



MicrobeBio[®]
Nature Activator[™]



OUTLOOK:

Soil health is a growing concern in cannabis and agriculture industry. Years of damage done by erosion, chemical pesticides and fertilizers have left the soil stripped of vital nutrients and microbes. It is estimated that by the year 2050 we will need to produce twice the amount of food in the same acreage to feed the world. In order to accomplish this there will need to be some serious renovation.

That's where Microbebio[®] Nature Activator comes in. Microbebio[®] Nature Activator is a liquid or granular spray made from a beneficial combination of microorganisms and trace elements that is fed high levels of organic nutrient blends. This provides a high concentrate product in the form of a liquid spray making it very cost effective and easy to use. Farmers are becoming more aware of the damaging effects of the overuse of chemical fertilizers, insecticides and herbicides. Half of every metric ton of nutrients or fertilizer applied to fields never makes it to the plants and instead ends up evaporating or being washed into local watercourses which leads to an increase in chemical residues in plants and foods. Microbebio[®] Nature Activator is the natural answer for growers and farmers wanting to reduce chemical inputs into soils while still maintain competitively high yields



MISSION:

The Microbebio[®] Nature Activator maintained biodiversity would work cooperatively with the current traditional nutrients by enhancing their productiveness. Let our customers' expenditure in soil amendments and nutrients authentically plant.

- Improve the healthy roots – biomass
- Increasing yield up to 40%
- Remediate Soil
- Balance Brix and pH
- Balance Minerals
- Disease Suppression
- Reduce Erosion, Runoff, and Heavy Metals
- Increase the “Terpene levels” up to 300%



WHY NATURE ACTIVATOR:

- The astronomical majority of inoculant now rely exclusively on microbe strains discovered in the 1800s such as Trichoderma and Basillus Subtilis. In the early Egyptian times, mycorrhizae have been utilized. The advancement of bio products has been in a holding pattern for many years due to the prevent efficacy of synthetic or chemical counterparts. More than 50 of the beneficial strains found in Nature Activator are proprietary and incipient revelations in the discipline of microbiology. The competency to accumulate all of these strains in a stable form is a scientific breakthrough and unlike any other product ever utilized in the agriculture market.
- The coalescence of these incipiently discovered strains engender enzymes, acids, hormones and chemicals, unique to our product and not found in any other product in the world. The premise for the development of Nature Activator was under the conception that it is not what a microbe can achieve on its own, but what microbes engender in coalescence that makes them efficacious. The enzymes and chemicals our organisms engender are what augmented terpene levels and give Nature Activator true efficacy and industry staying puissance.



INTRODUCTION:

- MicrobeBio[®] Nature Activator is formulated a combination of spectrum minerals, trace elements, and more than 50 beneficial microorganisms that is taken from cannabis plant roots in nature environment and desert. When the microbes are applied on soil, all beneficial trains regenerate on the cannabis plant roots where all nutrients and water are up-taken to grow the cannabis plants.
- The proprietary right of the strongest strains produces chemicals, acids, and enzymes unique to Microbebio[®] Nature Activator and not found in any product in the world. The possessive enzymes have been proven to increase terpene levels by 300%.
- *Terpenes are a large and diverse class of diverse class of organic compounds, produced by a variety of plants, particularly conifers, though also by some insects such as termites or swallowtail butterflies, which emit terpenes from their osmeteria. They often have a strong odor and may protect the plants that produce them by deterring herbivores and by attracting predators and parasites of herbivores. The difference between terpenes and terpenoids is that terpenes are hydrocarbons, whereas terpenoids contain additional functional groups. (source: www.wikipedia.org)*

TRACE ELEMENTS:

ELEMENTS	AT WEIGHT	PPM	ELEMENTS	AT WEIGHT	PPM
Hydrogen H ₂ O	1.00797	100.000	Carbon C	12,011	28.0
Oxygen H ₂ O	15.9994	883,000	Nitrogen ion	14.007	15.5
Sodium NaCl	22.9898	10,800	Fluorine F	18.998	13
Chlorine NaCl	35.453	19,400	Neon Ne	20.183	0.00012
Magnesium Mg	24.312	1,290	Aluminum Al	26.982	0.001
Sulfur S	32.064	904	Silicon Si	28.086	2.9
Potassium K	39.102	392	Phosphorus P	30.9248	0.088
Calcium Ca	10.08	411	Argon Ar	39.948	0.450
Bromine Br	79.909	67.3	Scandium Sc	44.956	<0.000004
Helium He	4.0026	0.0000072	Titanium Ti	47.90	0.001
Lithium Li	6.939	0.170	Vanadium V	50.942	0.0019
Beryllium Be	9.0133	0.0000006	Chromium Cr	51.996	0.0002
Boron B	10.811	4.450	Manganese Mn	54.847	0.0004

