

**Effects of the viroids and rootstocks on fruit yield and juice quality of Tunisian citrus variety “Maltese half-blood”.** A. NAJAR<sup>1</sup>, L.HAMROUNI<sup>2</sup>, R. BOUHLEL<sup>1</sup>, A. JEMMALI<sup>1</sup>, B. JAMMOUSSI<sup>3</sup>, N. DURAN-VILA<sup>4</sup>. <sup>1</sup>National Institute of Agricultural Research of Tunisia, Street Hedi Karray, 1004 El Menzah, Tunis, Tunisia. <sup>2</sup>National Research Institute of Rural Engineering, Water and Forests, Street Hedi Karray, 1004, El Menzah, Tunis, Tunisia. <sup>3</sup>Higher Institute of Education and Continuing Education, Tunisia. <sup>4</sup>Instituto Valenciano de Investigaciones Agrarias, Moncada, Valencia, Spain. E-mail: asmanajara@yahoo.fr

In Tunisia, citrus varieties are commonly grafted on sour orange rootstocks. Considering the present strategy to prevent damage which could be associated with tristeza disease, the substitution of sour orange rootstocks with symptomless rootstock/scion combinations is a desirable approach. However, some promising rootstocks are known to be sensitive to viroid infection. The performance of Tunisian ‘Maltese half-blood’ sweet orange infected with Citrus exocortis viroid (CEVd), Hop stunt viroid (HSVd), Citrus bark cracking viroid (CBCVd), Citrus bent leaf viroid (CBLVd) and Citrus dwarfing viroid in single or mixed infections was evaluated on eight rootstocks [sour orange (SO), ‘Carrizo’ citrange (CC), volkamer lemon (CV), ‘Cleopatra’ mandarin (MCL), ‘Swingle’ citrumelo (Citru), ‘Rangpur’ lime alemow (LR) and trifoliate orange (PT)], at the INRAT station in Cap Bon region. The trees were planted in 2005 and size, fruit production and fruit quality were evaluated every year from 2008. Mixed viroid infections decreased the canopies of Maltese grafted on CC by 41%, Citru by 40%, MCL by 39%, LR by 50%, CV by 46% and PT by 60%. The cumulative yield of Maltese grafted on CM and inoculated with HSVd was 76% less than the control. Mixed infections decreased production from the rootstocks Citru by 30% and PT by 60%. The only viroid effect on fruit quality was increased vitamin C content. This was more pronounced from mixed infections where the greatest amounts of vitamin C were recorded for fruit juice of Maltese grafted on CM, CV, LR or PT.

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**Effect of temperature on *Lactuca sativa* cultivars infected naturally with *Sclerotinia sclerotiorum* - a field study.** P. KRÓLIKIEWICZ, V.K. MACIOSZEK, T. JĘCZ, A.K. KONONOWICZ. Department of Genetics, Plant Biology and Biotechnology, Faculty of Biology and Environmental Protection, University of Lodz, Banacha 12, 16, 90-237 Lodz, Poland. E-mail: andrzej.kononowicz@biol.uni.lodz.pl

*Sclerotinia sclerotiorum* is one of the most destructive fungi of cultivated *Lactuca sativa* (lettuce), causing lettuce drop. Four lettuce cultivars (iceberg lettuce cvs *Diamentinas* and *Templin*, green lettuce cv. *Lollo Bionda* and red lettuce cv. *Lollo Rossa*) were grown in a horticultural holding in the central Poland (Lodz voivodeship), in the field naturally infested by *S. sclerotiorum*. In parallel, control lettuces were grown in a non-infested field. The experiment was conducted in 2016, in three yields/repetitions. Lettuce seeds used were purchased by Rijk Zwaan and Nunhems Companies. Seedlings were prepared by Schwanteland GmbH, Jungpflanzen, Germany. Each of lettuce cultivar was grown in 8 × 1 m plots, and each plot was divided into five sectors, each of 20 lettuce heads (100 heads per plot). Fertilizers (5 kg each of ammonium nitrate, potassium sulphate and triple superphosphate) were applied to each plot. Temperature was measured daily, and numbers of infected lettuce heads were counted at 4 and 8 weeks. Severity of lettuce drop was assessed using 5 point scale, and survival of individual plants was estimated. total phenolic and flavonoid content was also assessed. The most resistant cultivar to low temperature as well as to *S. sclerotiorum* infection was *Lollo Rosa*. This cultivar also had the greatest phenolic and flavonoid contents.

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**The effects of sulfur dioxide pads on postharvest grey mold and quality of sultana table grapes.** P. KINAY TEKSUR, F. SEN<sup>2</sup>, H.B. ÜNAL<sup>3</sup>, A.K. SELVİ<sup>1</sup>, A.KALIN<sup>4</sup>, A.M. AGHDAM<sup>1</sup>, B. CENBERCI COŞKUN<sup>5</sup>. <sup>1</sup>Ege University Faculty of Agriculture Department of Plant Protection, 35100 Bornova, Izmir, Turkey. <sup>2</sup>Ege University Faculty of Agriculture Department of Horticulturae, 35100 Bornova, Izmir, Turkey.