Eco-Tea™
LIQUID BIOLOGICAL AMENDMENT

HARNESSING THE POWER OF BIOLOGY

SUSTAINABLE LANDSCAPE MANAGEMENT PRACTICES FOR GOLF COURSES, FARMERS AND GARDEN CENTRES
Arrakis Bioreactor

Introducing the Arrakis Bioreactor. The Arrakis Bioreactor allows large commercial farmers, for the first time, to build high quality living microbial extracts on the farm in large enough volumes to keep up with any seeding, cultivating or spraying equipment. The Arrakis is user friendly and is the first of its kind.

Self-cleaning filtration system

Fully enclosed stainless steel, pressurized rotating drum assembly provides 300μm/50mesh screened Eco-Tea™ output that will not clog crop spraying equipment.

Filter drum assembly and plumbing system all located on pull out drawer for unobstructed servicing.

User friendly wheeled waist collection dump cart fits into frame

Can hold up to 5 cycles before reaching max capacity and needing to be emptied.

Fork lift pockets for easy lifting/dumping of waste residue.

Fast and efficient Pneumatic material conveying system

Innovative pneumatic conveying system allows the Eco-Tea™ inoculum and microbial food material to be easily conveyed into the top of the system.

High strength tubular steel frame which is forklift friendly

The Arrakis Bioreactor 11ft tall and occupies a floor area of 6ft x 6ft.

The Arrakis can extract and karate Eco-Tea™ and operate a 1000 gallon nurse tank all at the same time.

Pneumatic 12” Knife/Gate valve.

Power Requirements

120/240V single phase at 40 amp.

Ultra quiet Air compressor (70db) providing

Consistent aeration

Filter drum screen cleaning

Pneumatic knife valve actuation.

High throughput

40 GPM 50 mesh/300 μm Eco-Tea™ output.

Fast Cycle Time

950 gal. Eco-Tea™ output in a 90 minute cycle.

Soil Ecology and Productivity

There is an immense diversity of microbes in soil. Microbes in this context consist of bacteria, fungi, algae, protozoa, nematodes and other micro-invertebrates. Microbes help to create a balanced and robust environment for plant growth (productive soil). Productive soils require less nutrient and pesticide addition and most importantly less water.

Bacteria: Tens of thousands of species of bacteria inhabit just one gram of productive soil. Bacteria are viral to the productivity of healthy soils. They aid in nutrient cycling, soil building, disease suppression, food sources for other microbes and degrading organic residues.

Fungi: Perhaps the least understood and most under appreciated members of the soil community. There are thousands of species in one gram of productive soils. Fungi are extremely important in binding and releasing P-complexes and Ca, creating stable and aerated soil aggregates. They are the “superhighways” of the soil.

Protozoa: The mineralizers. Protozoa consume extremely large numbers of bacteria releasing the vital nutrients contained within and excreting them.

Nematodes: The most numerous animal invertebrate on the planet and perhaps the most poorly understood. Most nematodes are beneficial – feeding on bacteria, fungi and other soil microbes. Some are pathogenic – feeding on plant roots (hence the bad reputation).

Macro-arthropods: Shredders and grinders mobilize organic matter into forms more usable by other microbes. Macro-arthropods are extremely important in nutrient cycling and disease prevention.

“Root growth is unparalleled. We have never seen roots this healthy, white and large”

– Riverway Golf Course, City of Burnaby, British Columbia
Eco-Tea™ Product Details

Eco-Tea™ is an actively aerated casting/compost tea with the addition of an organic blend of humic, fulvic, long-chain amino acids—Atlantic kelp extract, simple and complex carbohydrates and enzymes. Further, it injects soluble macro and micronutrients in chelated (plant-available) form into plant root zones. The real benefit is the biology within Eco-Tea™. The biological community will improve soil structure, root function/biomass and the release and uptake of N,P,K + micronutrients.

Eco-Tea™ is specially brewed to inoculate soil with an active community of beneficial microbes. Its unique combination of night-crawler castings/compost, humic acid, bio-stimulants and micronutrients provide a vast array of benefits. The humic acid chelates macronutrients and the fulvic acid chelates micronutrients effectively tying them up in the soil in plant available forms. Atlantic kelp provides a food source for important fungi, while improving the functions of most plant hormones.

Eco-Tea™ contains various sources of humified composts (earthworm castings and plant-based composts), which provide a large diversity of plant beneficial microbes, OEE Inc. manufactures all of the composts, microbial foods and catalysts that are utilized in Eco-Tea™. OEE Inc.’s proprietary processes and continued research into soil ecology have helped in increasing our knowledge of the microbes in Eco-Tea™.

The plant beneficial biology within Eco-Tea™ will help to decrease stress from pathogenic bacteria, fungi and some insects—while increasing the effectiveness of fertilizers. This helps plants focus less on producing energy expensive shock proteins and more on biomass production.

Eco-Tea™ is designed to allow customers to integrate it into an existing management program. Our customers have been able to reduce pesticide and fertilizer applications when using Eco-Tea™ properly. Eco-Tea™ is one part of a regular fertility and integrated pest management program.

Examples of some of the plant beneficial microbial isolates from Eco-Tea™:

- Bacillus - aryhlti, punilus, subilis, tequenis lichonomiformis
- Streptomyces - atrovs, grescus, homonensis parvulus
- Pseudomonas - florescens, putida, fulva, baetica
- Trichoderma - harzianum, citrinoviride.

Some of the benefits of regular Eco-Tea™ applications include:

- Increase in root function and biomass.
- Increase in availability of natural phosphates and iron.
- Inoculates plant roots with millions of plant beneficial microbes with just a couple of milliliters.
- Increase in plant vigor and chlorophyll production.
- Improves stress tolerance (transplant, drought, cold, physical and pathogens).
**Essential Organics™ Worm Castings Product Details**

Essential Organics™ premium worm castings are derived from the healthiest and happiest worms. We go to great lengths to ensure that no contaminants have entered our feedstock or bedding materials. Essential Organics™ premium worm castings contain a great diversity of plant-beneficial biology that help to cycle nutrients, consume pathogens and create stable soil aggregates—which help to generate the healthiest plants.

Essential Organics™ premium worm castings are non-toxic, completely safe, 100% organic odorless manure of the earthworm. They will not burn when applied directly to plants. Can be used indoors as well as outdoors. Worm castings enrich and condition the soil helping plants grow to their full potential. When mixed into soil it acts as a slow release fertilizer, soil builder and inoculum for beneficial microbes, which has an array of benefits.

**Organics Resource Management Facility**

Overton Environmental is a world leader in organics resource management, turning agricultural and food processing wastes into climate-changing compost-based products.

Our proprietary Bio-Eco composting process and recipe creates the highest quality, weed seed free, high-nutrient, humus compost (Lawn and Garden Accelerator).

Once applied to the landscape our Lawn and Garden Accelerator increases soil productivity and helps to reverse climate change.

Contact us for more information.