

CONTROL OF ANTHRACNOSE DISEASE OF BANANA  
WITH INORGANIC SALTS

SUDAN / P. H. TEET

PLANT PATHOLOGY DEPARTMENT AND ENTOMOLOGY  
UNIVERSITY OF SUDAN, KHARTOUM

11006683

1100066830

Perpustakaan Sultanah Nur Zahirah  
Universiti Malaysia Terengganu (UMT)



LP 26 FASM 1 2008



1100066830

Control of anthracnose disease of banana with inorganic salts /  
Sudau Eh Teet.

PERPUSTAKAAN SULTANAH NUR ZAHIRAH  
UNIVERSITI MALAYSIA TERENGGANU (UMT)  
21030 KUALA TERENGGANU

1100066830

1100066830		

Lihat sebelah

HAK MILIK  
PERPUSTAKAAN SULTANAH NUR ZAHIRAH UMT

CONTROL OF ANTHRACNOSE DISEASE OF BANANA WITH INORGANIC  
SALTS

Sudau a/p Eh Teet

This project is submitted in partial fulfillment of the requirement of the  
degree of Bachelor of Science in Agrotechnology (Postharvest Technology)

FACULTY OF AGROTECHNOLOGY AND FOOD SCIENCE  
UNIVERSITI MALAYSIA TERENGGANU

2008

This project should be cited as:

Sudau, E. T. 2008. Control of Anthracnose Disease of Banana with Inorganic Salts. Undergraduate thesis, Bachelor of Science in Agrotechnology (Postharvest Technology), Faculty of Agrotechnology and Food Science, Universiti Malaysia Terengganu. 79p.

No part of this project may be produced by any mechanical, photographic, or electronic process, or in the form of phonographic recording, nor may it be stored in a retrieval system, transmitted, or otherwise copied for public or private use, without written permission from the author and the supervisor of the project.

IP  
26  
FRESH  
1  
2008

1100066830

## ACKNOWLEDGEMENT

First of all, I would like to take this golden opportunity to express my sincere appreciation to my supervisor, Dr. Chuah Tse Seng for his continuous comments, patient thought and guidance that enable this project to run smoothly. I also would like to record my special gratitude to Miss Patricia Pang Sing Tung for her guidance, adoration and inspiration that she gave to me throughout these years. Besides, I would like to express my sincere thanks to the examiners for their patience in reviewing my thesis. I would also like to extend my gratitude to the laboratory assistances, Mr. Ruhairi and Mr, Fauzi for their kindly help and guidance.

The highest appreciation also given to my beloved family, my parents and younger brother for their support and living encouragements as well as the tower of strength in my hour of needs. Last but not least, my appreciation also goes to my course mates and those who have contributed to this project.

## ABSTRACT

Effects of sodium bicarbonate, calcium propionate, sodium metabisulfite, potassium carbonate and ammonium carbonate against mycelial growth of *Colletotrichum gloeosporioides* were evaluated in a *in-vitro* study. Sodium metabisulfite is found to be the most effective salt that exhibited fungicidal activity at the lowest concentration of 0.06% compared to the other salts. Post-harvest application of sodium metabisulfite to control infection of anthracnose on bananas caused by *C. gloeosporioides* was evaluated in a *in-vivo* study. The effectiveness of the treatments were assessed by evaluating their impact on physical-chemical parameters of fruits such as firmness, hue angle, chroma, total titratable acidity (TTA), total soluble solid (TSS), pH, vitamin C content, diameter of lesion and incidence. The bananas subjected to curative treatment using 2% sodium metabisulfite showed less fungus infection and greater flesh firmness as compared to other treatments. No significant difference was observed in the hue angles of bananas subjected to curative treatment and bananas injured before being dipped into salt with control. In addition, there were no significant differences in the chroma, TTA and vitamin C content among all treatments and control. However, the bananas subjected to protective treatment and untreated bananas showed higher value in TSS and pH compared to bananas subjected to curative treatment. This result suggests that curative treatment using sodium metabisulfite could provide a significant level of protection on bananas.