

THE EFFECT OF DIFFERENT HARVESTING DATES ON  
SHELF LIFE OF EGGPLANT  
(*Solanum melongena*)

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THE EFFECT OF DIFFERENT HARVESTING DATES ON SHELF LIFE OF  
EGGPLANT (*Solanum molengena*)

By  
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Research Report submitted in partial fulfillment of  
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DEPARTMENT OF AGROTECHNOLOGY  
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## ENDORSEMENT

The project report entitle **The Effect Of Different Harvesting Dates On Shelf Life of Eggplant (*Solanum molengena*)** by **Siti Faridah Hamdillah** Matric No. **UK 16337** has been reviewed and corrections have been made according to the recommendations by examiners. This report is submitted to the Department of Agrotechnology in partial fulfillment of the requirement of the degree of Bachelor of Science Agrotechnology (Postharvest 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 quotation and summaries which have been duly acknowledged.

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## ABSTRACT

This study was conducted to determine the effect of different harvesting date on the shelf life of eggplant (*Solanum molengena*). Eggplant trees were planted with fertigation system at Green House, Department of Agrotechnology, and University Malaysia Terengganu. The entire samples were tagged after flower bud emerged and harvested at three different times where the first harvesting date was (25 days after tagging), second harvesting date (30 after tagging) and third harvesting date (35 days after tagging). After harvesting, all the samples were evaluated with physical and chemical analysis of firmness, skin color, vitamin C, pH, and total soluble solid (TSS) every 3 days over a storage at ambient for 9 days. The fruit of the first harvesting date contained high sugar compared to the second and the third harvesting. The higher content of vitamin C was obtained in the third harvesting date followed by second harvesting date and first harvesting date. The pH value of three harvesting dates showed an increase trend from day 0 until day 9 during storage ( $24\pm 0.2^{\circ}\text{C}$ ). The firmness was higher in the first harvesting date compared to the second and third harvesting dates. The high value of firmness also related to the shiny skin color of eggplant. From the results, the best quality of eggplant was found when the fruits were harvested at 25 days after tagging (flower bud emerged). This stage had high total soluble solid, shiny skin and flesh firmness

## ABSTRAK

Kajian ini telah dijalankan untuk menentukan waktu penuaian terhadap jangka hayat terung (*Solanum molengena*). Pokok terung ditanam secara fertigasi di Makmal Tanaman Lepas Tuai, Fakulti Agroteknologi dan Sains Makanan, Universiti Malaysia Terengganu. Semua sample di tanda selepas kudup bunga keluar dan di tuai sebanyak tiga kali iaitu tuaian pertama (25 hari selepas ditanda), tuaian kedua (30 hari selepas ditanda) dan tuaian ketiga (35 hari selepas ditanda). Selepas dituai semua sample dianalisis dari segi fizikal dan kimia termasuk kandungan vitamin C, gula, pH, kekerasan dan warna kulit. Buah pada hasil tuaian pertama mempunyai kandungan gula yang tinggi berbanding tuaian kedua dan tuaian ketiga. Kandungan vitamin C tinggi pada hasil tuaian ketiga berbanding tuaian kedua dan pertama. Nilai pH pada ketiga-tiga hasil tuaian menunjukkan penurunan dari hari 1 hingga hari ke semasa penyimpanan. ( $24 \pm 0.2^{\circ}\text{C}$ ). Nilai kekerasan pada hasil pertama tuaian lebih tinggi berbanding tuaian kedua dan ketiga. Nilai kekerasan yang tinggi membuktikan bahawa kulit buah terung pada hasil tuaian pertama lebih berkilat. Hasil daripada kajian saya, kualiti buah yang baik adalah pada hasil tuaian pertama iaitu 25 hari selepas kudup bunga keluar. Pada hasil tuaian ini, buah terung mempunyai kandungan gula yang tinggi, kulit yang bersinar dan kekerasan isi yang baik untuk penyimpanan.