SPECIFICATION SHEET

E-MICROZYME

Organic biofertilizer with biological nitrogen fixation (BNF)

Biofertilizer soil inoculant and plant nutrition regulator
(Microbial-based nutrient enhancer)

Liquid concentrate Registered product

OMRI listed: myd-16241

E-MICROZYME Biofertilizer
Liquid concentrate: Microbial-based nutrient

Active ingredients:

Primary microorganisms: Azotobacter vinelandii > 300,000 cfu/mL, Clostridium pasteurianum > 300,000 cfu/mL *Nitrosomonas, Nitrobacter, Nitrococcus, Pseudomonas, Micrococcus, Lactobacter, Thermoactinomyces, Actinomyces, Lactobacillus, Bacillus subtilis, Bacillus thuringiensis, Bacillus megaterium*, cytokinins (extracted from algae).

Inert ingredients as carrier:

Bacterial cell and enzyme immobilizing solution, proprietary formula of organic extracts containing polypeptides, polysaccharides, carbohydrates and purified water. carbohydrates as a source and purified water.

General Information:

E-MICROZYME is a 100% natural and ecologically safe bacterialenzymatic complex concentrate with numerous species of soil microorganisms that help increase soil fertility and availability of vital nutrients to all types of plants and crops. The microorganisms in the E-MICROZYME concentrate are dormant with a long shelf-life due to the stabilizing solution. When the concentrate is diluted in water, the microorganisms come out of dormancy, become active, and begin to multiply, making them ready to be applied to the soil in high cfu/mL counts, performing the following functions in the soil:

- Fixes atmospheric nitrogen non-symbiotically in aerobic and anaerobic conditions.
- Supports the full nitrogen cycle..
- Frees phosphorus, potassium and trace elements so that they are available for uptake.
- Increases cation exchange capacity between soil and plant.
- Restores soil microbiological balance.
- Produces biological substances for plant growth and pathogen control.
- Promotes balanced soil-plant nutrition and thereby greater gene expression for production and quality.
- Improves soil structure and fertility.
- Promotes environmental care.

PRECAUTIONS: KEEP OUT OF REACH OF CHILDREN. Do not ingest. For use on soil and plants only. Wash hands after using product. If swallowed: Drink plenty of water. If in eyes: Hold eyes open and rinse thoroughly and gently with water. If on skin or clothing: Rinse with water and soap.

METHOD OF ACTION: When applied to the soil, the microorganisms in E-MICROZYME initiate a colonization process, primarily in the root zone of plants. The colonization process will last for 3 to 5 weeks (depending on application dose, and soil type, fertility, humidity and temperature). When the microorganisms have established themselves, the soil will contain an abundant variety of aerobic, anaerobic and facultative microorganisms common to fertile soils. Through this colonization process, the soil will recover the live and active part of its organic matter and will have better physical and chemical characteristics. The micro-organisms in E-MICROZYME will work directly and indirectly in the fixation and mineralization of atmospheric nitrogen, and the fixation, mineralization and uptake of all fertilizers and nutrients, be they organic, mineral or synthetic. The rate at which all of these processes are performed will be greater and more efficient, and for a longer duration, because the catalytic activity of the enzymes is more efficient and constant when immobilized by the product formula.

DIRECTIONS FOR USE:

1. Mixing instructions:

Dilution: Shake well before use. Dilute 1 part of E-MICROZYME CONCENTRATE in 100 parts of clean non-chlorinated water. Use non-metallic tanks. **Water quality:** The quality of the water used for the dilution is important for a good activation. Clean non-chlorinated water with a pH range of 6.5 to 7.5 and an electrical conductivity above 400 µS/cm will give us an ideal mixing medium. If the water is chlorinated, let the water stand for 24 hours prior to diluting. To adjust pH and electrical conductivity of water use any of the following: a) 0.5 liter of molasses or 1kg of sugar; b) 0.5kg of urea or triple 17; c) 0.5 liter of fulvic or humic acid; d) any other source of N-carbon.

Activation: Mix thoroughly. Cover tank and expose to warm ambient temperature (30-45˚C) for 3 days. If the ambient temperature is below 30˚C, allow the E-MICROZYME MIXTURE to stand for 1 extra day of acti-

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vation for each 5˚C drop below 30˚C. The mixture will turn a dark brown color and develop a supernatant layer on its surface when fully activated. Once fully activated, it can be applied immediately or anytime within the following 2 weeks.

