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# plant disease

Editor-in-Chief: Anthony P. Keinath

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Trends in Plant Pathology: What Does the Future Hold?

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[Previous Article](#) | [Next Article](#)

July 2009, Volume 93, Number 7

Page 766

DOI: 10.1094/PDIS-93-7-0766A

## Disease Notes

### First Report of Dry Rot Caused by *Fusarium oxysporum* on Rose (*Rosa* spp.) in Brazil

B. M. Barguil, F. M. P. Viana, R. M. Anjos, and J. E. Cardoso, Embrapa Agroindústria Tropical, Caixa Postal 3761, CEP 60511-110, Fortaleza, CE, Brazil

Roses are a high-value niche crop in the higher altitudes of northeastern Brazil. From July of 2007 and throughout 2008, severe stem rot and wilting of rose seedlings were observed in commercial fields in the São Benedito District, Ceará State, Brazil. Although economic losses due to the disease are unknown, it poses a threat to the growing rose industry in that region. Symptoms included leaf yellowing and abscission followed by plant collapse. Symptoms appeared earlier when grafted seedlings were produced during periods of high relative humidity (80 to 98%) and warm temperatures (20 to 31°C). In the laboratory, symptomatic seedlings were rinsed with distilled water, surface sterilized with 0.5% NaOCl, and incubated on PDA at 26 ± 2°C. *Fusarium oxysporum* was consistently isolated from infected scions and rootstocks. Identification of *F. oxysporum* was based on colony and conidia morphology obtained from single-spore colonies. Five 4-week-old rose ('Carola') seedlings were inoculated with a culture of fungus by spraying the needle-wounded scion with a spore suspension (1 × 10<sup>5</sup> CFU/ml). The spore suspension was obtained from a 1-week-old PDA culture incubated at 26 ± 2°C. Control seedlings were sprayed with sterile water. Inoculated seedlings were incubated for the first 48 h in a saturated humidity chamber. After 20 days at room temperature, the scion tissue of inoculated seedlings turned necrotic. Two symptomatic seedlings were placed in a saturated humidity chamber for 24 h to determine if fungal sporulation could be observed on the surface of the tissue. After 5 to 7 days, a white mycelium was observed over the necrotic tissue. Seedlings sprayed with sterile water remained symptomless. *F. oxysporum* was reisolated from symptomatic tissue. An isolate of *F. oxysporum* (No. 1484) was deposited in the Mycology Collection of Lavras (Minas Gerais State, Brazil). To our knowledge, this is the first report

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of *F. oxysporum* causing a disease on rose seedlings in Brazil.

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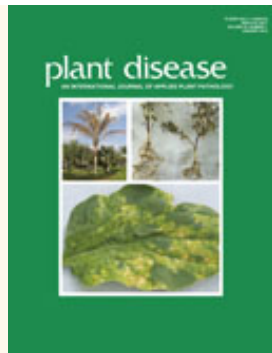
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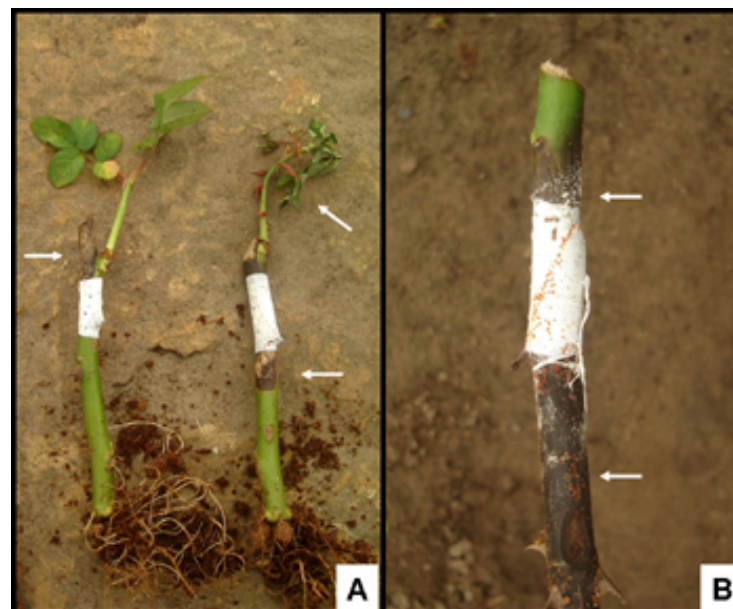
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[Home](#) > [Plant Disease](#) > [Table of Contents](#) > [Supplemental Material](#)

[Previous Article](#) | [Next Article](#)

July 2009, Volume 93, Number 7  
Page 766  
DOI: 10.1094/PDIS-93-7-0766A

### Supplemental Material



Rose seedlings showing typical symptoms and signs of *Fusarium oxysporum* infection on scion and scion-rootstock. A, Details of wilting of twig, scion, and scion-rootstock symptoms (arrows).

B, *F. oxysporum* mycelium and sporulation structures (arrows).

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