

CURRICULUM VITA



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DATE OF BIRTH: May 24, 1954
NATIONALITY: Egyptian **PLACE OF BIRTH:** Port Said
MARITAL STATUS: Married **CHILD:** One

ACADEMIC QUALIFICATIONS

EDUCATION

YEAR	INSTITUTION	DEGREE	SUBJECT
1977	Faculty of Agriculture, Cairo Univ.	Bachelor	Horticulture Department
1992	Valinsia Univ., Spain	Diploma	Horticulture
1993	Faculty of Agriculture, Cairo Univ.	Master	Ornamental, medicinal and aromatic plant
1998	Faculty of Agriculture, Cairo Univ.	Ph.D.	Ornamental, medicinal and aromatic plant

EMPLOYMENT HISTORY

FROM	TO	ORGANIZATION / INSTITUTION	POSITION HELD
2008	Till now	Medicinal & Aromatic Plants Research Dept., Horticultural Research Institute (HRI) & National Gene Bank (NGB) - Agricultural Research Centre (ARC)	Professor of Medicinal & Aromatic Plants
2003	2008	Medicinal & Aromatic Plants Research Dept., Horticultural Research Institute (HRI) & National Gene Bank (NGB) - Agricultural Research Centre (ARC)	Associate Professor of Medicinal & Aromatic Plants
1998	2003	Medicinal & Aromatic Plants Research Dept., Horticultural Research Institute (HRI) - Agricultural Research Centre (ARC)	Researcher of Medicinal & Aromatic Plants
1994	1998	Medicinal & Aromatic Plants Research Dept., Horticultural Research Institute (HRI) - Agricultural Research Centre (ARC)	Assistant Researcher of Medicinal & Aromatic Plants
1991	1994	Medicinal & Aromatic Plants Research Dept., Horticultural Research Institute (HRI) - Agricultural Research Centre (ARC)	Researcher Assistant of Medicinal & Aromatic Plants
1978	1991	Ministry of Agriculture & Land Reclamation	Agricultural Engineer

PROFESSIONAL EXPERIENCE

TRAINING COURSES

- Potato production, storage and seed technology, International Agriculture Centre, Wageningen, Netherland (April to July, 1987).
- National course of pests fighting centre of management, Ministry of Agriculture (NARP Project), Egypt, January 1989.
- Condensed course of greenhouse agriculture techniques, Egyptian Ministry of Agriculture, in cooperation with UNDP-FAO, October 1989.
- Irrigation of agriculture crops, university of Novi Sad, Yugoslavia (May to August, 1990), in cooperation with Agriculture University of Wageningen.
- Diploma in economics of production and marketing of citrus (November, 1982); Spain from September 1992 to April 1993.
- Master in Citrculture Polytechnical, University of Valensia, Spain (September 1992 to April 1993).
- Tissue culture, Egyptian Ministry of Agriculture (July 1993).
- Tissue culture, Egyptian Ministry of Agriculture in cooperation with Suez Canal University (October, 1993).
- Environment- oriented resource planning in intensive agriculture German Foundation for International Development DSE, Zscortau, the Federal Republic of Germany (August, 1994)

AWARDED

- International DLG- prize (Deutsche Landwirtschaftis Gesellschaft), West Germany, November 1985.
- International Agriculture Centre, Wageningen, the Netherlands, 1987.
- Irrigation of agriculture crops, University of Novi Sad, Yugoslavia, 1990.
- Environment protection prize, Arab office of youth and environmental in corporation with Al-Ahram since clubs, Egypt June 1982; June 1990.
- Diploma of master in production and marketing of citrus, November 1982; Spain 1993.
- Environment-oriented resource planning in intensive Agriculture German Foundation for International Development DSE, Zscortau, the Republic of Germany, 1994.

MEMBERSHIP IN SCIENTIFIC SOCIALITES

- Egyptian society of horticulture.
- Arab office of youth and environment.
- Egyptian society of volatile oils, taste and odor additives.
- Egyptian society for medicinal and aromatic plants producers, manufactures and exports.
- Arab society for biotechnology.
- Environment friends' society of horticultural research institute.
- Egyptian syndicate of agronomists.

