EFFECT OF POSTHARVEST TREATMENTS ON THE SHELF LIFE OF MAURITIUS PINEAPPLE (*Ananas comosus* L. Merr.)

A PROJECT REPORT PRESENTED

BY

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to the

POSTGRADUATE INSTITUTE OF SCIENCE

in partial fulfillment of the requirement

for the award of the degree of

MASTER OF SCIENCE

of the

UNIVERSITY OF PERADENIYA

SRI LANKA

October 2002

ABSTRACT

Effect of Postharvest Treatments on the Shelf Life of Mauritius Pineapple (*Ananas comosus* L. Merr.)

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This study was carried out to observe the effect of postharvest treatments on the shelf life of Mauritius pineapple for the award of the degree of Master of Science under the Board of Study in Plant Sciences at Post Graduate Institute of Science, University of Peradeniya.

Eight different treatments, *viz.*, control, benlate dip, topsin dip, 300-gauged black polythene wrap, 300-gauged white polythene wrap, 150-gauged white polythene wrap, paper wrap and wax treatment were given for pineapple fruits at less than quarter ripe stage. In a treatment, six replicates each comprising two fruits of similar characteristics were used.

Their physiochemical properties, *viz.*, titratable acidity, ascorbic acid content, total soluble solids, pH, firmness, weight loss, and shell colour were determined by using standard methods after five, ten and fifteen days of storage in ambient temperature. An organoleptic evaluation was also conducted.

Titratable acidity, ascorbic acid content and firmness had decreased while weight loss and pH had increased, showing significant differences between treatments during storage. Total soluble solids remained more or less unchanged over the storage period without any significant differences between treatments. But significant treatment differences were observed in the shell colour and organoleptic properties during storage.

When fruits were stored in sealed polythene films, some desirable properties such as minimum weight loss, higher degree of firmness, lower levels of titratable acidity and ascorbic acid and high pH were observed when compared to others.

Control and waxed fruits proved similar results in moderate weight loss, high amount of titratable acids with low pH. Further, these parameters had only slight deviations from initial values. Therefore, these two treatments were more appropriate for short-term pineapple storage in ambient temperature.

But, considering cost factor and high ascorbic acid content, control treatment would be the best method to store pineapple for short period at the tested environmental conditions.