

METHODS FOR *MACROPHOMINA PHASEOLINA* INOCULATION IN COMMON BEANS

D. De la Peña-Devesa\ S. Hernández-Delgado^ M.A. Cantú-Almaguer^, A.L. Arroyo-Becerra^, M.A. Villalobos-López^, J.M. González-Prieto^ and N. Mayek-Pérez^

Centro de Biotecnología Genómica-Instituto Politécnico Nacional (IPN). Reynosa, México

^Campo Experimental Río Bravo-INIFAP, Río Bravo, México

^Centro de Investigación en Biotecnología Aplicada-IPN. Tlaxcala, México

Abstract

The fungus *Macrophomina phaseolina* (Mp) causes charcoal rot in common beans and other crops through Mexico under water stressed and high temperature conditions. Methods for assess pathogenicity of Mp have been developed for specific host species and/or research objectives. Inoculation methods of Mp can be divided into two groups: destructive (p. e. use of colonized seeds and inoculation of seeds and/or seedlings under field or controlled conditions) and non-destructive (p. e. detached-leaf method) (1, 2, 3, 7). Our research group is interested to reproduce Mp symptoms in common beans under specific test conditions in order to develop methods of genomic analysis of Mpbean interactions and therefore detect those differentially expressed genes during the pathogenesis. The aim of this work was to compare the efficiency of several methods of inoculation of bean seedlings under controlled conditions and to identify an appropriate method for genomic studies in the pathosystem Mp-common beans.