GENERAL SKILLS

Computer skills:

PACKAGE/APPLICATION/SOFTWARE	ADVANCED	INTERMEDIATE	BEGINNER
WORD		*	
INTERNET		*	
INTERNET DESIGN			*
EMAIL		*	
EXCEL		*	
ACCESS			*
PHOTOSHOP		*	
TYPING ABILITY ENGLISH		*	
TYPING ABILITY ARABIC		*	
Statistical SW		*	
OTHER:			
OTHER:			

Languages:

AREA	ADVANCED	INTERMEDIATE	BEGINNER
ENGLISH WRITTEN	*		
ENGLISH SPOKEN	*		
ARABIC WRITTEN	*		
ARABIC SPOKEN	*		
OTHER: SPANISH		*	

MORPHO-BIOCHEMICAL CHARACTERIZATION OF SOME MINT (*Mentha spp.*) GERMPLASM MAINTAINED IN NATIONAL GENE BANK, EGYPT

BY

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FROM

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ABSTRACT

Nine *Mentha spp.* germplasm collected and maintained in the green house of the National Gene Bank of Egypt during 2008-2009 seasons. The *Mentha spp.* germplasm subjected to characterize and document addressing essential oil constituents as well as macro-morphological attributes. Total of eight macro-morphological attribute and fourteen essential oil attributes measured. Essential oil percentages ranged from 0.54% in *Mentha sativa* cv. siwy to 4.16% in *Mentha longifolia* subsp. *Typhoides*. The major essential oil constituents detected were: α -pinene, β -pinene, phellandrene, menthone, methyl acetate, menthofurane, 1,8-cineol, iso-menthol, menthol, pulegone, limonene, carvone and caryophellene. Some germplasm have essential oil with a high content of a particular constituent, like pulegone (80.23 % in *Mentha pulegium*) and menthol (67.38 in *Mentha sativa* cv. siwy). Phellandrene, mean of essential oil percentages and carvone are important to distinguish the two subspecies (subsp. *typhoides* and subsp. *schimperi*) of *Mentha longifolia* and *Mentha suaveolens* from the rest of studied taxa. Pulegone has the importance value to distinguish *Mentha pulegium* from the rest of studied taxa. In combination of taxa and all attributes, the *Mentha* germplasm separated into three groups. The first group contain the two subspecies (*typhoides* and *schimperi*) of *Mentha longifolia* highlighted the importance of leaf shape, leaf color, leaf petiole, α -pinene, β -pinene, phellandrene, menthofurane, carvone and mean of essential oil %. The second group contains the *Mentha pulegium* due to the effects of stem habit, methyl acetate and pulegone. The third group contains the rest of studied *Mentha* germplasm. These data will be used to enhance sources of information of *Mentha spp.* germplasm in the gene bank.

Characterization of some *Pelargonium spp.* in Egypt.

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TO GENERATE essential information of the identification, description and documentation of *Pelargonium*, *P. graveolens* L'Herit. Ex Ait cv. Baladi, *P. graveolens* cv. Kanater-8, *P. graveolens* cv. Gazaari (Algerian), *P. fragrans* Wild. and *P. radula* (Cav.) L'Her. were subjected to characterize and document using macro-morphological, micro-morphological data and chemical analysis of oil. A total of 47 attributes were selected, which are representing macro-morphology (26), hairs (9), stomata and epidermal cell (2) and oil percentage (10). Micro-morphologically, *P. fragrans* can be distinguished by presence of hair type 4 and mixed type of leaf stomata. The highest essential oil percentage (0.540%) was recorded in the first cut of *Pelargonium radula*, while the lowest percentage (0.110%) was recorded in second cut of *P. graveolens* cv. Gazaari (Algerian). GLC analysis of geranium essential oils revealed that a total of seven essential oil components were determined viz.: Lemonene, linalool, citronellyl formate, citronellol, geraniol, geranyl butyrate and geranyl tiglate. The essential oil of *Pelargonium fragrans* was characterized by presence of limonene and absence of citronellyl formate and geraniol.

Key words: Characterization, Geranium oil, *Pelargonium*

RESPONSE OF LAVENDER PLANT (*Lavandula multifida* L.) TO COMPOST AND ACTIVE DRY YEAST.

