterial growth. Altough the nutrient catalysts determine the dominance of fungi or bacteria in the tea, periodic laboratory analysis of the tea allows quantification of the microbial content.

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The aerobic microorganisms in compost tea are dependent on oxygen so aerated compost tea should be used witin 18-24 hours and preferable within 6-8 hours after being removed from the brewer. It can be applied at a maximum rate of 5-10 gallons of concentrate per acre but is often diluted at a ratio of ten to one. Thus one gallon of tea yields ten gallons of foliar spray. When diluted, the dilution water must not contain chlorine. We carry a de-chlorinating product if you have chlorinated water. Compost tea may be sprayed on the foliage of plants to suppress foliar diseases such as powery mildew or may be used as a soil drench to enhance the soill microbe population and ultimately soil fertility. It can be applied for home use with a watering can, hand help sprayer, or even a sump pump submerged in a garbage can filled with tea. It can be applied as often as once a week. To minimize UV damage to microbes, it is recommended that foliar spraying be done in the early morning.

Optimal conditions for soil microbes are soils that are not being fertilized with high salt chemical fertilizers. Alaska Garden and Pet Supply in Anchorage has formulated an organic slow release fertilizer whose primary ingredients are organic, namely feather meal, steamed bone meal, potassium sulfate, and gypsum. The analysis of this formulation is 9-3-4, and it is the fertilizer of choice for lawns or gardens in which you are trying to build up the soil microbe population.