

STUDIES ON PECTOLYTIC *ERWINIA* SPP. IN PORTUGAL REVEAL UNUSUAL STRAINS OF *E. CAROTOVORA* SUBSP. *ATROSEPTICA*

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SUMMARY

The bacterial pathogens *Erwinia carotovora* subsp. *atroseptica*, *E. carotovora* subsp. *carotovora* and *E. chrysanthemi* are responsible for soft rot diseases, affecting plants in the field and/or in storage. Thirty-one strains from Portugal and elsewhere were characterised by classical, fatty acid methyl ester (FAME) and molecular methods (MSP-PCR and BOX-PCR). Ten strains were identified as *E. carotovora* subsp. *atroseptica*, 10 as *E. carotovora* subsp. *carotovora*, and 11 as *E. chrysanthemi* by classical methods. Strains of *E.c.* subsp. *carotovora* and *E. chrysanthemi* were phenotypically, chemotaxonomically, and genetically highly variable. *E. c.* subsp. *atroseptica* strains isolated from Portuguese fields had low molecular variability, but FAME analysis revealed high phenotypic variability. Fatty acid profiles of the Portuguese strains were compared with 27 *E. c.* subsp. *atroseptica* profiles obtained from the Dutch Plant Protection Service (PD) collection. The Portuguese *E. c.* subsp. *atroseptica* strains clustered separately from PD *E. c.* subsp. *atroseptica* strains. However, the clusters are not distant enough for Portuguese strains to be included in separate subspecies. Therefore, these Portuguese *E. carotovora* subsp. *atroseptica* strains may constitute an ecotype occurring in Portugal.

Key words: *Erwinia*, FAME, MSP-PCR, BOX-PCR, soft rot, variability.