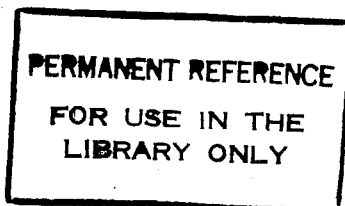


**EFFECT OF NITROGEN AND POTASSIUM LEVELS OF FRUIT
PEEL TISSUE ON ANTHRACNOSE DEVELOPMENT AND
POSTHARVEST STORAGE QUALITY OF 'EMBUL' BANANAS**

A PROJECT REPORT PRESENTED BY

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to the Board of study in Plant Sciences of the
POSTGRADUATE INSTITUTE OF SCIENCE



*in partial fulfillment of the requirement
for the award of the degree of*

**MASTER OF SCIENCE IN POSTHARVEST TECHNOLOGY
OF FRUITS AND VEGETABLES**

of the

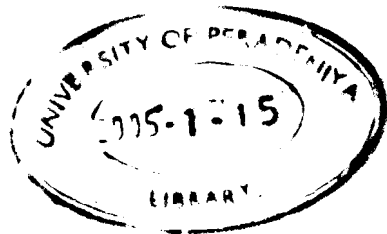
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ABSTRACT

**EFFECT OF NITROGEN AND POTASSIUM LEVELS OF FRUIT
PEEL TISSUE ON ANTHRACNOSE DEVELOPMENT AND
POSTHARVEST STORAGE QUALITY OF 'EMBUL' BANANAS****Himani M. Gammanpila**

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Anthracnose is one of the most destructive postharvest disease of banana. The disease becomes evident as the fruit ripens. Disease lesions on the fruit seldom extended into the flesh, however they render unmarketable. *Colletotrichum musae*, the fungus responsible for this disease, forms quiescent infections on the fruit. The degree to which pathogens attack plants, is regulated by several properties of plant host tissues. Nutritional conditions under which the plants are grown have been reported to significantly affect the occurrence and severity of many diseases.

In this study 100 g, 200 g urea and 100 g, 200 g muriate of potash fertilizer were applied directly to the bunch by hanging polyethylene bags to the peduncle end at two weeks after bunch emergence. Fertilizer treated bunches together with the control bunches were arranged in a completely randomized design. After harvest fruits were inoculated with *Colletotrichum musae* and kept in a humid environment. Lesion development at inoculated points and natural lesion development were observed. Freckle disease intensity was also estimated at 4 weeks after application of fertilizer and at harvest. Visual quality rating and sensory evaluation were recorded.

Application of 100 g and 200 g of muriate of potash (MOP) fertilizer significantly reduced anthracnose disease development on banana fruits. Application of 100 g, and 200 g of urea increased anthracnose disease development than those of control and MOP treated fruits. The incidence of freckle disease was not significantly reduced or

increased with fertilizer application. Visual quality rating of banana fruits reduced with application of 100 g and 200 g of urea per bunch. Application of 100 g and 200 g of MOP fertilizer to the bunch maintained the visual quality rating of banana fruits at higher level. Fertilizer application did not significantly effect sensory evaluation of banana fruits.

