

ANALYSIS OF THE EFFECTS OF POTASSIUM, PHOSPHORUS AND
ZINC ON THE GROWTH AND YIELD OF THE WASE LIFE OF
SUNFLOWER (*Helianthus annuus*)
GIVE FLOWER

THE FOOT KOSY

THE UNIVERSITY OF CALicut
SCHOOL OF DISTANCE EDUCATION
BIOLOGY

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The effect of sodium hypochlorite, glucose and cold water treatment on the vase life of chrysanthemum (*Chrysanthemum morifolium*) cut flower / Ng Hooi Koon.

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**THE EFFECT OF SODIUM HYPOCHLORITE, GLUCOSE AND COLD
WATER TREATMENT ON THE VASE LIFE OF CHRYSANTHEMUM
(*Chrysanthemum morifolium*) CUT FLOWER**

**By
Ng Hooi Koon**

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

**Department of Agrotechnology
FACULTY OF AGROTECHNOLOGY AND FOOD SCIRNCE
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FAKULTI AGROTEKNOLOGI DAN SAINS MAKANAN
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PENGAKUAN DAN PENGESAHAN LAPORAN
PROJEK ILMIAH I DAN II

Adalah ini diakui dan disahkan bahawa laporan ilmiah bertajuk:

THE EFFECT OF SODIUM HYPOCHLORITE, GLUCOSE AND COLD
WATER TREATMENT ON THE VASE LIFE OF CHRYSANTHEMUM
(Chrysanthemum morifolium) CUT FLOWER

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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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ABSTRACT

Chrysanthemum is very sensitive to high temperature which will shorten its vase life by lowering carbohydrate concentration. Improper concentration of preservative solutions and present of bacteria in tap water also can cause wilting of chrysanthemum, and also failure of the flowers to fully open. The present investigation was therefore carried out to study the effect of cold water, sodium hypochlorite (NaOCl) and glucose on chrysanthemum cut flowers vase life and their freshness under ambient temperature ($25^{\circ}\text{C} \pm 1^{\circ}\text{C}$). Chrysanthemum cut flowers were kept in tap water, cold water ($4^{\circ}\text{C} \pm 1^{\circ}\text{C}$), 0.5% NaOCl, 1.0% NaOCl, 5.0% NaOCl, 5.0% glucose, 10.0% glucose and 15.0% glucose to test their effect on vase life and freshness of flowers. Data were collected from physical measurements in several categories; namely, diameter, blooming rate and vase life. The vase life of flower was considered terminated when more than 50% of the open flowers had wilted. All the treatments had positive effect on the flower's diameter and blooming rate. Cold water ($4^{\circ}\text{C} \pm 1^{\circ}\text{C}$) gave maximum vase life of chrysanthemum cut flowers up to around 26 days as compared to control water which was around 19 days. Besides, cold water ($4^{\circ}\text{C} \pm 1^{\circ}\text{C}$) also work best in keeping chrysanthemum cut flowers look fresh for vase display and the flower blooms.