

**ANALYSIS OF PHYTOPLASMA DISEASE OF APRICOT PLANTATIONS WITH
LABORATORY AND REMOTE SENSING METHODS**

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The health condition of apricot (*Prunus armeniaca*) trees is affected by various abiotic and biotic factors, for example, spring frost and diseases that cause the death of trees. I started to analyse the most aggressive apricot disease, the European stone fruit yellows, 'Ca. Phytoplasma prunorum' pathogen that, in many cases, results in severe crop loss and the sudden death of trees. Our main objective was to verify the presence of the pathogen in the major apricot-growing regions. We verified the phytoplasma presence in the laboratory circumstances with PCR analysis. In the plantations where phytoplasma was confirmed, our objective was to try to detect or even predict the infection using drone-based remote sensing. With the use of UAVs, we took monitoring images over the plantations and conducted the data analysis using QGIS software. Using the vegetation indices calculated from the monitoring images, we could obtain information about the health of the apricot trees. Research on the pathogen is of fundamental importance, as there is currently no effective method for controlling the disease it causes. Currently, protection can only be based on prevention, the key elements of which are planting infection-free propagating material and controlling the vector responsible for its spread in the plantation. Apricots are one of the most important cultivated fruits in Hungary; therefore, it is highly important to better understand and map this dangerous disease.

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