Title: EVALUATION OF *Moniliophthora perniciosa* GROWING IN ALTERNATIVES NITROGEN SOURCES

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Abstract:

The fungus *Moniliophthora perniciosa* belonging to the class of basidiomycetes is considered hemibiotrophic for presenting a life cycle divided into two phases, the initial phase called biotrophic and then, saprophytic phase. This fungus is the main cause of the cacao disease, which brought a vertiginous decay in cocoa production in the 80s. Many projects are in effective constant search for information about the physiology, genetics, morphology and evolution of the fungus. To that end, the biotype C belonging to 553 strain isolated from *M. perniciosa* was regularly maintained in the laboratory on solid media CPD-2%/CPG-2% in incubator at 25ºC in the dark and subculture to new solid media. From the stock culture a 2-3 mm disc was removed from the extremity of mycelium and transferred to the center of the Petri dish which are variations of CPD and CPG media added alternative nitrogen sources (ammonium sulfate – 2%, yeast extract - 2%, tryptone – 2%, peptone – 2%), in incubator at 25ºC, in the dark, for 21 days, and analyzed every 7 days. The best growing of the fungus was observed in media containing yeast extract because the halo was bigger than the other utilized media and the hyphae were more compacted, leaving the mycelium with a whiter color, as this is a media rich in nutrients, which facilitates the growth of the fungus. Since the media containing the ammonium sulfate, fungus presented the lowest halo of growth compared to the other medias, once the ammonium sulphate is the source of nitrogen with more acid character among sources used and the *M. perniciosa* presents good growth with pH around 7.0. When nitrogen sources were peptone and tryptone the fungus showed similar growth to each other and can be considered as a moderate growth, because the halos were not as large as the halo presented by yeast extract and not so small as halo of media containing ammonium sulphate. It was also clear that the *M. perniciosa* showed better growth when the carbon source was glucose in relation to glycerol.

Key-words: glycerol, *Moniliophthora perniciosa*, peptone, tryptone, yeast extract

Promotion agency: CAPES