Name of Candidate: Sayed Osman Mahmoud Radwan **Degree:** M.Sc.
Title of Thesis: Evaluation of Some Common bean Genotypes Under Different Climatic Conditions
Supervisors: Dr. Sayed Fathey El-Sayed
Dr. Ahmed Ali Gharib
Department: Vegetable Crops **Approval:** / / 2011

ABSTRACT

This study was carried out in Agricultural Experiments and Researches Station of Faculty of Agriculture, Cairo University, and included three parts. The first part aimed to evaluate the performance of seventeen common bean genotypes, as compared with the local common bean 'Nebraska', concerning dry seed production and nutritive value of seeds. Seeds were sown on 23rd February in the first season and on 1st March in the second season of 2007 and 2008, respectively. The second part aimed to evaluate sixteen snap bean genotypes as compared with the commercial snap bean 'Tema' as a control under the high temperature conditions, regarding vegetative growth, yield and its components. Seeds were sown on 10th June in the first season and on 13th June in the second season of 2007 and 2008, respectively. The third part aimed to evaluate fourteen snap bean genotypes, as compared with the commercial snap bean 'Baulista', as to vegetative growth, yield and its components under low temperature conditions. Seeds were sown on 28th October in the first season and on 5th November in the second season of 2007/2008 and 2008/2009, respectively. A randomized complete block design with three replicates was used for caring out the three experiments.

The results of the first part experiment indicated that genotypes 69 528, 25 684, 46 920, Comtesse Chamberd and Line 4 produced the highest pod number per plant while, genotype 69 528, followed by 25 684 produced the highest weight of pods per plant. On the other hand the highest average pod weight was recorded for genotype 28 695 followed by common bean 'Nebraska'. Pods of Blue-lake contained the highest number of seeds per pod followed by 'Comtesse Chamberd', Line 1 and Line5. Line 69 528 had the highest pod and seed yield per feddan while seeds of Comtesse Chamberd had a higher percentage of crude protein than the control while, Seeds of common bean 'Nebraska' significantly had the highest percentage of total carbohydrates in both seasons. The results of the second part experiment revealed that the longest pod of snap bean was obtained by Lines 11 and 18 with significant differences as compared with snap bean 'Tema'. On the other hand, genotype 'RR-25' had the highest early, marketable and total yield with significant differences as compared with all genotypes. Line 10 significantly had the highest chlorophyll content in leaves as well as percentage of total carbohydrates in pods in both seasons. Correlation between total yield of snap bean pods and pod weight was found and positive but it was too small to be significant. The results of the third part experiment showed that Line 24, 25, 26, 27, 31 produced the highest pod number and weight of pod per plant. On the other hand Lines 24 and 27 had the highest early, marketable and total yield. Pods of Lines 22 and 26 had higher percentage of crude protein while, Pods of Lines 21,24, 25,26,27,28 and 31 had the highest percentage of carbohydrates. Leaves of all bean genotypes, except Line 27 significantly contained higher IAA and Phenols than 'Baulista' in both seasons.

Key words: Common Bean, Dry Bean, Snap Bean, *Phaseolus vulgaris* L., High Temperature, Low Temperature, Correlation, Plant Hormones.

Name of Candidate: Noha Gaber Abd El-Rahman **Degree:** Ph.D.
Title of Thesis: Effect Of Using Organic Substrates On Strawberry Production Under Greenhouse Conditions
Supervisors: Dr. Ahmed Hassan Khereba
Dr. Hassan Ali Hassan
Dr. Mostafa Hamdy El-Kattan
Department: Vegetable Crop
Branch: **Approval: 6/12/2011**

ABSTRACT

These studies were carried out in Central Laboratory for Agriculture Climate (CLAC), Agricultural Research Center (ARC), Egypt. This study was conducted for two successive seasons 2005/2006 and 2006/2007. Strawberry (*Fragaria* x *ananassa*) cv. Festival was used in both experiments under protected cultivation.

