

First Report of *Rhizoctonia solani* Causing Web Blight on Pigeonpea in Brazil

Kátia de Lima Nechet & Bernardo A. Halfeld-Vieira

Embrapa Roraima, Cx. Postal 133, CEP 69301-970, Boa Vista, RR, Brazil, e-mail: katia@cpafrr.embrapa.br

Autor para correspondência: Kátia de Lima Nechet

RESUMO

Primeiro relato da mela causada por *Rhizoctonia solani* em feijão-guandu no Brasil

Plantas de feijão-guandu cultivar Petrolina foram observadas pela primeira vez no Brasil com sintoma de mela causada pelo fungo *Rhizoctonia solani* (teleomorfo *Thanatephorus cucumeris*) no município de Mucajaí, Roraima.

Pigeonpea [*Cajanus cajan* (L.) Millsp., family Fabaceae] is a tropical rich-crop used to fix atmospheric nitrogen through symbiotic association, and which can be cultivated in many environmental conditions. It has been used as a cover plant, as green manure and as a nutrient in human and animal diets (Vieira, Informe Agropecuário 16, 52. 1992). In June 2006 in Mucajaí, Roraima, pigeonpea plants cv. Petrolina growing in an experimental field were found to have web blight and microsclerotia formation leading to plant death (Figure 1A). Microscopic examination of the symptomatic plants revealed association with *Rhizoctonia solani* based on the characteristics observed, a distinct right-angle branching pattern, the constriction of hyphae near the point of origin (Figure 1B) and multinucleate individual hyphae compartments (Sneh, Identification of *Rhizoctonia* Species. 1991). The fungus was isolated from infected tissues on potato-dextrose-agar (PDA). The radial growth rate on PDA at 25°C in the dark was 1.5 cm.day⁻¹. After ten days, microsclerotia formation was observed, white when young, becoming pale brown with age, 442 µm in diameter. Pathogenicity of *R. solani* isolate was performed by inoculation with a suspension containing 10⁴ microsclerotia per mL. This suspension was sprayed on five thirty-day-old pigeonpea cv. Petrolina plants, and distilled water was sprayed on another five plants (control). Plants were kept in a humid chamber for 24 hours and then maintained in greenhouse conditions. Twelve days later, the presence of web blight symptom and microsclerotia were recorded on inoculated plants (Figure 1C). The non-inoculated control plants, on which distilled water was sprayed, remained healthy. Koch's postulates were fulfilled by re-isolating *R. solani* from diseased plants. The web blight on pigeonpea was previously reported in Ghana, India, Malaysia, Puerto

Rico, Sierra Leone and Zambia (Lenné, Phytopathological Papers 31. 1990). No description of a similar symptom on this host has been reported in Brazil. Therefore, it is the first record of web blight caused by *Rhizoctonia solani* on *Cajanus cajan* in Brazil.

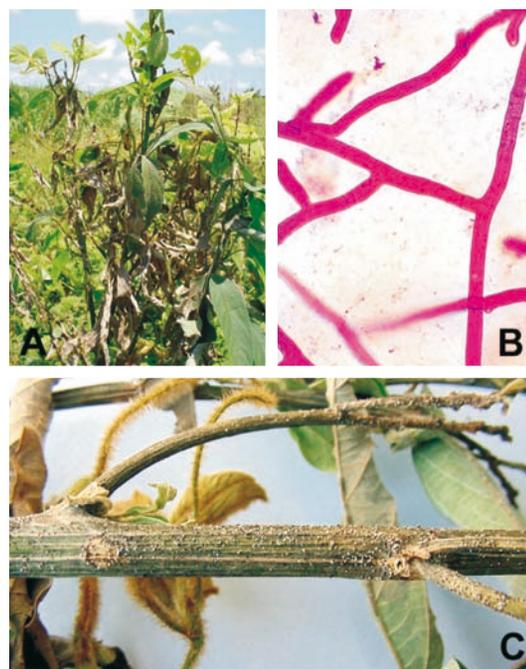


FIG. 1 - A. Natural occurrence of web blight caused by *Rhizoctonia solani* on pigeonpea plant; B. Micelium of *Rhizoctonia solani* on pigeonpea leaf tissue; C. Microsclerotia of *Rhizoctonia solani* on inoculated pigeonpea plant.

Received 5 March 2007 - Accepted 27 August 2007 - FB 7022