TRACE ELEMENTS:

ELEMENTS	AT WEIGHT	PPM	ELEMENTS	AT WEIGHT	PPM
Ferrum (Iron) Fe	55.847	0.0034	Zirconium Zr	91.22	0.000026
Cobalt Co	55.847	0.00039	Niobium Nb	92.906	0.000015
Nickle Ni	58.71	0.0066	Molybdenum Mo	0.09594	0.01
Copper Cu	63.54	0.0009	Ruthenium Ru	101.07	0.00000007
Zinc Zn	65.37	0.005	Rhodium Rh	102.905	-
Gallium Ga	69.72	0.00003	Palladium Pd	106.4	-
Germanium Ge	72.59	0.00006	Argentum Ag	108.870	0.00028
Arsenic As	74.922	0.0026	Cadmium Cd	112.4	0.00011
Selenium Se	78.96	0.0009	Indium In	114.82	-
Krypton Kr	83.80	0.00021	Stannum Sn	118.69	0.00081
Rubidium Rb	85.47	0.120	Antimony Sb	121.75	0.00033
Strontium Sr	87.62	8.1	Tellurium Te	127.6	-
Yttrium Y	88.905	0.000013	Iodine I	166.904	0.064

TRACE ELEMENTS:

ELEMENTS	AT WEIGHT	PPM	ELEMENTS	AT WEIGHT	PPM
Xenon Xe	131.30	0.000047	Erbium Er	167.26	0.00000087
Cesium Cs	132.905	0.0003	Thulium Tm	168.934	0.00000017
Barium Ba	137.34	0.021	Ytterbium Yb	173.04	0.00000082
Lanthanum La	138.91	0.0000029	Lutetium Lu	174.97	0.00000015
Cerium Ce	140.12	0.0000012	Hafnium Hf	178.49	<0.000008
Praseodymium Pr	140.90	0.00000064	Tantalum Ta	180.948	<0.0000025
Neodymium Nd	144.24	0.0000028	Tungsten W	183.85	0.0000084
Samarium Sm	150.35	0.00000045	Rhenium Re	186.2	-
Europium Eu	151.96	0.0000013	Iridium Ir	192.2	-
Gadolinium Gd	157.25	0.0000007	Platinum Pt	195.09	-
Terbium Tb	158.924	0.00000014	Aurum Au	196.967	0.000011
Dysprosium Dy	162.50	0.00000091	Mercury Hg	200.59	0.00015
Holmium Ho	164.930	0.00000022	Thallium Tl	204.37	-

TRACE ELEMENTS:

ELEMENTS	AT WEIGHT	PPM	ELEMENTS	AT WEIGHT	PPM
Lead Pb	207.19	0.00003	Bismuth Bi	208.980	0.00002
Thorium Th	232.04	0.0000004	Uranium U	238.03	0.0033
Plutonium Pu	(244)	-			

ppm = parts per million – mg/liter = 0.001 g/kg



KNOWLEDGE OF CANNABIS:

In 2017, cannabis legalization is speculated to widely spreading not only across The United States of America but also in many countries around the world.

There are 3 main categories of Cannabis:

- Indica
- Sativa
- Hybrid

INDICA

SATIVA

HYBRID

Primary Effects:

- Relaxing
- Full-body effects

Primary Effects:

- Uplifting
- Cerebral
- Good for creativity

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Medicinal Usage/Effects:

- Insomnia
- Pain Relief

Medicinal Usage/Effects:

- Depression
- ADD
- Fatigue

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Physical Growing:

- Shorter and bushier
- Born in the mountains
- Higher resin production
- Shorter Flowering time
- Good for indoor nursery

Physical Growing:

- Taller plants
- Prefer equatorial climates
- Longer time to grow
- Good for outdoor nursery

Physical Growing:

- Grow indoor and outdoor.



