

QUALITY CHANGES IN PINEAPPLE
(*Ananas comosus* Merr. cv. Josepine)
STORED AT LOW TEMPERATURE

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**QUALITY CHANGES IN PINEAPPLE (*Ananas comosus* Merr. cv. Josapine)
STORED AT LOW TEMPERATURE**

**By
Nur Atiqah binti Anuar**

**Research Report submitted in partial fulfillment of
the requirements for the degree of
Bachelor of Science in Agrotechnology (Post Harvest Technology)**

**DEPARTMENT OF AGROTECHNOLOGY
FACULTY OF AGROTECHNOLOGY AND FOOD SCIENCE
UNIVERSITI MALAYSIA TERENGGANU
2010**

ENDORSEMENT

The project report entitled **Quality Changes in Pineapple (*Ananas comosus* Merr. cv. Josapine) Stored at Low Temperature** by Nur Atiqah binti Anuar, Matric No. **UK 16038** has been reviewed and corrections have been made according to the recommendations by examiners. The report is submitted to the department of Agrotechnology in partial fulfillment of the requirement of the degree of Agrotechnology (Post Harvest Technology), Faculty of Agrotechnology and Food Science, Universiti Malaysia Terengganu.

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DECLARATION

I hereby declare that the work in this thesis is my own except for quotations and summaries which have been duly acknowledged.

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Date : 26 APRIL 2010

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ABSTRACT

Studies on the storage of pineapple cv. Josapine were conducted. The fruits used in this experiment were selected based on maturity index of 0 and stored at 10°C and at ambient temperatures for up to 4 weeks. It was assumed that when storage temperature is high, rate of fruit metabolism after harvest increases therefore causing them to deteriorate in quality. The objective of this study was to observe the quality changes of pineapple cv. Josapine stored at low temperature. Four batches of pineapples were stored one at ambient temperature storage and at low temperature of 10°C. Changes in fruit quality on the physical and chemical changes were evaluated weekly. Observations and analysis were made on weight loss, skin colour, crown condition, flesh colour, ascorbic acid, total soluble solids and pH. Fruit quality was maintained throughout storage at low temperature and deteriorated faster for fruit stored at ambient. From all the parameters that were studied, the first treatment, which was the storage at 10°C gave the best result for the all parameters. This was because low temperature slowed down the rate of metabolism of the fruit. Therefore, quality changes in pineapple stored at low temperature was minimal as compared to ambient temperature storage.

ABSTRAK

Kajian terhadap buah nanas kv. Josapine telah dijalankan. Buah telah dituai kira-kira pada indeks kematangan 0 dan disimpan pada suhu 10°C dan pada suhu sekitar sehingga 4 minggu. Adalah dianggap bahawa apabila suhu penyimpanan adalah tinggi, kadar metabolisma buah selepas tuaian adalah tinggi seterusnya menyebabkan kualiti buah rendah. Objektif kajian ini adalah untuk mengkaji perubahan kualiti buah nanas kv. Josapine yang disimpan pada suhu rendah. Empat kumpulan nanas telah disimpan pada suhu sekitar dan suhu rendah 10°C. Perubahan kualiti buah pada keadaan fizikal dan sifat kimia telah diselidik pada setiap minggu. Pemerhatian dan analisis dilakukan terhadap kehilangan berat, warna kulit, keadaan jambul, warna isi, asid askorbik, pepejal larut keseluruhan dan pH. Kualiti buah terpelihara sepanjang dalam penyimpanan pada suhu rendah dan berubah dengan cepat dalam penyimpanan pada suhu sekitar. Dari kesemua parameter yang dikaji, rawatan pertama iaitu penyimpanan pada suhu 10°C memberikan keputusan yang terbaik keada semua parameter yang dikaji. Ini disebabkan oleh suhu rendah melambatkan kadar metabolisma buah. Oleh itu, perubahan kualiti buah nanas yang disimpan pada suhu rendah adalah minima jika dibandingkan dengan penyimpanan pada suhu sekitar.