

paid considerable attention to various grape diseases, but there was confusion in their attempts to explain symptoms and development over time. Examples include “mal nero”, folletage and California disease. Symptoms of what are now known to be virus diseases were frequently attributed to the actions of fungal pathogens. In the case of esca, all symptoms recorded on the leaves (i.e., the well-known “leaf stripes” and others) were thought to be the effects of white rot of vine wood. Something similar is happening today with the introduction of some “new” GTDs. Different reports and lack of knowledge has led to the introduction and use of disease names that should now be revised and updated in the light of new knowledge for the esca complex, and for grapevine trunk diseases in general. It is important to clarify what was traditionally linked to wrong interpretations, and to use disease names that can be useful to share knowledge. These disease names should be based on official parameters applied in the naming of plant diseases.

Communications

Invasive pathogens and new emerging plant diseases

Establishment potential of citrus black spot, caused by *Phyllosticta citricarpa*, in Mediterranean environments. J. MARTÍNEZ-MINAYA², D. CONESA², A. LÓPEZ-QUÍLEZ², A. VICENT¹. ¹Centro de Protección Vegetal y Biotecnología, Instituto Valenciano de Investigaciones Agrarias (IVIA), Moncada 46113, Valencia, Spain. ²Departament d'Estadística i Investigació Operativa, Universitat de València. Burjassot 46100, Valencia, Spain.

Citrus black spot (CBS), caused by *Phyllosticta citricarpa*, is the main fungal disease of citrus worldwide, causing external fruit blemishes and yield losses. The Mediterranean Basin is free of the disease, so phytosanitary measures are in place to avoid the entry of *P. citricarpa* in the EU. However, the suitability of Mediterranean climates for CBS establishment is debated. As a case study, an analysis of climate types and environmental variables in South Africa was conducted to identify potential associations with CBS distribution. In 1950, CBS was confined to climates with summer rainfall (Cw, Cf). The dis-

ease later spread to drier regions, and the hot arid steppe (Bsh) is the main climate region where CBS now develops. The disease was not detected in the Mediterranean-type climates (Csa, Csb). Arid steppe (Bs) climates are common in important citrus areas in the Mediterranean Basin. Hierarchical Bayesian analyses were also conducted by considering latent Gaussian models, which allowed the use of the integrated nested Laplace approximation (INLA) methodology. The spatial effects were implemented with the stochastic partial differential equation (SPDE) approach. Spatial models outperformed non-spatial models in the 1950 dataset. Problems of model convergence were detected in 2014 due to the strong spatial structure of CBS. Spatial models with principal components for 1950 had better classification accuracy of CBS distribution in 2014 than non-spatial ones. Therefore, previous models based solely on climate may underestimate the potential geographical distribution of this disease.

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Advances on the study of emerging Southern tomato virus infecting tomato crops in the Mediterranean basin. L. ELVIRA-GONZÁLEZ¹, C. CARPINO^{1,2}, A.V. PUCHADES¹, A. ALFARO-FERNÁNDEZ³, M.I. FONT-SAN AMBROSIO³, L. RUBIO^{1,4}, L. GALIPIENSO^{1,4,5}. ¹Instituto Valenciano de Investigaciones Agrarias (IVIA), Ctra. CV-315, 46113 Moncada, Valencia, Spain. ²Department of Agricultural and Forestry Science, University of Palermo, Piazza Marina 61, 90133 Palermo, Italy. ³Instituto Agroforestal Mediterráneo, Universidad Politécnica de Valencia, Camino de Vera s/n, 46022-Valencia, Spain. ⁴Euro-Mediterranean Institute of Science and Technology (IEMEST), Vía Michele Miraglia 20, 90139 Palermo, Italy. ⁵Departamento de Biotecnología, Escuela Técnica Superior de Ingeniería Agronómica y del Medio Natural, Universidad Politécnica de Valencia, Camino de Vera s/n, 46022-Valencia, Spain.

Southern tomato virus (STV; genus *Amalgavirus*, family *Amalgaviridae*), has a double stranded RNA genome. STV has been detected in different tomato (*Solanum lycopersicum*) varieties showing symptoms of stunting, and fruit discoloration and reduced size. This virus was first detected in North America, and recently