CONDITION TO GROW:

- **Warmth:** The optimal temperature range for cannabis is 75 to 86°F (24 to 30°C)
- **Light:** Cannabis use chlorophyll to absorb light energy. It is also photosensitive (flower stage: a ratio of 12-hour light to 12-hour dark).
- **Water:** Most tap water works quite well for growing cannabis. Notice: before using tap water on plants, allow it sit in an open container for at least one hour so the chlorine will evaporate out of it. Always check the pH of water.
- **Nutrients:** Cannabis grows best with a full variety of nutrients. Different stages of the plant's life cycle will utilize different amounts of these nutrients. The early growth stage requires more nitrogen, while the later flowering stage requires more phosphorous. However, providing a constant supply of the full amount is all that is really necessary. Just for reference, the nutrient requirements of cannabis are very similar to that of the tomato plant.

INCREASING TERPENES:

1. Biodiversity:

Different types of root and soil microorganisms play the single most important role in increasing the types and amounts of terpene levels a plant is capable of producing. Nature Activator is not only the old school strains (Endomycorrhizae and Ectomycorrhizae) and super potent strains of Bacillus Subtilis and Trichoderma but also utilizing over 50 proprietary strains of microbes that have been taken or “isolated” from the Cannabis plant in its natural growing environment. The combination of beneficial microbial strains are specific to the Cannabaceae and are formulated to grow plants roots in hydroponic mediums.

2. Microbial Enzymes:

Good microbe combinations will produce acids, chemicals and enzymes around the roots which have multiple effects on the plant. Some communicate with the plant to produce oils and other enzymes will break down the large particles of organic and synthetic fertilizers and turn them into a smaller particle size (almost liquid form) that the plant can actually absorb. They can break down salts and these enzymes can boost the plant’s immunity. So, the more fertilizers your plant can absorb, the more material it has to create more oils (Terpenes). Nature Activator contains cannabis specific microbes that naturally make enzymes as the plant needs.

3. Bio - Substances:

A nice bio – substances are in Nature Activator that add to plant roots to give the microorganisms the food they need to continue to grow and absorb that nutrients. The products listed above are “carbon” based and will additionally give your plants some organic nutrients.

INCREASING TERPENES (cont.):

4. Organic Additional Matters:

Microbebio® Nature Activator supports a perfect balance of nutrients to give plant a strong biomass and to “fill the gaps” the nutrient diversity.

5. Trust:

On a microscopic level, the spacing between soil aggregates in a natural soil environment is very tight. For that reason, Microbebio® Nature Activator is a vital formulation with more saprophytic organisms that are designed to break down undecomposed organic matter in the growing medium and colonize the root faster.



HOW TO OBTAIN HIGH BENEFITS:

Microbebio® Nature Activator provides multiple benefits for the soil while helping growers reduce cost. Our microbial soil enhancers can rebuilt and maintain soil health and fertility in several methods:

1. Biological Nitrogen Fixation – the process of assimilating atmospheric nitrogen into organic compounds, especially by microorganisms.
2. Phosphate Solubilization – the process of solubilizing bound phosphate in the soil and making it available for uptake by plants.
3. Immobilization and Mineralization – Which is the process of using carbon sequestration to increase healthy plant hormones and storing carbon in the soil which drastically increases the amount of available nitrate nitrogen. Utilizes organic bio-stimulants which are used to provide a reservoir for plant nutrients special available in the soil.
4. Phytohormone Production – Reducing the Salinity in Soil – Nature Activator is a biological soil enhancer that is used to reduce the effects of soil salinity, acidic, erosion, and runoff, which is how much salt content is in the soil. It achieves this through the use of bacteria.
5. Balance Soil pH – Nature Activator promotes optimal soil pH under extreme environmental condition by balancing. Organic bio-stimulants makes the soil more porous, thus improving soil aeration, infiltration and drainage. It buffers a soil's pH and prevents losses of plant nutrients through leaching. Organic bio-stimulants make soils more granular, improving the aggregation of soil particles.
6. Saprophytic Competence – saprophytes live on dead or decomposing matter. They help the microbes in Nature Activator to compete with native soil microbes and organic bio-stimulants, allowing them to better perform their intended functions.
7. Combine strongest microbe's strains which produce proprietary enzymes. That helps the increase terpene levels from 150% - 500%.

FOR HIGHER YIELDS

WITH ORGANIC MATTER

- Enters through the stomata and leaf tissue.
- Increases fruit set during flowering, pollination and germination.

- The oxygen availability increases.
- CO₂ is taken up through the leaves.