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ABSTRACT

*This study was carried out at the Experimental Nursery of Department of Medicinal and Aromatic Plants, Horticultural Research Institute, Agricultural Research Center, Dokki, during the two successive seasons of 2003 and 2004. The aim of the study was to investigate the effect of organic fertilizer (compost) at the rate of 25, 50 and 75 g/pot, and bio-fertilization (active dry yeast, ADY) at 5g/ L on the growth, oil yield and chemical composition of lavender (*Lavandula multifida* L.) plants. Two cuts were taken during two seasons. Data on vegetative growth, flowering, essential oil production and plant constituents were recorded. The results revealed an increases in plant height, No. of branches/plant, No. of leaves/plant, No. of main spikes/ plant, total fresh and dry weights/ plant, volatile oil percentage in both leaves and spikes, leaves and spikes oil yield/ plant, total volatile oil yield/ plant. Furthermore, results of GLC analysis of the essential oil components revealed an increment in 1, 8 cineole, linalool, linalyl acetate and borneol. Also, there were increments in photosynthetic pigments contents, carbohydrates content and mineral contents due to the treatments of compost either alone or in combination with active dry yeast. This could result in environmentally safe plants to minimize the hazards of pollution caused by using mineral fertilizers.*

Keywords: *Lavandula multifida*, compost, dry yeast, growth parameters, essential oil percentage, essential oil components.

INFLUENCE OF BIOFERTILIZERS ON GROWTH, VOLATILE OIL YIELD AND CONSITITUENTS OF FENNEL (*FOENICULUM VULGARE*, MILLER) PLANT

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(Manuscript Received 28 December 2005)

Abstract

Two field experiments were carried out at Baramoon Experimental Station, Dakahlia Governorate, Egypt, during the two successive seasons of 2003-2004 and 2004-2005 to study the effect of Bio Effective Microorganisms (EM₁), ascobein, microbein, biogein and ammonium sulphate at the rate of 150 kg/Fed. The results were as follow:

Biogein followed by microbein, ascobein and ammonium sulphate, respectively, compared with untreated plants enhanced all measurements such as plant height, number of branches, number of umbels, weight of fruits (per plant and per plot), volatile oil percentage, volatile oil yield (per plant and per plot), the main component of fennel volatile oil (anethole) was increased in the two seasons in comparison with control plants.

The combinations of EM₁ with each of biogein, microbein, ascobein and ammonium sulphate were more effective on all traits studied than each individual treatment in both seasons.

(EM₁) application individually achieved results better than obtained by biogein, microbein, ascobein and ammonium sulphate individually, on the other hand, combination of EM₁ with each of biogein, microbein, ascobein or ammonium sulphate, respectively, were the best applications in both two seasons.

**EFFECT OF CHEMICAL, ORGANIC FERTILIZERS AND ACTIVE DRY YEAST ON *SALVIA OFFICINALIS*, L. PLANTS.
I. EFFECT ON GROWTH AND YIELD.**

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ABSTRACT

The present study was conducted during the two successive seasons of 2003/2004 and 2004/2005 at the Farm of Ornamental Horticulture Department, Faculty of Agriculture, Cairo University and Medicinal and Aromatic Plants Department, Horticulture Research Institute, Agricultural Research Center, Dokki, Giza to investigate the effect of chemical fertilizers (NPK), organic manure (poultry manure) and spraying active dry yeast on sage (*Salvia officinalis*) plants. The results showed that, NPK fertilizer [300 kg ammonium sulphate (20.6 % N), 200 kg calcium superphosphate (15.5 % P₂O₅) and 100 kg potassium sulphate (48 % K₂O)/ fad/ season] significantly increased plant height , number of branches/ plant , leaf area , leaves, stems and herb fresh and dry weights/ plant compared to the control, in most cases.

In general, poultry manure (PM) fertilizer at 10 and 20 m³ / fad / season significantly increased number of branches/ plant , leaf area , fresh and dry weights of leaves, stems and herb / plant compared to the control. Also, plant height was significantly increased as a result of using PM at 20 m³ / fad. PM at 20 m³/ fad was more effective than 10 m³ / fad / season.

