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First Report of Rust Caused by *Phakopsora pachyrhizi* on Soybean in Democratic Republic of Congo. P. S. Ojiambo, R. Bandyopadhyay, and M. Twizeyimana, International Institute of Tropical Agriculture (IITA), PMB 5320, Ibadan, Nigeria; A. Lema, 198, Avenue Isiro, Commune de la Gombe, Kinshasa, R. D. Congo; R. D. Frederick, K. F. Pedley, and C. L. Stone, USDA-ARS Foreign Disease-Weed Science Research Unit, 1301 Ditto Ave., Fort Detrick, MD 21702; and G. L. Hartman, USDA-ARS and Department of Crop Sciences, University of Illinois, Urbana. Plant Dis. 91:1204, 2007; published online as doi:10.1094/PDIS-91-9-1204C. Accepted for publication 25 June 2007.

Nigeria (1) and Uganda (3) are the closest countries to the Democratic Republic of Congo (DRC) where soybean rust caused by *Phakopsora pachyrhizi* has been reported. In February 2007, during a disease survey in DRC, soybean (*Glycine max*) leaves with rust symptoms (tan, angular lesions with erumpent sori exuding urediniospores) were observed in 10 fields in the following areas in Bas Congo Province: Bangu, Kimpese, Kolo-Fuma, Lukala, Mbanza-Ngungu, Mpalukide, Mvuazi, and Ntemo. Rust incidence in these fields ranged from 85 to 100%, while severity ranged between 3 and 35% of the leaf area on infected plants. Urediniospores were hyaline, minutely echinulate, and 23 to 31 × 16 to 20 µm. Within a week of collection, infected leaf samples were sent to the USDA-ARS Foreign Disease-Weed Science Research Unit (FDWSRU) for pathogen identification. DNA was extracted from sections of leaves containing sori with the Qiagen DNeasy Plant Mini kit (Valencia, CA), and all 10 field samples amplified in a real-time fluorescent PCR with the *P. pachyrhizi*-specific primers Ppm1 and Ppa2 (2). Infected leaves of cultivar Vuangi collected from one field each in the INERA Research Station, Kimpese-Crawford, and Kimpese-Ceco were separately washed in sterile water to collect urediniospores that were used to separately inoculate three detached leaves of susceptible cultivar TGx 1485-1D (4). Lesions on inoculated leaves developed 5 days after inoculation (DAI), and pustules (110 to 130 µm) formed 7 DAI and erupted 2 days later exuding columns of urediniospores similar in size to the initially collected isolates. Inoculation of another set of detached leaves with a spore suspension (1 × 10(^6) spores per ml) from the first set of detached leaves resulted in typical rust symptoms. Seedlings of cultivar Williams also showed typical rust symptoms when inoculated separately with urediniospores collected from nine fields (i.e., all except Kimpese-Ceco, which was infective in the detached leaf assay). Inoculation and incubation were carried out at the FDWSRU Plant Pathogen Containment Facility at Fort Detrick as described earlier (2). The PCR assay, morphological characters of the isolates, and pathogenicity tests demonstrate that *P. pachyrhizi* occurs in DRC. To our knowledge, this is the first report of *P. pachyrhizi* infecting soybean in DRC.

References: (1) O. A. Akinsanmi et al. Plant Dis. 85:97, 2001. (2) R. D. Frederick et al. Phytopathology 92:217, 2002. (3) E. Kawuki et al. J. Phytopathol. 151:7, 2003. (4) M. Twizeyimana et al. Online publication. http://www.plantmanagementnetwork.org/infocenter/topic/soybeanrust/

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