The aims of the first study are to investigate the effect of different types of substrate and different types of containers on production and quality. Two types of container (bags and pots) and four types of substrates (coconut husks, coconut husks + sand, peanut husks and peanut husks + sand) were tested in comparison with soil cultivation. The electrical conductivity (EC) of the nutrient solution was maintained between 1.8-2.0 m mhos^{-1} while pH was adjusted between 5.5 and 6.5. The results of the first experiments showed that using coconut husks in black bags, coconut husks in white container and coconut husks + sand in white container produced higher number of leaves, plant height, total leaves area, total nitrogen, phosphorus, potassium, average fruit weight, early yield per plant, total yield per plant, early yield per square meter and total yield per square meter, fruit firmnesses and total soluble solids.

The aims of the second study are to investigate the effect of using intensive vertical system for strawberry production by using different types of substrate culture in comparison with soil cultivation.Vegetative growth (number of leaves, plant height, total leaves area and number of secondary crown), chemical constituents of plant leaves (N, P and K), yield (early yield / plant and total yield / plant) physical quality of fruits (firmness and average fruit weight), chemical quality of fruits (TSS, total acidity and vitamin C) were recorded in both experiments. The results of the second experiments showed that using coconut husks and coconut husks + sand in vertical system produced higher number of leaves, plant height, total leaves area, total nitrogen, phosphorus, potassium, early yield per square meter and total yield per square meter, total soluble solids and vitamin C content.

Key words: Strawberry, Peanut husks, Coconut husks, Containers and Organic substrates

Name of Candidate: Essam Mosaad Saad Abdel-Rahman **Degree:** Ph.D.
Title of Thesis: Effect of Shading and Calcium Levels on Growth and Marketable Yield of Some Sweet Pepper Cultivars During Summer Season
Supervisors: Dr. Sayed Fathey El-Sayed
Dr. Moheb Alphonse Tewfik
Department: Vegetable Crops **Approval:** 17 / 7 /2011

ABSTRACT

Two field experiments were carried out at the farm of Technogreen Company ,Abu-Sewer, Ismailia, Cairo, Egypt during the two successive summer seasons of 2005/2006 and 2006/2007 to study the effect of shading levels (0, 25 % and 50 % for 30 days and 25 % afterwards), periods (50 % for 30 days, 40 days, 50 days, 60 days and 25 % afterwards) and calcium levels (25 , 50 and 75 ppm calcium oxide) and their interactions on vegetative growth, early yield, marketable yield, non-marketable yield and total yield as well as leaves chemical composition of some sweet pepper cultivars(Mazurka, Paramo and Carmen).

The aim of this study was to find out the suitable shading level, period and the best calcium level for the selected sweet pepper cultivar to obtain the highest total and marketable yield during summer season under screen house conditions.

The shading levels results revealed that shading level 50% for 30 days and 25 % afterwards significantly increased plant height, leaf area, early, marketable and total yield, fruit length, fruit diameter and fruit weight. On the contrast, decreased leaves, stem and total dry matter percentage as compared to the control.

The results of the shading periods indicated that shading 50 % for 60 days increased plant height, leaf area, total chlorophyll content, as well as fruit length, diameter and weight. While shading for 40 or 50 days recorded the highest early, marketable and total yield.

The results of using calcium levels revealed that 50 or 75 ppm CaO increased plant height, leaf area, total chlorophyll content and leaves, stem and total dry matter percentages, while calcium level of 75 ppm CaO increased early, marketable and total yield and decreased the non-marketable yield in all treatments of shading levels and shading periods.

Cultivar results indicated that Carmen and Paramo cultivars recorded the highest plant height, leaves, stem and total dry matter percentages and total chlorophyll content, as well as early, marketable and total yield in both treatments of shading levels and periods.

The highest values of plant height, leaf area, total chlorophyll content, were obtained from increasing shading level from 0 to 50 % and increasing shading period to 60 days and calcium level to 50 or 75 ppm CaO while decreased non-marketable yield and dry matter percentages. Early, marketable and total yield were increased when Carmen and Paramo plants shaded with 50 % as shading level treatment and 50 % shading for 40 or 50 days as shading period treatment and treated with 50 or 75 ppm CaO.

