



## BACTERIOLOGIA

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### **Prevalence of *Xanthomonas perforans* associated with bacterial spot in processing tomato crops in Brazil**

(Prevalência de *Xanthomonas perforans* associada à mancha bacteriana em lavouras de tomate para processamento industrial no Brasil)

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Bacterial spot is one of the major diseases of processing tomato fields in Brazil. The disease can be caused by *Xanthomonas euvesicatoria*, *X. vesicatoria*, *X. perforans* and *X. gardneri*. Considering the epidemiological aspects that might be related to each species, the knowledge about the prevalent one(s) is of important concern. The objectives of this research were to identify and compile data of identified *Xanthomonas* strains, obtained in the most important producing processing tomato areas from 2002 to 2010. The strains were deposited in the plant bacteria work collection maintained at Embrapa Hortaliças, Brasília, DF. Three hundred fifty two strains were identified based on comparative genomic fingerprintings using BOX-PCR, or/and species specific primers. Type strains from all four species were obtained from the Instituto Biológico, Campinas, SP and used as references. *Xanthomonas perforans* seemed to be consistently the prevalent species. The percentage of isolates identified as *X. perforans* was 66.6, 100, 47.2, 96.0, 50.0, 47.5, 60.0, 70.7, respectively in the years 2002, 2003, 2004, 2005, 2007, 2008, 2009, and 2010. The frequency of occurrence of other species associated with bacterial spot in recent years is still to be investigated. The establishment and prevalence of *X. perforans* causing bacterial spot has been reported in tomato fields in Florida, United States. Species antagonism ability and/or environmental adaptation are the two factors that might be related to the observed *X. perforans* prevalence.