2. Application method: Initial application (at planting): apply 2 to 3 weeks before planting, during planting or up to 4 weeks after planting in the case of long-cycle crops. **During vegetative and blossoming/fruiting stages:** make periodic applications depending on crop type, soil conditions and production objectives. Apply to the soil over the root zone, during irrigation through any irrigation system, drip, micro-sprinkler, sprinkler, center or lateral pivot, furrow and flood. The E-MICROZYME MIXTURE can also be sprayed directly on the soil surface immediately preceding irrigation. **Seed inoculation:** the crop seeds, such as corn and wheat, can also be directly inoculated with the product prior to planting. Fully cover and soak seeds in E-MICROZYME CONCENTRATE for 15 minutes. Strain seeds and drain concentrate and allow seeds to dry prior to sowing into the soil with seed applicator. The drained product concentrate can be re-used in the soil.

3. Application dose: E-MICROZYME can be applied to any crop type. The dose will depend on the crop type and phenological cycle.
For annual and perennial crops
apply E-MICROZYME during the pre-plant period or at planting, and monthly or bi-monthly applications thereafter.
For vegetable or high-value crops:
a) apply E-MICROZYME during the pre-plant period or at time of planting; b) Apply an additional E-MICROZYME 6 to 8 weeks after the first application; c) In special situations of highyielding and high-value crops or in soils with nematode problems it is recommended to make bi-weekly or monthly applications depending on the particular circumstances.

4. Compatibility: E-MICROZYME is compatible with almost any chemical fertilizer and agrichemical. Do not apply together with agrichemicals containing bactericide ingredients such as formaldehyde, heavy metals or high concentrations of sulfur, given that these reduce the activity of E-MICROZYME. Apply E-MICROZYME 2 to 3 weeks apart from the application of these substances.
5.Recommended dosage according to crop: See table on the back of this sheet.
STORAGE AND HANDLING: Do not store at temperatures below 2˚C or above 48˚C. Do not expose to direct sunlight during storage. In case of leakage, wash with water and soap. If product disposal is necessary, dispose through ordinary drain in accordance with local environmental laws and regulations.
WARRANTY: Because the activation and application of E-MICROZYME is out of the manufacturer´s control, only the quality of the original product is guaranteed. For guidance on activation and application contact your local dealer. Read warranty and liabilities section on label.

Table: Dosage according to crop

CROP	DOSAGE DURING GROWING CYCLE LITERS/HA	SUGGESTED DOSAGE DURING GROWING CYCLE LITERS/HA
Chili peppers, eggplant, tomato and potato	4-8	Start with 2-3 liters and 1 additional liter every 15-20 days during full development of the crop until fruit setting and filling.During harvest 1 liter every 15-20 days according to program.
Cucumber, melon, pumpkin, watermelon and zucchini	5-8	Start with 2-3 liters and 1 additional liter every 15-20 days during full development, flowering, fruit set and filling. During harvest 1 liter every 15-20 days according to program.
Blackberry, blueberry, raspberry and strawberry	6-10	Start with 2-3 liters and 2 additional liters every 12-15 days during full development, flowering, mooring and fruit set. During harvest 1 liter every 15-20 days according to program.
Brussel sprouts, cauliflower, lettuce, radish and turnip	4-6	Start with 2-3 liters and an 1 additional liter every 15-20 days until fruit formation, according to program.
Apple, grape, olive, pecan and other fruit trees	6-8	Start with 2-3 liters and an 1 additional liter every 15-20 days during full development, flowering, mooring and fruit set. During harvest 1 liter every 15-20 days according to program.
Short-cycle vegetables	3-5	Start with 2 liters during sowing or transplanting and continue with 1 liter every 15-20 days during flowering, mooring, setting and fruit filling.
For soil, grain and forage health (corn, wheat, sorghum, alfalfa, etc.)	1-3	For seed inoculation 1-2 liters according to density/Ha. For pre-sowing or sowing 2 liters and 1 additional liter 30- 45 days after sowing (DDP). For fodder apply 1-2 liters initially and 1 liter after each monthly cut.

NOTE: In the case of soil health and high genetic performance of indeterminate crops, start with a minimum dose of 3 liters/Ha to colonize, then apply 2 liters/Ha after 15 days and then continue with intensive program of 1-2 liters/Ha weekly together with scheduled fertilization according to crop needs.