Key words:. Pepper, Shading levels and periods, calcium, screen houses**.**

Name of Candidate: Ahmed Abdel-Wahab Ahmed Mohamed **Degree:** Ph.D.
Title of Thesis: Effect of Planting Dates and Some Cultural Practices on Sudden Wilt Control in Melon
Supervisors: Dr. Sayed Fathey El-Sayed
Dr. Yasser Mohamed Ahmed
Department: Vegetable Crops **Branch:** - **Approval:** 21/4/2011

ABSTRACT

Two field experiments were conducted in sandy soil during the fall seasons of 2007 and 2008 to study the effect of some cultural treatments, *viz.*, grafting on bottle gourd (*Lagenaria sesiraria*), grafting on gourd (*Cucurbita ficifolia*), grafting on pumpkin (*Cucurbita maxima*), mycorrhiza inoculation, covering with agryl, fungicides drenching, water stress treatment and control, three planting dates, *viz.*, 1st of July, 1st of August and 1st of September and three melon cultivars, namely Galia F_1 (Galia type), Nader F_1 (Ananas type) and Magenta F_1 (Charantais type), on sudden wilt control, some fruit characters, yield and fruit chemical composition. A spilt-split plot design with 3 replicates was adopted, where, planting dates were distributed randomly in the main plots, while melon cultivars were arranged in sub plots and the cultural treatments in sub-sub plots. The results indicated that the lowest percentages of sudden wilt were recorded in July planting in 'Magenta' and in grafted plants on gourd or bottle gourd as well as covering with agryl and water stress treatment.

Grafting on bottle gourd or gourd rootstock in both seasons as well as water stress treatment in the second season led to a significant increment in melon yield, while grafting on pumpkin in both seasons as well as mycorrhiza treatment in the first season, significantly, decreased the total yield, as compared with the control. Also, grafting on pumpkin decreased fruit weight, fruit length, fruit diameter, fruit size, TSS percentage, total sugars concentration and the other chemical compositions (N, P and K), whereas water stress treatment significantly increased TSS percentage, as compared with the control.

There were significant effects for melon cultivars on yield, TSS% and fruit characters. Generally, the highest total yield was achieved with Galia F_1 in both seasons. Meanwhile, TSS percentage significantly increased in 'Magenta' and 'Nader' as compared to 'Galia'. Moreover, 'Magenta' gave the best fruit characters, *viz.*, fruit weight, fruit diameter, fruit size and fruit firmness.

With regard to the effect of planting dates on melon yield, planting in July significantly increased the early and total yield and enhanced all fruit characters as compared with August planting. On the contrary, planting in September did not achieve any yield, due to the high sudden wilt percentage which occurred two months after planting.

Key words: Melon, *Cucumis melo*, sudden wilt, planting dates, grafting, mycorrhiza, agryl covering, fungicides, water stress.

Name of Candidate: Saudi Mohammed Mohammed **Degree:** M.Sc.
Title of Thesis: Pepper Response to Organic and Bio- Fertilizers under Plastic House Conditions
Supervisors: Dr. Amal Mohamed Farrag
Dr. Mohamed Mohamed Shaheen
Dr. Said Mohamed Kabeel
Department: Vegetable Crops
Branch: **Approval:** / /

ABSTRACT

Two experiments were carried out during two successive seasons of 2006-2007 and 2007-2008 at Kaha Experimental Station, Kaluobia Governorate, Horticultural Research Institute on pepper plants cv Sonar, F1.

The experiment was carried out to evaluate between 2 m^3 /540 m^2 chicken manure and 1, 2 , 3 m^3/540 m^2 of compost with or without effective micro organisms and Enciabein . vegetative growth parameters, early and total yields ,fruit physical properties and fruit chemical properties were taken blace in this experiment.

Applying 3m^3 of compost /540 m^2gave significantly the highest values of plant height, number of branches and leaves, total leaf area, fresh and dry weight of leaves and stem per plant as well as early and total yield/ m^2, fruit weight and ascorbic acid (Vit. C).

No significant effect was determined by organic fertilizers on plant height in the second sample of the first season and in the first and second samples in the second season as well as number of branches in the second sample in the second season, weight of early yield, total fruits number in the second season, dry matter percentage, flesh thickness , and T.S.S of fruit in both seasons.

