H2020-MCSA-RISE-2016-VIRUS FREE FRUIT NURSERIES (VirFree)

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Fruit trees and grapevine are propagated vegetatively and are often grafted. As a result they suffer from a high number of pathogens such as viruses and viroids, with some of them causing severe yield losses and reducing the productive life of the affected plants. As these pathogens cannot be controlled by the application of chemicals, the most efficient way to combat them is the production and commercialization of high quality pathogen-tested propagative material. Nevertheless, this procedure is not straightforward and both academia and private sectors are working towards its improvement. In this direction was built the herein interdisciplinary project which brings together participants from both academia and private companies to collaborate through their expertise on the following objectives: 1) to identify new viral and viroid strains or species affecting fruit trees and grapevine, 2) to optimize existing and develop novel detection methods and 3) to improve propagation and sanitation methods for producing high quality (virus-tested) plant material of fruit trees and grapevine. In this project diagnostic tools currently used in certification schemes will be combined with cutting edge technologies such as NGS and Nanobodies. The project has eight academic partners within the EU and associated countries, three within Third Countries and five non-academic partners. The knowledge obtained will be shared among the partners of the project and further disseminated to academic institutions, nurseries and other private sectors. Most importantly training of a new generation of researchers will be done in close contact to the needs of both industrial and academic sectors. In conclusion, the results of this project will enrich the knowledge on viruses/viroids associated with different diseases, improve the sensitivity of their detection methods, lead to new detection products and further contribute to the improvement of the disseminated propagative material of fruit trees and grapevine.

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