

10. CHANGES IN POSTHARVEST DISEASE DEVELOPMENT AND RIPENING OF 'AMBUL' BANANAS TREATED WITH ACID AND ALKALINE SUBSTANCES COMPARED TO A BENLATE TREATMENT

N. PERERA AND A.M. KARUNARATNE

*Department of Botany, Faculty of Science,
University of Peradeniya.*

Some non-pesticidal postharvest treatments were tested on Ambul bananas to compare their effects with that of a commercial fungicide. Since it was found that the pH value of peels of Ambul bananas reduced from 5 to 4, with ripening, acid and alkaline substances were dissolved in distilled water separately, and were infiltrated into harvested fruits under pressure ($4.3 \times 10^{-3} \text{ Kg m}^{-2}$) for 5 min. When a 0.4% NaHCO_3 solution was used, ripening and disease development were delayed by a day. When different concentrations of acetic acid were used, 0.2% acetic acid caused over 70% reduction of total disease, a 4 days' delay in disease appearance and a 2 days' delay in ripening. Dipping in Benlate (1.2g in 1l) for 10 min. eliminated diseases significantly, but the fruits ripened a day earlier than the controls. A 0.1% citric acid solution caused disease appearance to advance by a day. When conidia of *Colletotrichum musae* were inoculated on to a series of acidified Cook's No. 2 broth cultures, the fungus did not grow below a pH of 4.0. Work is proceeding to determine the biochemical basis of these treatments.

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