Application of EM significantly gave the highest values of vegetative growth characters, which lead to increase early and total yield as well fruit quality while, Enciabein effect came to the second order conserning those cherecteristics in both seasons.

The highest total yields of fruits were obtained with application the combined of 3 m^3 compost with EM followed by 2 m^3 of compost plus EM .the increment were 98% and 73%, respectively in the first season and 67% and 50%, respectively in the second seasons as comparing with applying 2 m^3 chicken manure alone.

Inoculation organic fertilizers (chicken manures or compost at different levels) with EM reduced nitrate accumulation in pepper fruits.

Key words: pepper plants ,organic fertilizers, effective microorganisms, slow release fertilizer (Enciabein), chicken manure

Name of Candidate: El-Sayed El-Badawy Ibrahiem **Degree:** M. Sc.
Title of Thesis: Physiological Studies on Fruit Set in Tomato
Supervisors: Dr. Merghany Mohamed Merghany
Dr. Ahmed Ali Gharib
Dr. Fayza Mohamed Darwesh
Department: Vegetable Crops
Branch: **Approval:** ٢٤ / ٣/ 2011

ABSTRACT

Two field experiments were carried out during the two successive late summer seasons of 2007 and 2008 at Barrage Horticultural Research Station, Agricultural Research Center, Qalubia Governorate, to study the effect of some stimulant compounds. viz.,KNO_3, KH_2PO_4, zinc, citric acid, ascorbic acid, Baker's yeast as well as amino acids (dipping the roots or foliar spray) and their interaction on vegetative growth, fruit set, yield, fruit characters and chemical components of tomato plants grown under high temperature. Seeds of tomato F_1 hybrid Adora were sown on 21st and 30th of March in 2007 and 2008 seasons, respectively. Tomato seedlings were transplanted on 6th and 11th of May in both seasons, respectively. The soil type of the experimental area was loamy clay. Two samples were taken after 64 and 85 days after transplanting of the two late summer seasons.

All data, i.e., plant height, number of leaves/plant, fresh weight, dry weight, leaf area, total leaf area per plant, number of days to 50 % flowering, position of the first cluster, number of clusters/plant, fruit set (%), yield and its components, fruits characters and chemical constituents of tomato plants, showed significant response to all treatments used in this study. The results had no significant differences between the application methods, i.e., dipping the roots of seedlings or foliar spray. While, the stimulant components were significantly increased all parameters as compared with control.

Generally, all interactions between the application methods and stimulant components used in this trial, showed gradually increase in the average of the studied vegetative growth parameters from 64 to 85 days after transplanting. The interactions had no significant differences of average fruit setting percentage per plant in both seasons. The most favorable beneficial interactions regarding to yield and its components were Baker's yeast as well as amino acids either roots were dipped or foliage were sprayed with these solutions in both seasons. It can be recommended that dipping the roots seedlings in Baker's yeast solution or using it as a foliar spray to enhance tomato production under heat stress.

Key words: Some stimulant compounds, application methods, growth and yield of tomato

Name of Candidate: Magda Waheed Mostafa **Degree: M.Sc.**

Title of Thesis: Studies on the Productivity of Two Kinds of Mushroom Grown on Some Agricultural Wastes

Supervisors: Dr. Ahmed Hassan Khereba
Dr. Amal Mohamed Ahmed Farrag
Dr. Fathi Ragab Hussein

Department: Vegetable Crops
Branch: Vegetable Crops

Approval: Date: 23 / 3 / 2011

ABSTRACT

Cultivation of *F. velutipes* and *P. eryngii* mushrooms on rice straw, wheat straw, maize cubs, faba bean stalks and sawdust under the local environmental conditions and suitability of some local wastes as a cultivation media were studied. Effects of media of cultivation on yield of the two mushrooms were also studied. The highest yield of *F. velutipes* (٢12.60 g/kg wet medium) and *P. eryngii* (320.400g/kg wet medium) were obtained by maize cubs.