- Improves the breakdown of leaf residues

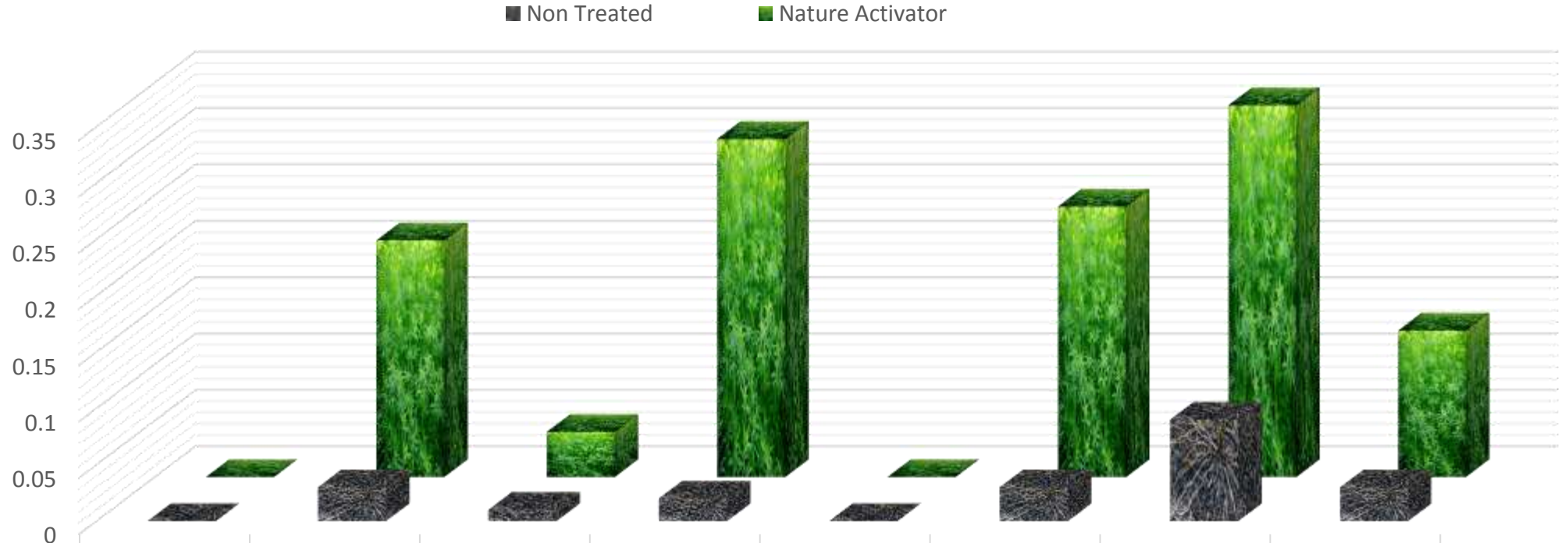
- Reduces nutrient inputs

- Chelated minerals are in a bio available form.
- A clean carbon food source for increasing soil biology.
- Increases soil aeration and worm activity.

- Hold nutrients in a bio available form in soil solution.
- CO₂ is taken up through the roots.
- Unlocks soil nutrient reserves.



REACHING THE TERPENOID



	A - Terpinene	Beta - Myrcene	Alpha - Pinene	Limonene	Terpinolene	Linalool	Beta - caryophyllene	Alpha - Humulene
■ Non Treated	0	0.03	0.01	0.02	0	0.03	0.09	0.03
■ Nature Activator	0	0.21	0.04	0.3	0	0.24	0.33	0.13

EXPLANATION:

TERPENOID	NATURE ACTIVATOR	UN - TREATED	CONCLUSION
A - Terpinene	0.00%	0.00%	<ul style="list-style-type: none"> • According to the result of the Terpenoids, the Terpenoids are treated by Nature Activator at 1.25%, and the Terpenoids are untreated at 0.21%. • Nature Activator have been proven to increase the terpene levels by over 400% of percentage change between using Nature Activator and un-treated. • By treating with Nature Activator, the root biomass also increases.
Beta - Myrcene	0.21%	0.03%	
Alpha - Pinene	0.04%	0.01%	
Limonene	0.30%	0.02%	
Terpinolene	0.00%	0.00%	
Linalool	0.24%	0.03%	
Beta - Caryophyllene	0.33%	0.09%	
Alpha - Humulene	0.13%	0.03%	
Total	1.25%	0.21%	