## ekolive biostimulants development



ekolive is the first and leading provider of a certified novel eco-bioleaching technology (nnoBioTech startup providing that can be used to upgrade soils/minerals and to produce inexpensive but unique bio me stimulant

plants strengthening and soil regeneration – consisting of liquid dissolved natural minerals (mica, feldspar, carbonates, iron oxides etc.), trained symbiosis of healthy Probiotics and plant growth-promoting bacteria, dozens of proteins, organic acids, alcohols, bacteriocins produced by them and microalgae – with which many problems in agriculture can be solved, also in the olives sector (e.g. frost, drought resistance, diseases, destroyed natural probiotic microflora by intensive usage of Glyphosate, old trees reactivation, leaves nutrition, yield support, oil content increase).

A unique bio me stimulant produced without energy consumption and without a volume limit by a new patented and certified ecobioleaching process (InnoBioTech®) with a green guarantee from



the European Commission. It uses the biological decomposition of low-quality minerals, where the high content of iron, manganese, carbon and the like prevents their industrial use, while these minerals reach high quality for industry (e.g. glass production) and at the same time dissolved minerals such as feldspars, clays, mica, carbonates, silicates, oxides and hydroxides of iron provide all necessary and important nutrients (Fe, Mn, Zn, Mg, Ca, etc.) to plants in a liquid and easily acceptable form. It is a replication of the natural weathering of minerals that would run in a healthy root system and the plant would obtain nutrients that way. For this, we use a unique and trained mix of bacteria supporting plant growth (360 species) developed during 35 years of research. Each bacterial species has its own function and during bioleaching it produces a wide range of very valuable and important organic acids, proteins, bacteriocins and alcohols that stimulate plant hormones and siderophores and make plants naturally strong, resistant and regenerate the soil. Our biostimulants are not created by mixing chemicals, but by replicating the natural process of weathering, which creates a unique mix of healthy probiotic microflora (a billion bacteria in one liter of product), various metabolites produced during bioleaching (organic acids, proteins, bacteriocins and alcohols), which solve many problems of the agricultural industry (drought, frost, disease, etc.) and would be produced in a healthy root system with a healthy microbiome. This is how we can restore this natural process and the healthy microbiome in the soil and contribute to the Green Deal and regenerative agriculture.

During the development, we researched detailed composition of ecofertile® plant biostimulant – mainly contains iron, manganese, magnesium, silicon and cobalt from dissolved minerals, probiotic bacteria supporting the growth of Lactobacillus, Lactococcus, Bifidobacterium, Acetobacter. And most importantly, the biostimulating metabolites produced by them (organic acids such as butyric, lactic, acetic, propionic, formic, diketopiperazines, hydroxy derivatives of fatty acids, 3-phenyl lactate; antibacterial bacteriocins and bacteriocin-like inhibitory substances, alcohols, hydrogen peroxide, pyrrolidone-5-carboxylic acid, diacetyl and reuterin directly stimulating the production of plant hormones and siderophores).

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In past 18 months we learned about the main effects – increased immunity of plants against a wide range of hulants diseases (fungi, viruses and bacterial pathogens) and resistance to high temperatures and drought due to ethanol content. Thiobacillus proteins increase the oil content. Revitalizes already attacked unhealthy damaged plants. It increases the yield, the root system of plants and the BRIX of fruits. And in past 18 months, we tested it on different crops including the olives.

We tested simple application with classic available irrigation mechanisms, and if mixable with other products. It is applied to soil by irrigation to the root systems for soil regeneration, restoration of weathering mechanisms, more efficient use of agrochemicals (dissolving P fertilizers, nitrogen fixation, CO2 fixation) and increasing soil quality or by direct foliar spray on the leaves of trees or crops to stimulate health, yield and quality.

In past 18 months we certified the product for EU organic farming, Demeter and Bioland, mutually recognized and commercialized in Spain, Slovakia, Germany, Croatia, Bulgaria, Czech republic.

ekolive (in past 18 months) has received many awards from the world's most recognized agricultural University in Wageningen, the largest chemical company BASF, as well as sponsored by the European Commission, Atlas pize by VUB Foundation and recently awarded by golden sickle by Ministry of Agriculture of Slovak Republic.

2 TV reports was done and several internet articles to increase awareness can be found on our wepage. Trial on Olives at Fitoaroma company in Croatia:





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## ekolive biostimulants development



Olive tree with ekoterite

Olive tree without ekofertile

Olive tree without ekofertile

Olive tree without ekofertile

Olive tree with ekofertile

Olive tree with ekofertile

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