Spraying active dry yeast alone at 5 g/ L significantly increased plant height, leaf area, fresh and dry weights of leaves and herb, and dry weight of stems in the first cut of both seasons. It also significantly increased fresh weight of stems in the first season in both cuts .

Generally, interaction between PM fertilizer at 10 or 20 m³ / fad/ season and spraying plants with active dry yeast at 5 g / L significantly increased plant height , number of branches / plant , leaf area , leaves fresh and dry weights/ plant and herb fresh and dry weights / plant in both cuts of the two seasons, compared to the control. PM at 20 m³ / fad plus active dry yeast at 5 g / L was recommended.

Keywords: Chemical, organic fertilizers, active dry yeast, *salvia officinalis*, yield.

**EFFECT OF CHEMICAL, ORGANIC FERTILIZERS AND ACTIVE DRY YEAST ON *SALVIA OFFICINALIS*, L. PLANTS.
ii.EFFECT ON OIL PRODUCTION AND PLANT CONSTITUENTS.**

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ABSTRACT

The results showed that, NPK fertilizer [300 kg ammonium sulphate (20.6 % N), 200 kg calcium superphosphate (15.5 % P_2O_5) and 100 kg potassium sulphate (48 % K_2O)/ fad./ season increased oil percentage in the second season, oil yield / plant in both seasons, α -pinene, β -pinene, 1,8 cineole, thujone and carvacrol percentage in the oil, chlorophyll a and carotenoids percentages in the second cut of both seasons, total carbohydrates, N, P and K contents in both seasons, in most cases, compared to the control.

PM fertilizer at 10 and 20 m^3 / fad increased oil percentage in the second season, oil yield/ plant, especially in the first cut of both seasons; thujone, camphor and menthol percentages in the oil. These treatments also increased chlorophyll a, b, carotenoids in the second cut of both seasons; total carbohydrates, N and P percentages in most cuts, whereas they decreased oil percentage in the first season and K percentage in most cuts.

Active dry yeast alone at 5 g / L increased oil percentage and oil yield in the second season in most cases; α -pinene, β -pinene, camphene, camphor, borneol and menthol in the oil; chlorophyll a in the second cut of both seasons; total carbohydrates and P percentage in most cases; chlorophyll b and K percentages in the second season; while decreased oil percentage and oil yield in the first season, carotenoids and N in most cuts.

The interaction between active dry yeast at 5 g / L and PM at 10 and 20 m^3 / fad increased oil percentage in the second season; oil yield / plant in both seasons; chlorophyll a and carotenoids percentages in the second cut of both seasons; chlorophyll b content in the second season; total carbohydrates, N and K contents in both seasons compared to the control. Active dry yeast at 5 g / L and PM at 20 m^3 / fad treatment gave the highest oil yield in both seasons and increased 1,8 cineole, thujone, borneol, menthol, carvacrol and caryophyllene contents in the oil. So, active dry yeast at 5 g / L and PM at 20 m^3 / fad treatment is to be the recommended.

Keywords: Chemical, organic fertilizers active, dry yeast, *salvia officinalis*, plants oil production, plant constituents.

EFFECT OF IRRIGATION INTERVALS AND BIOFERTILIZATION ON GROWTH, YIELD, OIL PRODUCTION AND CHEMICAL CONSTITUENTS OF ROSEMARY (*Rosmarinus officinalis*,L.) PLANTS.

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**Med. and Arom. Plant Research Dept., Hort. Research Instit., Agric. Research Center, Dokki, Giza, Egypt.

ABSTRACT

*This investigation was carried out aiming to study the effect of irrigation intervals (every 7 , 11 and 15 days) and Biofertilization (nitroben and phosphorein each at 0 , 3 and 6 g /pot) on growth, yield, oil production and chemical composition of rosemary (*Rosmarinus officinalis*, L.), during two successive seasons of 2004 and 2005.*

The results showed that irrigation every 7 days gave the tallest plants, the highest oil percentage and oil yield/ plant in the first cut of both two seasons, the highest number of branches/ plant, fresh and dry weights/plant, total carbohydrates , N, P and K percentages in the dry herb, in the first and second cut of both seasons and gave the highest linalool and P-cymene percentages in the essential oil. Whereas irrigation every 11 days gave the tallest plants, the highest oil percentage and oil yield/ plant in the second cut of both seasons and the highest α -pinene, β -pinene, limonene, 1,8 cineol and camphor percentages compared to irrigation every 15 days which gave the lowest values.

