

MONILIOPHTHORA PERNICIOSA AND M. RORERI PERFORMANCE AT POD LEVEL ON CLONES WITH DIFFERENT DEGREE OF RESISTANCE TO THE DISEASES THEY CAUSE

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SUMMARY

Close relationship between the causal agents of Witches' Broom Disease (WBD) and Frosty Pod Rot (FPR) in cocoa have been demonstrated, leading to placed both agents within the same genus, *Moniliophthora* (*perniciosa* and *roreri* respectively) despite conspicuous differences between both species, where the high specialization of the latter to attack only pods is the most stricken character. A consequence of this pod specialization of *M. roreri* is that all tests for resistance has to be performed on adult trees and attempts to develop an early test have failed so far. On the other hand, there is some indirect evidence that clones that show resistance for FPR seems to be as well resistant for WBD on pods. The study herein reported pretends to show this relationship. Clones showing different levels of resistance against WBD and FPR from INIAP's collection at EET Pichilingue were used. Open pollinated pods of about three to four months and ~5cm in size, were inoculated with a cotton ball soaked on a spore suspension of each pathogen. Twenty pods were used for each of the following treatments: only *M. perniciosa* or *M. roreri*; each species in opposite sites at the widest circumference of the pods; each species on the base or the tip of the pod; and a mixed suspension of both organisms together in one single inoculation point; then all treatments were kept cover with a plastic bag for seven days. The study was repeated with two months old hand pollinated pods. In general, *M. roreri* seems to perform better on pods, with the disease progressing 2 to 5 days faster than *M. perniciosa*; each organism was recovered only from correspondingly infected pod tissue. Although there were certain differences in ranges, the latent period for each infection showed similar response for both diseases. A description of symptom development and severity of both diseases were part of this study.

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