Growth of the Coffee Orange Rust *Hemileia vastatrix* in Hosts and Nonhosts

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ABSTRACT

The germination, appressoria formation and growth of *Hemileia vastatrix* in leaf tissues of resistant *Coffea arabica* plants as well as in nonhost species such as *Ixora javanica*, *Vigna sinensis*, *Phaseolus vulgaris* and *Arachis hypogaea* were studied. The germination ability of the fungus was good on host and nonhost and the percentage of apressoria formation over the stomata was equally good with exception of *A. hypogaea* where it was significantly lower. The percentage of full appressoria was lower in *C.arabica* and *I. javanica* (< 25%), followed by *V. sinensis* and *P. vulgaris* (40%) and by *A. hypogaea* (88%). In the host resistant plants and in *I. javanica*, *V. sinensis* and *P. vulgaris* the fungus ceased growth in different stages of infection with higher frequency in the stage of haustorial moyher cell (HMC) with 3 haustoria. In *A. hypogaea* only 1% of the infections reached the stage of HMC but without haustoria formation. The most restricted growth of the fungus in *A. hypogaea* suggests a quicker expression of resistance in this species than in the resistant hosts and remaining nonhosts.