

THE EFFECTS OF DIFFERENT TEMPERATURE WITH  
DIFFERENT ARRANGEMENT DURING STORAGE  
ON THE SHELF LIFE OF RED PATAVA  
(*Hytococcus polytrichus*)

SITI NORHAYESE AZLIAN DANI AHMAD

FAKULTAS PERTANAHAN, UJUMBUH AND FOOD SCIENCE  
UNIVERSITAS MELAYU NEGERI SEMBANG

2012



## **ACKNOWLEDGEMENTS**

Special thanks to my supervisor, Prof. Madya Dr. Awang Soh Bin Mamat, for his support, professionalism and guidance that enable this project to run smoothly. Heartiest thanks for his help and cooperation in guiding through this project.

Special thanks to all the lecturers of Faculty of Agrotechnology and food Science and to all post- harvest technology laboratory staffs for their cooperation and permission to use facilities in the laboratory.

A lot of thanks to all my friends for their contribution in constant help in technical assistance and spiritual support during the studies. Also special thanks to Nuradzrina Binti Haji Norani for the fruits from her cultivation site that used in this study.

Lastly, my gratitude goes to my parent for their encouragement and supportive advice. May the Lord bring all of you His blessing.

## ABSTRACT

A study was carried out to determine the effect of different storage temperatures and different arrangements during storage of red pitaya (*Hylocereus polyrhizus*) to its shelf life. Pitaya fruit were arranged in three arrangements; standing vertically, upside down vertically and lying horizontally. Each arrangement was kept in two different storage temperatures which are ambient temperature (28°C) and cold room (4°C) for 15 days. The control fruits are kept in ambient temperature without specific arrangement. Assessments on weight loss, stem quality, the fruit quality, presence of rots on the fruit peel and the soluble solids concentration (brix value). These assessments were done for every three days. After 15 days, the result of this experiment have shown that the fruits which stored in cold room (4°C) with standing arrangement, upside down and lying arrangement gave significant different compared with other treatment in reducing the weight loss (significant different = 0.00) and maintaining green healthy stem (significant different = 0.016). From the observation of rots appearance, include blossom end rots (significant different = 0.007) and body rots (significant different = 0.004), it shows that these treatments gave no sign of rotting on the fruits pulp and thus maintaining the quality of fruits for at least 15 days of storage.