

DISEASE NOTE

FIRST REPORT OF *CHILLI RINGSPOT VIRUS* INFECTION OF *SOLANUM XANTHOCARPUM* IN CHINA

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Solanum xanthocarpum (yellow-berried nightshade) is a common weed in southwest China. In August 2014, two *S. xanthocarpum* plants with leaves displaying ringspots were observed near Mianyang (Sichuan province, China). Total RNAs was extracted from symptomatic and symptomless leaves using Trizol (Invitrogen, USA), and first strand cDNA synthesis was primed with M14T (5'-GTTTTCCCAGTCACGAC(T)18-3') by SuperScript III Reverse Transcriptase (Invitrogen, USA). RT-PCR was performed using the potyvirus universal primers Sprimer (5'-GGX AAY AAY AGY GGX CAZ CC-3', X=A, G, C or T; Y=T or C; Z=A or G) and M4 (5'-GTT TTC CCA GTC ACG AC-3') (Chen *et al.*, 2001). A 1.6 kb DNA fragment was amplified from symptomatic but not from symptomless leaf samples. The amplified products were purified, cloned into the PMD19-T vector (TaKaRa, China) and sequenced. Sequencing results confirmed the presence of *Chilli ringspot virus* (ChiRSV) (GenBank accession No. KP310866) with 99% (JN008909.1) and 91% (DQ925438) nucleotide identity with comparable sequences of other ChiRSV isolates available in GenBank. To the best of our knowledge, this is the first report of ChiRSV on *S. xanthocarpum* in China.

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FIRST REPORT OF *RHODOTORULA GLUTINIS*-INDUCED RED SPOT DISEASE OF *PLEUROTUS NEBRODENSIS* IN CHINA

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In September 2012, red spots located between the stipes and pilei of the fruiting bodies of *Pleurotus nebrodensis* whose growth had halted were observed in China. The internal transcribed spacer (ITS) and the D1/D2 domain of 26S rRNA gene from the putative pathogen, a bacterium isolated from diseased mushrooms, were amplified and sequenced (GenBank accession Nos KF314800 and KF314802). The neighbour-joining tree constructed with ITS sequences showed that those of the bacterium under study had the highest similarity (99.2%) with the comparable sequences of *Rhodotorula glutinis* CBS 20^T, while the D1/D2 domain sequences were identical with those of the same bacterial species. Metabolic profiles of the bacterial isolate from diseased mushrooms closely resembled that of *R. glutinis* CBS 20^T with one exception (negative for acid production from fermentation of D-ribose). Based on the above, the putative pathogen was identified as *R. glutinis*. Pathogenicity tests carried out with suspensions (approximately 1×10⁶ CFU/ml) directly inoculated on the surface of young *P. nebrodensis* fruiting bodies resulted in the development within 3-5 days of red spots like those shown by naturally diseased mushrooms. Negative controls did not develop symptoms. A bacterium identical to that used for inoculation trials was re-isolated from symptomatic mushrooms, thus fulfilling Koch's postulates. *Rhodotorula* spp. are closely phylogenetically related to the genus *Sporobolomyces*, which was reported as the agent of the red spot disease of *Pleurotus eryngii* (Xu *et al.*, 2014). To the best of our knowledge, this is the first report of *R. glutinis*-induced red spot disease of *P. nebrodensis* in China.

Xu F., Wang S.X., Liu Y., Ma Y.W., Zhang D.P., Zhao S., 2014. First report of *Sporobolomyces symmetricus* induced red spot disease of *Pleurotus eryngii* in China. *Plant Disease* **98**: 693.

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