Nitroben and phosphorein at 3 and 6 gm/ pot significantly increased plant height, number of branches/ plant, fresh and dry weights/ plant and oil yield/ plant, and increased the main constituents of the essential oil (γ -Terpenene, 1,8 cineol, linalool , camphor, P-cymene, bornyl acetate and β caryophyllene percentages), total carbohydrates, N, P and K contents in the first and second cut of both two seasons compared to unfertilized control.

Interaction between irrigation intervals and bio-fertilization had a significant effect on vegetative growth characters, oil percentage and oil yield. Irrigation every 7 days and phosphorein at 6 g /pot gave the highest values of plant height (in the first cut), number of branches /plant (in the second cut), fresh and dry weights /plant (in the first cut), oil yield /plant (in the first cut) and total carbohydrates. N and P contents in the first and second cut of both seasons. Whereas irrigation every 11 days and phosphorein application at 6 g /pot gave the highest dry weight/ plant, oil percentage and oil yield/ plant in the second cut of both two seasons. Irrigation every 11 days and nitroben application at 3 g /pot gave the highest β -pinene, 1,8 cineol, camphor and bornyl acetate percentages in the essential oil. Whereas irrigation every 11 days and phosphorein at 3 gm/pot gave the highest linalool and P- cymene percentages in the essential oil.

Keywords: Irrigation intervals, biofertilization, growth, yield, oil production, chemical constituents, rosemary (*rosmarinus officinalis*,L.) plants.

EFFECT OF ACTIVE DRY YEAST AND ORGANIC MANURE ON *THYMUS VULGARIS* L.

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ARC, Egypt

(Manuscript Received 7 December 2005)

Abstract

To assess the effect of active dry yeast and chicken and cattle manures on the growth and essential oil content of thyme plant (*Thymus vulgaris*, L.), two experiments were carried out at Baramoon Experimental Station, Dakahlia Governorate, Egypt during the two successive seasons 2003/2004 and 2004/2005.

Chicken and cattle manure (at rates of 12, 18 and 24 m³/fed.) were added to soil before sowing (during soil preparation). The active dry yeast was applied as foliar spray with four concentrations i.e., 0, 1, 2 and 3 gm/l three times, after one week from transplanting, one month later and another one month later.

The obtained results revealed that kind of manure caused significant differences on growth characteristics in both two seasons. Chicken manure gave better performance than cattle manure. Active dry yeast increased plant performance in all studied characters. Best growth characteristics were obtained with 24 m³/fed of chicken manure with 3 gm/liter of active dry yeast, at two seasons.

Interactions between three factors i.e., kind of manure x levels of manure x active dry yeast levels shown significant differences on results in most treatments.

EFFECT OF PLANTING DENSITY, SPACING AND NUMBER OF CUTS ON GROWTH, YIELD AND OIL OF *SALVIA OFFICINALIS*, L. PLANTS

SHALAN, M. N., T. A.T. ABDEL-LATIF AND E. A. E. EL-GHADBAN

Medicinal and Aromatic Plants Research Department, Horticultural Research Institute, ARC, Giza, Egypt.

(Manuscript received 21 March 2006)

Abstract

The present work was conducted to study the effect of spacing, number of plants/ hill and number of cuttings on plants of *Salvia officinalis*, L. during two successive seasons of 2003/2004 and 2004/2005. The investigation was carried out in the experimental farm at Baramoon, Dakahlia Governorate, Egypt. Plants harvested at 26 May (First cut) and 26 October (Second cut) – on other hand, plants harvested at 23 April (First cut), 9 June (Second cut) and 26 October (Third cut). On other side plants were cultivated as one plant/hill and others as two plants in every hill at different distances between plants as (30, 40 or 50 cm) in both the two seasons. The obtained results indicated that plant height (cm) showed that one plant/hill at 30 cm apart between hills with two cuttings showed the tallest plant height over all remain treatments, while one plant/ hill at 40 cm distance between hills and two cuttings showed the most furious branches. In general differences were statistically significant in both the two seasons for all growth traits.

