



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكرو فيلم

بسم الله الرحمن الرحيم



HANAA ALY



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شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

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HANAA ALY

MICROPROPAGATION OF SOME INDOOR ORNAMENTAL PLANTS

By

REDA MOHAMED ABD EL BASET

B.Sc. Agric. Sci. (Horticulture), Fac.Agric., Ain Shams University, 2002
M.Sc. Agric. Sc. (Ornam., Medic. and Aroma. Plant), Fac. Agric., Ain Shams Univ., 2009

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This thesis for PH.D. degree has been approved by:

Dr. Emam Mohamed Saber Nofal

Prof. Emeritus of Ornamental Plants, Faculty of Agriculture, Kafr
El sheikh University.

Dr. Mostafa Hassan El-Sherif

Prof. Emeritus of plant Physiology, Faculty of Agriculture, Ain
Shams University.

Dr. Sohair El-Sayed Mohamed Hassan

Prof. Emeritus of Ornamental, Medicinal and Aromatic Plants,
Faculty of Agriculture, Ain Shams University.

Date of Examination: 26 /12 / 2020

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Under the supervision of:

Dr. Sohair El-Sayed Mohamed Hassan

Prof. Emeritus of Ornamental Plants, Department of Horticulture,
Faculty of Agriculture, Ain Shams University (Principal
Supervisor).

Dr. Mohammed Hewidy Mahmoud Ramadan

Lecturer of Ornamental, Medicinal and Aromatic Plants, Horticulture
Dept., Faculty of Agriculture, Ain Shams University.

Dr. Faisal Mohamed Abdel-Aleam Saadawy

Head Researches Emeritus, Ornamental Plants and Landscape
Design Research Department, Horticulture Research Institute,
Agricultural Research Center.

ABSTRACT

REDA MOHAMED ABD EL BASET: MICROPROPAGATION OF SOME INDOOR ORNAMENTAL PLANTS. Unpublished M.Sc. Thesis, Department of Horticulture, Faculty of Agriculture, Ain Shams University, 2020.

These experiments were carried out in the Tissue Culture Laboratory, Horticulture Research Institute, Agricultural Research Center, Giza, Egypt during the period from 2015 to 2017, to investigate some factors affecting the micropropagation of 2 indoor ornamental plants *Alocasia amazonica* and *Epithelantha micromeris* by tissue culture.

The first plant: *Alocasia amazonica*

Experiment 1: Multiplication: the use of 3 ppm BAP: had the highest number of shoots. 2 ppm Kinetin: got the highest values for shoot length, shoot fresh weight and number of roots.

Experiment 2: Agar substitutes and sugar availability: potato with sugar had the highest degree for all studied characters, i.e. Number of shoots, shoot fresh weight, shoot length, number of leaves, number of roots, root fresh weight and root length.

Experiment 3: Effect of auxin type and concentration and their interaction on rooting, at 2 ppm IBA: acquired the highest number of shoots, number of leaves and number of roots. The use of 3 ppm IBA: got the highest number of shoots, number of leaves and number of roots.

Experiment 4: Acclimatization: Perlite+peatmoss: had the heaviest plant fresh weight and number of roots, while peatmoss achieved the highest value for plant fresh weight.

The second plant: *Ephelantha micromeris*: **Experiment 5:** soaking seeds in GA₃ at 1000 ppm for 20 min resulted in higher percentage of germination compared to soaking in a distilled water.

Experiment 6: Multiplication: BAP at 2-3 ppm obtained the greatest number of shoots and heaviest cluster fresh weight. Kinetin at 3 ppm also achieved the highest number of shoots

Experiment 7: Vetrification: Agar at 11 g/l without coal achieved the lowest vetrification%.

Experiment 8: Rooting: the use of NAA at 2 ppm: got the first rank concerning number of roots, root fresh weight, shoot length and plant fresh weight.

Experiment 9: Acclimatization: Perlite, perlite+peatmoss: achieved the highest rank for number of roots and root length. Peatmoss: obtained the greatest records for plant fresh weight and plant length.

LIST OF ABBREVIATIONS

Abbreviation : Meaning of abbreviation

BA, BAP : Benzyl adenine

cm : Centimeter (s)

Conc. : Concentration (s)

Fig. : Figures

g : Gram (s)

IBA : Indole-3-butyric acid

l : Litre

mg/g : Milligram / gram

MS : Murashige and Skoog medium

NAA : Naphthalene acetic acid

No. : Number

Pl. : PLATES

Ppm : Part per milion

Tot. Chl. : Total chlorophyll

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