Title: Determination and Characterization of Tobacco Mosaic Virus in Tobacco Fields in North Lebanon

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The tobacco mosaic virus, of the *Tobamovirus* genus, has been named as the most important virus in the plant virology community. It infects cultivated plants and in particular tobacco and other members of the *Solanaceae* family. Our study was conducted to detect tobamovirus infections of tobacco crops in 55 regions of northern Lebanon. The detection of tobacco mosaic virus was conducted using Double Antibody Sandwich Enzyme Linked Immunosorbent assay (DAS-ELISA), and was confirmed by RT-PCR using primers that amplify different regions of the viral genome. The ELISA tests showed a positive result suggesting TMV infection in 4 tobacco samples out of 92 samples taken from Akkar and Daniye, which was confirmed by PCR using a specific primer that amplifies an 880 bp PCR product representing a part of the replicase gene. PCR was also performed using primers that amplify regions throughout the viral genome, the results showed that for a single sample we were able to amplify all regions throughout the viral genome, but for the other three samples we were able to amplify only a part of the viral genome. thus, this may be due to a mutation in the region that encodes the capsid protein (CP) and the movement protein (MP), and at a part of the region that encodes the replicases. Alternatively, the three samples may have been infected with different TMV isolates or even different tobamoviruses. Sequencing of the PCR products will provide clarity in this matter. Our study was the first in Lebanon showing TMV infection in tobacco leaves.

Biography

Dr Dalya Gereige has completed her PhD at the age of 27 years from Strasbourg University(UDS) and the institute of plant molecular biology (IBMP)- Strasbourg and postdoctoral studies from the national institute for agronomical research (INRA). She works currentlys as associate professor in the Lebanese University Faculty Of Sciences. She is interested in plant - tobamoviruses interaction research as well as identifying tobamoviruses infecting crop plants in Lebanon.

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