Two plants/ hill at 50 cm apart between hills with three cuttings showed more fresh and dry yield per plant (gm) and per plot (kg) and same trend was obtained when essential oil percentage, essential oil yield / ml per plant and per plot were concerned. Differences were statistically significant in both the two seasons.

GLC analysis for sage oil recorded sixteen components, α - thujone was found to be the main component.

**CHEMICAL COMPOSITION AND INSECTICIDAL
ACTIVITY OF THE VOLATILE OILS OF LEAVES AND
FLOWERS OF *LANTANA CAMARA* L. CULTIVATED
IN EGYPT**

By
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AND EL-MEWAFY A. EL-GHADBAN³**

Department of Pharmacognosy, Faculty of Pharmacy (Girls),
Al-Azhar University, Nasr City, Cairo¹, Research Institute of
Medical Entomology, The General Organization for Institutes
and Teaching Hospitals, Giza,² and Department of Medicinal
and Aromatic Plants Research, Horticulture Research Institute,
Agriculture Research Center, Giza³, Egypt.

Abstract

GC and GC/MS analysis of the hydrodistilled volatile oils of the leaves and flowers of *Lantana camara* L. cv. *flava* (Verbenaceae) cultivated in Egypt revealed both qualitative and quantitative variations. Experimentally, twenty-nine and twenty-two components were identified in the volatile oils of leaves and flowers representing 91.91% & 95.24% of the total composition of both oils respectively. The major constituents of the leaves volatile oil were caryophyllene <E-> (9.76%), cineol <1,8-> (9.37%) & pinene <Beta-> (8.15%). The flowers volatile oils were caryophyllene<E->(18.20%), humulene<Alpha-> (12.22%) & bicyclegermacrene (10.33%). Comparing the chemical composition of the volatile oils of the leaves and flowers of *L. camara* cv., *flava* from different origins, seasons and even experimental conditions revealed that there are significant qualitative and quantitative variations. The larvicidal effect of the volatile oils of *L. camara* cv., *flava* leaves and flowers of was tested against the maturation of *Musca domestica* L. larvae in the laboratory at concentrations (0.0125%, 0.025%, 0.05%, 0.1% & 0.2%). They showed mortality rate ranged from 80%-100%. On the other hand, 10-20 % of the developed pupae emerged to adults. Adults' fecundity was in larvae given a concentration of 0.0125%. In conclusion, the volatile oils of the leaves and flowers of *L. camara* cv., *flava* can be safely recommended in controlling *M. domestica* 3rd stage larvae.

تأثير التسميد العضوي (بيوجرين) والتسميد الحيوي على النمو والمحصول والتركييب الكيماوى لنباتات البردقوش

Effect of Organic Fertilizer (Biogreen) and Biofertilization on Growth, Yield and Chemical Composition of Marjoram Plants

سلالات جديدة مباشرة منخبة من بعض اصناف الثوم

New Promising Clones Selected from Some Garlic (*Allium sativum* L.) Cultivars

زيادة تحمل نباتات البردقوش للملوحة باستخدام الرش بالبتروسين

Reinforcing Salt Tolerance of Marjoram Plants by Foliar Application of Putrescence

تأثير تقاوى القلقاس والتسميد الأزوتى على النمو والمحتوى الكيماوى وجودة الكورمات

Effect of Taro Seeds and Nitrogen Fertilizer Levels on Growth, Chemical Constituents and Quality of Corm

التأثير المثبط لبعض الزيوت العطرية على بعض الفطريات الممرضة للنبات

Inhibitory Effect of Essential Oils towards Some Plant Pathogenic Fungi

تأثير الرش بالخميرة والسماذ الورقى (سنجرال) على النمو والمحصول والزيت الثابت لنبات الخروع

Effect of Foliar Spraying with Active Dry Yeast and Complete Fertilizer (sengral) on Growth, Yield and Fixed Oil of (*Ricinus communis* L.) Plant

دراسة تأثير التسميد المعدن وطرق الزراعة على نبات الدمسيسة

Effect of Mineral Fertilization Levels and Methods of Sowing on Damsis Plant (*Ambrosia martima* L.)