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Agente causal de la marchitez letal en plantaciones comerciales de palma aceitera en el Ecuador

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ABSTRACT

The lethal wilt (ML) is a sanitary problem that affects oil palm crop (*Elaeis guineensis* Jacq.), whose symptoms have been reported to be associated with the presence of a phytoplasm transmitted by the hemipteran *Myndus crudus.* Although symptoms of ML in oil palm commercial plantations in Ecuador suggest the disease incidence, the presence of this pathogen has not been demonstrated. In this research, it was validated the molecular detection of phytoplasm in arder to monitor its presence in commercial plantations of La Concordia and Orellana (Ecuador). The phytoplasm detection was performed using specific primers from the spacer region of the 16S and 23S genes, applying the Nes-ted-PCR reaction with the combination of P1 F-P7R and R16mF 2-R16mR1 primers. On the other hand, microbial diversity was analyzed using soil metage-nomic technique, to determine any association with the incidence of the disease. Far monitoring of commercial plantations, 20 plants with symptoms of ML in seven plantations were analyzed, where it was detectad the presence of phytoplasm in 16 cases, and in any case in healthy plants DNA, sampled in the same plantations. Soil metagenomic analysis was performed far 16 positiva cases and eight negativa cases, showing that there is no variation associated with microbial diversity among plants with symptoms of ML and healthy plants.

Keywords: Lethal wilt, metagenomics, oil palm, phytoplasma.

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