HUMYPHEMOL Biocomplex H

Study of effects of one heteropolymer of earthworms humus in complex with phenolic compounds of olive leaves (MOL) Micronized Olive Leaves on Olea Europaea-Ogliarola Salentina affected by Xylella fastidiosa.

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Introduction

Vermicomposting differs from conventional composting because the organic material is processed by the digestive systems of worms in the Lumbricidae family. According to the observations of Martinez-Vilalta et al. (2002) plant mortality is mainly controlled by the carbon assimilation process. This theory is of considerable importance, a deficit of stored nutrient reserves can be asymptomatic in the plant at the time of the adverse period and can last for many years after an aridity stress event has occurred, with very negative consequences on the health of the plant.

THE CORRELATION BETWEEN SOIL USE AND PLANT DISEASES

Based on scientific literature and on direct observations and experiments, on soil related to xylella fastidiosa on Olea Eropeae species, it can be said that tree mortality increases with this correlation: decrease in water stress - growth rate - carbon assimilation - bacteriosis. Some olive trees, in fact, have a lower growth rate in the years preceding their death from xylella. Thus, we attribute a reduction in the growth rate to a dysfunction in the assimilation of carbon, and we believe very likely that the bacteriosis of xylella is caused by a depletion of the stored energetic reserves.

MATERIALS AND METHODS

The experiment was designed with randomized ground treatments: (1) T1, Control (without modifying the soil); (2) T2, HM product (VERMICOMPOST WITH ADDED of polyphenols of European olea leaves MOL in variable ratios. In the DPPH test, the MOL has demostred an IC50 value of 0.18 mg / mL.

The soil without any modification was taken as a control (C) for the comparison of the data with other treatments. All amendments were applied in the study area as a randomized block design with real distances of 2 meters. The treatments were randomly assigned to each within the individual blocks with a separate randomization for each block.

The result is that the bacterial communities come from the soil and reach the parts of the aerial plants through the lymph of the xylem WITH THE BIOCOMPLEX H, which is demonstrated by the experimental results. The microbioma complex associated with plants, also referred to as the second plant genome, and is crucial for plant health.

Therefore, the use of the biocomplex H RICH IN BACTERIAL COMMUNITIES POSITIVELY INFLUENCES THE XYLEMATIC VASES, cancels the effect of water stress, consequently oxidative stress and blocking the advance of the xylella.
The response is definetly positive. HUMYPHEMOL can act as preventive and phytoterapeutic innovative method to improve the plants life.

In the picures below we have the begin of tretment March 2020 and the Finish of treatment june 2020. The tretment have had a very good response and it will be do again for another tranche of months.

Before treatment

After treatment

1 Detail before treatment. Leaves affected by xylella (Red arrow). Leaves that were in the early stage of yellowing ,yellow arrow.

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