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INFECTION PROCESS OF *Gaeumannomyces graminis* var. *graminis* ON RICE ROOTS / Processo infeccioso de *Gaeumannomyces graminis* var. *graminis* em raízes de arroz. C. HAWERROTH¹; L. ARAÚJO²; F. A. RODRIGUES¹. ¹Plant Pathology Department, Viçosa Federal University, Viçosa, Brazil / ²Agricultural Research and Rural Extension Company, São Joaquim, Brazil. E-mail: caroline.hawerroth@ufv.br

Crown sheath rot, caused by the ascomycete *Gaeumannomyces graminis* var. *graminis*, infects the roots and the base of the culm of rice plants and causes early grains maturation, the death of the tillers and reduced yield. Considering the little information for the interaction rice-*G. graminis* var. *graminis* at the microscopical level, this study aimed to gain novel insights regarding the infection process of this soilborne pathogen on the roots of rice plants by using both light and scanning electron microscopy. The fungus initially colonized the epidermal, exodermal and sclerenchyma cells. At 15 days after inoculation (dai), prominent fungal hyphae colonized the cortex as well as clusters of perithecia were noticed into the roots. At 20 dai, the fungus reached the central cylinder. The results of this study provide new insights into the infection process of *G. graminis* var. *graminis* on rice roots and may contribute to the development of more effective control measures to reduce the crown sheath rot in rice fields.

Keywords: *Oryza sativa* L.; Crown sheath rot; Perithecium; Scanning electron microscopy.

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