Chemical composition of *F. velutipes* and *P. eryngii* *eryngii* fruit bodies differed according to cultivation media and the range of fruit bodies moisture, crude protein, crude fiber, ash content, fats and total carbohydrates for *F. velutipes* were 89.20 - 84.50%, 24.30 - 19.10%, 12.70 - 7.00%, 8.00 - 6.50%, 3.12 - 1.71 % and 64.39 - 52.84% respectively, while *P. eryngii* contained 89.30 - 86.20%, 23.40 - 20.00%, 12.00 - 9.30%, 7.80 - 5.10%, 2.25 - 1.29% and 63.70 - 56.20%, respectivly.

It was observed that there was change in media chemical component after cultivation compared with that before cultivation.

It was found that fibers %, fat % and total carbohydrates % decreased after cultivation. Meanwhile, protein % and ash % increased after cultivation for *F. velutipes* and *P. eryngii.*

Key words: Cultivation, *F. velutipes*, *P. eryngii*, yield**,** chemical component

Name of Candidate: Mohamed Kamel Fathalla El-Tawashy **Degree:** M.Sc.
Title of Thesis: Studies on Propagation and Breeding on Artichoke
Supervisors: Dr. Merghany Mohamed Merghany
Dr. Yasser Mohamed Ahmed
Dr. Afaf Tewfik Mahmoud Kassim
Department: Vegetable Crops **Approval:** 30/11/ 2011

ABSTRACT

The present study was conducted during the period from 2006 to 2011 at the Experimental Station of the Faculty of Agriculture, Cairo University, Giza Governorate, Egypt. It included two separated experiments, the first experiment on evaluation the effect of seed scarification and soaking in some chemical compounds on seed germination, plant growth, head yield and its quality in 2006/2007 and 2007/2008 seasons. The second experiment aimed to produce globe artichoke hybrids in 2009/2010 and 2010/2011 seasons.

In the first experiment, seeds of globe artichoke, Green Globe cv. were used in this experiment. The used treatments in these trials were water for 4 days at temperature of 4°C the water was changed each 24 hrs, mono potassium phosphate at 1% for 10 hrs, mono potassium phosphate at 2% for 5 hrs, ethephone at 50 g/L for 30 min, ethephone at 100 g/L for 30 min, kinetin at 50 ppm for 5 min, kinetin at 100 ppm for 5 min in addition to scarification treatment all these treatments were compared with the control treatment.

The results indicated that best percentage of seed germination, speed of germination, number of leaves per seedlings, vegetative growth, head characteristics, edible part characteristics and inulin percentage were observed with seeds treated by kinetin at 100 ppm for 5 min, compared with control, and other treatments.

In the second experiment the four cultivars viz., Green Globe, Asio, Opal, and Bil were cultivated in three separated groups. Three methods of pollination were used to differentiate between autogamous and allogamous plants. As follows: hand self-pollination (group 1), cross pollination under control with honey bee insects under net clothes (group 2) and artificial cross pollination. Crosses between these cvs were made by diallel mating design (group 3).

The results indicated that best vegetative growth, head characteristics, edible part characteristics and inulin percentage were observed with the hybrids of Asio × Bil, Opal × Bil, and Bil × Asio.

Key words: Globe artichoke, germination, chemical compounds, growth regulators, hybrid, plant growth, head yield.

Name of Candidate: Omaima Darwish Saleh Darwish **Degree:** M. Sc.
Title of Thesis: Effect of Compost Rates and Time of Application on Growth, Yield and Chemical Composition of Snap Beans (*Phaseolus vulgaris* L.)
Supervisors: Dr. Said Abdullah Shehata
Dr. Yasser Mohamed Ahmed
Dr. Emad Ahmed Shalaby
Department: Vegetable Crops
Approval: 2 /11/ 2011

