



Assay Descriptions

Total Bacteria: (TB)

The optimal bacterial biomass in the soil varies according to crop, climate and season; if it is not within this range, bacterial inocula or foods may be required.

Total Fungi: (TF)

As with bacteria, the optimal range varies according to crop, climate and season, and may require amendment if outside this range.

Active Bacteria: (AB)

Only that percentage of the bacteria which are currently metabolizing organic compounds are directly nourishing the plants; if this portion is too low, bacterial foods may be required to stimulate the dormant population.

Active Fungi: (AF)

As with bacteria, only those fungi which are currently growing and metabolizing are directly nourishing the plants, so the dormant part of the population may need feeding if the activity is low.

Protozoa: (Prots)

These large single-celled organisms feed upon bacteria and excrete nitrogen in the plant available form of ammonium, so are essential to healthy plant growth. One morphological group, the Ciliates, feed preferentially on anaerobic bacteria, so a high ciliate population may indicate anaerobic conditions which need to be addressed.

Nematodes: (Nem)

A very large group of very small worms, these are everywhere on earth. Of the soil-dwelling species, some cause significant crop damage, some prey on other nematodes, and most graze on bacteria and fungi, cycling nitrogen in plant available form. We count the number in a given weight of soil, and identify them to genus and function.

Mycorrhizal Colonization: (VAM)

Over 90% of all plants of Earth form symbiotic relationships with mycorrhizal fungi. These fungi increase the nutrient uptake capacity of the plant and protect it against pathogens. We determine what percentage of your roots are colonized, and also look for signs of disease and other damage.

Qualitative Assessment: (QA)

This fast evaluation does not provide actual counts or biomasses of organisms, but based on a visual scan of populations tells you whether your bacteria, fungi, protozoa and nematodes are present in excellent, good, adequate or poor numbers.

E. coli

This common intestinal bacterium has some disease-causing strains, and is an indicator of the presence of other harmful bacteria. We evaluate the number of Colony Forming Units per gram of compost or millilitre of compost tea, to let you know if levels are within or above accepted limits for agricultural fertilizers.

Leaf Organism:

This test determines the effective coverage of organisms on the leaf surface, very useful for before and after comparisons of foliar applications of Compost Tea. Adequate coverage of leaf surfaces helps to reduce disease and pests.

Information on optional chemistry testing available for a sample:

Soil samples

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| RA-PACK-01 | AGRICULTURAL REAMS and ALBRECHT TESTING including MICRO NUTRIENTS - Includes - pH & EC (1:5 water); available Ca, Mg, K, NH ₄ , NO ₃ , PO ₄ and S; organic matter' - exchangeable Na, K, Ca, Mg, H and Al; CEC; '- soluble, Bray I and II (available and extractable) P ; + Colwell P - micronutrients (Zn, Mn, Fe, Cu, B, and Si) - TC/TN; Colour and Texture |
| RA-PACK-02 | TOTALS - Acid digestable nutrients (P, Ca, Mg, K, Na, S, Cu, Zn, Mn, Fe, B, Si, Co, Mo, Se) + AGRICULTURAL REAMS and ALBRECHT TESTING (RA-PACK-01) |
| RA-PACK-06 | BASIC AGRICULTURAL SOIL ANALYSIS and TOTALS Includes Total Nitrogen, Total Carbon; Sodium, Potassium, Calcium, Magnesium, Phosphorus, Sulfate, Silicon, Cobalt, Molybdenum, Zinc, Manganese, Iron, Copper, Boron. Used to assess store of nutrients in the soil. |

Compost samples

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| CA-PACK-01 | COMPOST TOTALS ANALYSIS – Includes Moisture, pH, EC; Total Nitrogen, Total Carbon; Sodium, Potassium, Calcium, Magnesium, Phosphorus, Sulfur, Silicon, Cobalt, Molybdenum, Zinc, Manganese, Iron, Copper and Boron. |
| CA-OPT-03 | AVAILABLE NUTRIENTS - Includes Available Calcium, Magnesium, Potassium, Ammonia, Nitrate, Phosphate, Sulfur; Matter; Exchangable Sodium, Potassium, Calcium, Magnesium, Hydrogen, Aluminium, Cation Exchange Capacity); Bray I and II Phosphorus; Available and Extractable Phosphorus; Colwell Phosphorus; Available Micronutrients Zinc, Manganese, Iron, Copper, Boron, Silicon. |

Compost tea samples

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| FA-PACK-03 | LIQUID FERTILISER ANALYSIS (Results on 'as is' basis) Includes pH, EC, Total Dissolved Salts (TDS) (by calc.), Specific Gravity; Total Nitrogen, Total Phosphorus; Sodium, Potassium, Calcium, Magnesium, Sulfur, Sodium Absorption Ratio (SAR); Silicon, Cobalt, Molybdenum, Zinc, Manganese, Iron, Copper and Boron. |
| FA-OPT-03 | NUTRIENT DETERMINATION Includes Nitrate, Ammonia and Phosphate by water extract. |