# بسم الله الرحمن الرحيم

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# PHYSIOLOGICAL STUDIES ON SOME CUT FLOWERS

**By**


## MANAL HOSNY TAHA ABDELHALIM

**B.Sc. Agric. Sci. (Ornamental Horticulture), Fac. Agric., Cairo Univ., 2008**


## THESIS

**Submitted in partial Fulfillment of the Requirement for the Degree of**

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**In**

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**(Ornamental Horticulture)**


**Department of Ornamental Horticulture**
**Faculty of Agriculture**
**Cairo University**
**EGYPT**


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APPROVAL SHEET

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**By**


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**Date: 9/9/2019**

SUPERVISION SHEET

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**Title of Thesis:** Physiological studies on some cut flowers

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**Department:** Ornamental Horticulture Branch: Ornamental Horticulture

**Date: 9 / 9 /2019**

## ABSTRACT

To determine the appropriate treatment suitable for improving the heads flowers keeping quality and detecting some physiological changes occurring during the vase life period of the cut *(Dendranthema grandiflorum,* Ramat) cvs White Reagan and Arctic Queen heads flowers so, this study was consummated at post-Harvest. Lab. of floriculture Dep., Hort. Res. Inst., Giza, Egypt during 2013 and 2014 seasons to study the effect of some holding solutions ,viz. distilled water, (control), Gibberellic acid at 0.001%, Sucrose at (2 and 4 %), Citric acid at (150 mg/l), and 8-Hydroxyqunoline citrate at (200 mg/l) on longevity of flower heads (vase life), water uptake, number of yellowing leaves and number of days from putting flowers in the different solutions to yellowing leaves (day). The obtained data exhibited that all holding solutions caused a marked increment in the studied characters compared to that registered from Sucrose (4%). In this respect, cut flowers treated with Sucrose at (2%) +8-Hydroxyqunoline citrate at (200 mg/l) + Gibberellic acid at (0.001 %) + Citric acid at (150 mg/l) decreased yellowing leaves and improved chlorophyll content and total carbohydrates in flower petals and leaves followed by the combined treatment of Sucrose at (4%) + 8-Hydroxyqunoline citrate at (200mg/l) + Gibberellic acid at (0.001%) + Citric acid at (150mg/l). Cut flowers *(Dendranthema grandiflorum,* Ramat.) cv. White Reagan gave the best results for studied characters compared to cv. Arctic Queen, results of interaction showed that all holding solutions had the highest effect on extending vase life, number of days taken for yellowing leaves and water uptake, while decreased number of yellowing leaves and improved chlorophyll content and total carbohydrates in flower petals and leaves .It could recommended to extend vase life of chrysantmemum cvs White Reagan and Arctic Queen holding cut flower in distilled water content sucrose ( 2%) + 8-Hydroxyqunoline citrate (8-HQC) (200 mg/l) + $GA_3$ (0.001 %)) + Citric acid (150mg/l).

**Keywords:** Vase life, chrysanthemum cv. White Reagan and Arctic Queen, Gibberellic acid, Sucrose, 8-Hydroxyquinoline citrate, Citric acid.

# *DEDICATION*

*Thank fullness and gratefulness to ALLAH who always helping me through my life and enabled me to fulfill my thesis.*

*I dedicate this work to my mother and my husband for all the support they lovely offered during my post-graduate studies.*

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# CONTENTS

# LIST OF TABLES