Disease Note

OCCURRENCE OF *PANTOEA BEIJINGENSIS* ON *PLEUROTUS ERYNGII* IN CHINA

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In September 2012, water-soaked lesions and soft rot of stipes and pilei were observed in China on the fruiting bodies of *Pleurotus eryngii,* whose growth had halted. Four bacterial isolates with yellow, smooth and convex colonies, identical morphological characters and 16S rRNA, *gyrB*, *rpoB*, *infB* and *atpD* gene sequences were isolated from diseased tissues. Molecular phylogeny based on 16S rRNA sequence and MLSA data (combined *gyrB*, *rpoB*, *infB* and *atpD*) showed that the isolates had the highest similarity with *Pantoea dispersa* LMG 2603^T. However, physiological and biochemical tests performed using API 20 E, API 50 CHB (bioMérieux) and GN2 Microplates (Biolog), and DNA-DNA hybridization (33.9±1.3% relatedness with *P. dispersa* LMG 2603^T), differentiated the isolates from *P. dispersa*, identifiying them as *Pantoea beijingensis* (Liu *et al*., 2013). Based on the 16S rRNA gene sequence, a 98% similarity was found between *P. beijingensis* and *Pantoea* sp. PA4 reported as the agent of *P. eryngii* soft rot in Korea (Kim *et al*., 2007; Liu *et al*., 2013), suggesting that our isolates belonged to a species differing from *Pantoea* sp. PA4. Bacterial suspensions (approximately 1×10^6 CFU/ml) inoculated on the fruiting bodies induced within 5 to 7 days symptoms similar to those observed in natural infection. Controls remained healthy. Bacterial isolates recovered from typical lesions were identical to the inoculated strains in terms of 16S rRNA gene sequence, physiological and biochemical tests, performed using API 20 E, API 50 CHB (bioMérieux) and GN2 Microplates (Biolog), thus fulfilling Koch's postulates. *P. ananatis* was first reported as a pathogen of *P. eryngii* in Korea (Kim *et al*., 2007), but to the best of our knowledge, this is the first report of *P. beijingensis*-induced soft rot disease of *P. eryngii* in China.

Kim M.K., Ryu J.S., Lee Y.H., Yun H.D., 2007. First report of *Pantoea* sp. induced soft rot disease of *Pleurotus eryngii* in Korea. *Plant disease* **91**: 109.

Liu Y., Wang S.X., Zhang D.P., Wei S.J., Zhao S., Chen S.F., Xu F., 2013. *Pantoea beijingensis* sp. nov., isolated from the fruiting body of *Pleurotus eryngii*. *Antonie van Leeuwenhoek* **104**: 1039-1047.

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FIRST REPORT OF *TOMATO INFECTIOUS CHLOROSIS VIRUS* IN TUNISIA

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In Tunisia, tomato is the most important vegetable crop which, due to the favourable climatic conditions, is grown the whole year round. During field surveys conducted in autumn 2012, symptoms of severe yellowing, brittleness and thickening of mature leaves were observed in late tomato crops. Yellowing symptoms on older leaves were also observed in the main Tunisian artichoke-growing areas. Samples collected from symptomatic and symptomless tomato and artichoke plants from Kairouan and Bizerte, Ariana and Mannouba regions, respectively, were screened preliminary with Dig-labelled DNA probes for viruses infecting tomato and artichoke (Minutillo *et al*., 2012). In some samples a hybridization signal suggested the presence of *Tomato infectious chlorosis virus* (TICV). Total RNA was extracted from fresh leaf tissues according to CTAB protocol, reverse transcribed and subjected to PCR using the TICV-specific primer pair FOR-TCAGTGCGTACGTTAATGGG and REV- CACAGTATACAGCAGCGGCAG (Minutillo *et al*., 2012). A product of about 500 bp was amplified from 6 of 20 tomato and from 8 of 161 artichoke sample tested. The nucleotide sequence of two amplicons from tomato and one from artichoke was obtained and deposited in GenBank under accession Nos. KF873014, KF873015 and KF873016. The nucleotide sequence of Tunisian isolates was 98.7 to 100% identical and shared more than 99% identity with that of a TICV isolate from USA (accession No. FJ 542306). To the best of our knowledge, this is the first report of TICV on tomato and artichoke in Tunisia. Although we found the virus on two species in three different regions, its distribution is likely to be wider, since the symptoms cannot be unambiguously distinguished from those of mineral deficiency or physiological disorders.

Minutillo S.A., Mascia T., Gallitelli D., 2012. A DNA probe mix for the multiplex detection of ten artichoke viruses. *European Journal of Plant Pathology* **134**: 459-465.

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