(Uncinula necator (SCHW.) BURR.), anthracnose, black rot (Guignardia bidwellii (ELL.) VIALA et RAVAZ), and grape leaf folder moth (Desmia funeralis HÜBNER).

With careful parental selection and fruiting of progeny with population sizes of > 100 seedlings per cross it has been possible to obtain new recombinants of superior value as cultivars.

Literature cited

HALBROOKS, M. C.; MORTENSEN, J. A.; 1989: Origin and significance of Florida hybrid bunch grapes and rootstocks. HortScience 24, 546-550.

HOPKINS, D. L.; ADLERZ, W. C.; 1988: Natural hosts of Xylella fastidiosa in Florida. Plant Dis. 72, 429-431.

LOUCKS, K. W.; 1938: Investigations of fruit rots of grapes. Fla. Agricult. Exp. Sta. Ann. Rept. for 1938, 118-119.

---; 1942: Investigations of fruit rots of grapes. Fla. Agricult. Exp. Sta. Ann. Rept. for 1942, 124-125.

MORTENSEN, J. A.; 1988: 'Blanc Du Bois'grape. HortScience 23, 418-419.

---; STOVER, L. H.; BALERDI, C. F.; 1977: Sources of resistance to Pierce's disease in *Vitis. J. Amer. Soc. Hort. Sci.* 102, 695-697.

STOVER, L. H.; 1951: Breeding has produced better grape varieties for Florida. Proc. Fla. State Hort. Soc. 44, 269-271.

---; 1960: Progress in the development of grape varieties for Florida. Proc. Fla. State Hort. Soc. 73, 320-323.

WELLS, J. M.; RAJU, B. C.; HUNG, H. Y.; WEISBURG, W. G.; MANDELCO-PAUL, L.; BRENNER, D. J.; 1987: *Xylella fastidiosa* gen. nov. sp. nov.: Gram-negative, xylem-limited, fastidious plant bacteria related to *Xanthomonas* spp. Intern. J. Syst. Bacteriol. 37, 136-143.

Effects of European red mite on grapevine cultivars

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A b s t r a c t : Responses of *Vitis* cvs to attack by *Panonychus ulmi* may vary depending on grapevine genotype. Investigations were carried out: (i) to elaborate a screening system which can be used as a tool in breeding grapevines tolerant to spider mite infestation; (ii) to analyse damage of grapevine leaves caused by red spider mite.

A 9-point visual screening system based on the extent of leaf bronzing due to the mites' feeding activity was established. There was no strict correlation of leaf discoloration with population density of spider mites. Discoloration was, however, positively connected with the frequency of feeding necroses (the histology of which was also studied). Negative correlations were observed with chlorophyll contents of leaves, photosynthesis rate, stomatal conductance and transpiration rate.

The significant relationships between bronzing and objective parameters confirm the validity of the visual screening system as a quick method for estimating the degree of damage due to *P. ulmi* on grapevine breedings.