ABSTRACT

A field experiment was conducted at Agricultural Experimental and Research Station, Faculty of Agriculture, Cairo University, Giza, Egypt in the two summer successive seasons 2008 and 2009. The present work aims to study the response of snap bean to different rates of compost and time of application in comparison with two different sources of inorganic fertilizers. The experiment included 8 treatments, the recommended mineral fertilizer (MF) as a control, Natural fertilizer (NF) ,i.e. 4,6 and 8 tons of compost as organic sources were applied once through soil preparation (O). These treatments were applied at two equal splits at soil preparation and 30 days after sowing (S). The same rate of (N: P: K (50:45:60) kg/ fed) was applied either in MF or NF treatment. The N source in both treatments was ammonium sulfate, super phosphate (P) and potassium sulfate (K) in MF treatment and phosphate rock (P) and natural potassium (K) in NF treatment. Results showed that MF, NF, 4 tons compost O and S treatments produced significantly taller plants in combined over seasons. The highest value of plant height was obtained by the MF treatment. The lowest compost rate (4 tons /fed) S surpassed all treatments in early yield of snap beans pods. Both recommended mineral fertilizer and 4 tons splitting applications of compost significantly yielded the highest total yield. The compost treatments applied at two equal splits of the three different rates produced higher early yield and total yield in comparison with the corresponded rates added once in combined over seasons. Meanwhile, No significant differences were detected between all treatments for pod length, pod weight and number of branches per plant. The plant treated with 4t/fed organic fertilizer had the highest NPK percentage compared to 6 and 8 t/fed. The plants treated by 8 tons compost O possessed the highest values of leaves total chlorophyll. Higher values of fresh and dry weight of roots, stems and leaves were produced in the plants which received the lowest rate of compost in combined over seasons.

Keywords: Snap beans, organic and inorganic fertilizer, yield, vegetative growth and chemical composition.

ABSTRACT

The current investigation was carried out at the Tissue Culture Laboratory of Vegetable Crops Department, Faculty of Agriculture, Cairo University, Giza, Egypt during the period of 2009 to 2010. In the first experiment of this study, two tomato hybrids, namely; 'Agayad 7' and 'Jawahar' were used for *in vitro* regeneration. Hypocotyl and cotyledon explants were isolated from seedlings and cultured on modified MS medium which contains MS salts and B5 vitamins supplemented with 0.5, 1, 2, or 3 mg/l zeatin. The highest number of shoots were produced in Jawahar hybrid. Significant differences were found between different explants. The highest number of shoots per explant was produced by culturing cotyledon explants. The MS medium containing 2, 0.5 or 3 mg/l zeatin induced the highest number of shoots per explant (22.48, 19.92 and 19.0, respectively). The interaction between hybrids and explants was non-significant. Culturing cotyledon explant produced higher number of shoots per explant in 'Jawahar' on MS medium containing 0.5, 1, 2, and 3 mg/l zeatin . Maximum number of shoots per explant was produced by culturing cotyledon explant of 'Agayad 7' on MS medium containing 3 mg/l zeatin. The interaction (genotype × explant × zeatin concentration) revealed that the maximum shoot weight was obtained from cotyledon explant cultured on MS medium containing 3 mg/l zeatin in both hybrids. The highest plant (18.75cm) was produced by using MS medium with 3 mg/l zeatin in both hybrids. Concerning the interaction between the media and explants, culturing hypocotyl explant on MS medium with 2 mg/l zeatin produced the longest shoots. Three way interactions (genotype , explant and zeatin concentration) revealed that the longest plants were produced by culturing cotyledon and hypocotyl explants on MS medium with 3.0 mg/l zeatin in 'Agayad 7' (21.33 cm) and in 'Jawahar' (22.67 cm). The highest percentage of shoot formation occurred on MS medium with 3 mg/l zeatin followed by 1 mg/l zeatin (98.3% and 96.7% respectively). In the second experiment activated charcoal (AC) at 0, 1, 5 or 10 mg/l combined with casein hydrolysate(CH) at 0, 50,100,200,500 or 1000mg/l were also added at MS medium. The statistical analysis showed that Jawahar genotype significantly affected plantlets regeneration. AC at concentration of 5 mg/l seemed to act as a promoter of organogenesis. Casein hydrolysate did not have any significant effect on shoot regeneration response. Plantlets regeneration increased significantly by the addition of activated charcoal at 5 mg/l with 100 mg/l casein hydrolysate in 'Agayad 7'. The best results were obtained in Jawahar with increasing in shoot percentage of 90.28% and 91.68 % by increasing the concentration of CH from 50 mg/l to 500 mg/l respectively. The highest weight of plantlets was obtained on MS media with 1000 mg/l CH with 'Agayad 7' and 500 mg/l CH with 'Jawahar' (8.27 and 8.83, respectively). Agayad genotype produced longest shoots on MS medium supplemented with 1mg/l AC and 0 mg/l CH.

