

The microbiomes of olive cultivars help determine their resistance to *Verticillium* wilt

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Video Byte

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Abstract

Olives are enjoyed by many people worldwide. One of the most devastating diseases affecting olive production is Verticillium wilt of olive (VWO). An efficient way to manage this disease is the use of resistant or tolerant olive cultivars. But it is still unclear exactly what makes a cultivar capable of surviving VWO. The collection of microbes associated with an organism, or microbiome, is known to affect its susceptibility to infection. Therefore, a recent study aimed to describe the belowground microbial communities associated with two olive cultivars. One that is tolerant to VWO, and one that is susceptible to it. The authors found that the tolerant cultivar was associated with microbes known to promote plant growth. While the microbes associated with the susceptible cultivar tended to be more deleterious. Also, unlike for the tolerant cultivar, the fungus that causes VWO was able to enter the microbial community of the susceptible cultivar. These findings stress the need for more studies investigating the role of tree crop microbiomes in tolerance to biotic stresses. And open new avenues for research on biocontrol and breeding of VWO-resistant crops.