F. Kleitman *et al.* (2004) *Phytoparasitica* 32(2):127-131

Use of a Diagnostic Medium for *in situ* Determination of the Response of *Erwinia amylovora* Strains to Bactericides

F. Kleitman,[1] S. Manulis,[1] G. Kritzman,[1]
D. Oppenheim,[2] M. Zilberstaine[2] and D. Shtienberg[1,*]

Erwinia amylovora, the causal agent of fire blight, is managed by application of bactericides to protect fruit tree blossoms from infection. Monitoring the response of *E. amylovora* strains to bactericides is crucial for adequate disease management. The coliform agar medium produced by Merck was recently reported as an effective tool for rapid diagnosis of *E. amylovora* (RD-medium). The objective of the present study was to examine the possibility of using the RD-medium for *in situ* determination of the response of *E. amylovora* strains to oxolinic acid and streptomycin. The phenotypic response of 48 *E. amylovora* strains isolated in 2002 to both bactericides was determined with the RD-medium and, for comparison, by a routine laboratory test. The results of 45 samples (93.7%) were in agreement with the findings of the routine laboratory test. A χ^2 test rejected the null hypothesis that the phenotypic characteristics as determined by the two respective methods differed significantly (P=0.389). The *in situ* test was implemented on a national scale in 2003 and the results were in agreement with those obtained in laboratory tests, which suggests that this medium can be used *in situ* for monitoring the appearance of resistance in *E. amylovora* populations.
KEY WORDS: Bactericide; *Erwinia amylovora*; fire blight; resistance detection.

Received Aug. 11, 2003; accepted Oct. 13, 2003; http://www.phytoparasitica.org posting Feb. 11, 2004.
[1]Dept. of Plant Pathology and Weed Research, ARO, The Volcani Center, Bet Dagan 50250, Israel. *Corresponding author [Fax: +972-3-9683688; e-mail: danish@volcani.agri.gov.il].
[2]Extension Service, Ministry of Agriculture and Rural Development, Bet Dagan 50250, Israel.