

B-08 Effect of harvesting maturity and controlled atmosphere storage on crown rot development in embul bananas

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Fungal rot caused at the cut face of the crown, termed crown rot, is a major problem in the export of bananas (Var Embul). Changes in crown susceptibility to the rot during bunch maturation and effect of storage under low oxygen and elevated carbon dioxide were tested. Inoculation of crowns with *Colletotrichum musae* harvested 10, 11, 12 and 13 weeks after flowering showed that there was no inherent resistance against crown rot. The fungus causes fibrous rot in green bananas at 14°C, after a storage period of 14 days. The rot rapidly expanded when the fruits were ripened at 25°C. Storage of inoculated crowns at low oxygen concentration range of 1-5% minimized extent of the rot. The fungistatic nature of low oxygen was observed even in ripened fruit at 25°C. On the other hand, elevated carbon dioxide at 5 and 10% accelerated the extent of rot in bananas stored at 14°C. 14 days after storage when the fruits were induced for ripening, a greater extent of the rot was recorded in ripened bananas. Low oxygen 1 - 5% can be used to store bananas, and minimize the incidence of crown rot caused by *C.musae*.