Keywords: Tomato, Regeneration, In Vitro, Explants, Zeatin, Activated Charcoal, Casein hydrolysate

Name of Candidate: Shaban Mohamed Abdel-Samea **Degree:** M. Sc.

Title of Thesis: Survey, Screening and Evaluating of Melon Ecotypes in Some Egyptian Governorates

Supervisors: Dr. Ahmad Hassan Khereba
Dr. Hassan Ali Hassan
Dr. Youssof Talat Emam El-Lithy

Department: Vegetable Crops **Aproval: / /2011**

ABSTRACT

This study was conducted during the period from 2005 to 2007 at Kaha Vegetable Research Farm (KVRF), Qalubia Governorate, Horticulture Research Institute, Agriculture Research Center to evaluate some local melon landraces were collected from different regions of Egypt. Selfing was carried out twice in 31 local melon landraces in the open field at (KVRF), the first in April 2005 and the second in August 2005. Twenty-five ecotypes was selected from 31 local melon landraces to evaluate them in the open field in two successive summer seasons during 2006 and 2007. In both seasons a randomized complete block design (RCBD) with three replicates was used.

Ismailawi had the highest significant average plant length (165.2 cm) over all evaluated landraces in 2006. In 2007, the highest significant APL over all evaluated genotypes was obtained by the genotype Quena 2 with APL being 167.3 cm. The melon landrace Fayoum showed the highest significant average number of branches over all evaluated landraces with ANB being 5.60 branches in 2006. In 2007, El-Menia-Sandafa melon landrace had the highest significant ANB (5.87 branches) over all evaluated ecotypes.

Beni Swif 4 melon ecotype had the lowest significant number of days to flowering over all evaluated landraces in 2006 and in 2007 with NDF being 50.20 and 47.07 days, respectively. The lowest significant number of days to ripening in 2006 and 2007 among the evaluated ecotypes was produced by the ecotype Quena 2 (34.63 and 35.60 days, respectively).

In 2006, El-Menia-Sandafa produced the highest significant total yield per plant over all evaluated ecotypes with TY being 12.68 kg. El-Behaira 2 exhibited the highest significant TY/plant (10.20 kg) in 2007. El-Menia-Sandafa had the highest significant average fruit weight (5.32kg) over all evaluated ecotypes in 2006. In 2007, the highest significant AFW over all evaluated ecotypes was obtained by the ecotype El-Behaira 2 with AFW being 4.27 kg.

Ananas El-Dokki and Marsa Mattrouh produced round fruits**.** Oblate varieties was obtained by Shahd El-Dokki and Kahera 6. Cylindrical fruits were obtained by Aswan**,** Ismailia and Ismailawi**.** El-Qalubia-Basousi had the highest significant fruit flesh thickness (5.12 cm) over all evaluated landraces in 2006. In 2007, Ismailia melon ecotype exhibited the highest significant FFT (4.73 cm) over all evaluated ecotypes. In 2006, Kahera 6 and Beni Swif 3 produced the highest significant TSS value (12.76, 11.75 %, respectively) over all evaluated ecotypes. In 2007, the highest significant TSS value was produced by the melon ecotype Beni Swif 3 (11.46%). El-Behaira 1 exhibited the highest significant value of fruit skin netting over all evaluated ecotypes in 2006 and 2007.

Only 3 melon ecotypes were moderately resistant to fusarium infection, Aswan, El-Behaira 1 and El-Behaira2 El-Behaira 1 and El-Behaira 2 melon ecotypes had the lowest significant disease incidence % without significant differences between them.

Key words: Melon, *Cucumis melo*, ecotypes, landraces, Egypt Evaluation, Yield, Fruit quality, *Fusarium*