كلية الزراعة

ثانياً : الدكتوراة

قسم الأراضي

الإدارة المتكاملة للتربة والمياه والمحصول وتأثيرها على بعض العلاقات المائية ومحصول الأرز بشمال الدلتا

EFFECT OF INTEGRATED SOIL, WATER AND CROP MANAGEMENT ON SOME WATER RELATIONS AND RICE PRODUCTION AT NORTH DELTA

إبراهيم عباس إبراهيم الصياد

ABSTRACT

Two field experiments were carried out during ٢٠٠٢ and ٢٠٠٣ growing season at Sakha Agricultural Research Station, Kafr El-Sheikh Governorate. This site represents the conditions of circumstance of North Nile Delta region. The site locates at ٣١° ٠٧' latitude and °٣٠'٥٢ longitude and it has elevation about ٦ meters above sea level. A strip-plot design with three replicates was conducted in this work to study the effect of: a) different land levellings with different planting methods on some soil physical and chemical properties, b) three irrigation heads also, to estimate some water relations for rice crop, and c) three types of nitrogen fertilizers on nutrients content in rice grains and yield and some yield components of rice crop.

Main plots were included the four different soil land levelling, two dry levelling methods with different two planting methods, the first was drilling rice planting (dry grains in dry soil), and the second manual transplanting. The other two methods were wet levelling (talweeting) with different planting methods, the first was manual transplanting, and the second was mechanized transplanting.

قسم الإرشاد الزراعي

دراسة تحليلية لقيادة الرأى فى مجال ترشيد إستخدام المبيدات فى قرية الهندسة بمركز سيدي سالم –محافظة كفر الشيخ

FARMERS ADOPTION OF SELECTED FILED CROPS ABOUT EXTENSION RECOMMENDATIONS OF WEEDS INTEGRATED PEST MANAGEMENT IN KAFR ELSHEIKH GOVERNORATE

محمد عبد الفتاح السيد محمد يوسف

الملخص

تعتبر قضية التنمية إحدى التحديات التي تواجه الدول النامية، فالتنمية عملية إنسانية تتم بالإنسان ومن أجل الإنسان، حيث تهدف إلى النهوض بالمستوى الإقتصادى والإجتماعى والصحي والتعليمي والثقافي للفرد والمجتمع وذلك عن طريق الاستخدام الأمثل لكل الطاقات المتاحة سواء البشرية أو المادية.

ولا يمكن إغفال دور الجماعات المحلية فى إحداث التنمية عن طريق مشاركة الأهالى والقاده المحليين فى إحداث التغيرات المرغوبة من خلال عملية التفاعل بين أعضاء الجماعة وقادتها.

وقد أكدت الدراسات أن للقاده الريفيين تأثير واصح على أقرانهم وتابعيهم، حيث أنهم يؤدون دوراً هاماً فى إنجاح برامج العمل الإرشادى فى المجتمع الريفى، وبالإضافة إلى الدور الذى يمكن أن يلعبه قادة الرأى فى المجتمع الريفى من حفز الزراع نحو تبنى المستحدثات والأفكار التنموية، فهناك أيضاًمساهمة لهؤلاء القادة فى دفع عمليات التغير الإقتصادى والإجتماعى التى تستهدفها الخطط التنموية .

ومن هنا يتعاظم الدور الذى يمكن أن يؤديه القادة بالمجتمع المحلى ممثلاً فى نقل المعلومات، والتوصيات الإرشادية المثلي من الجهاز الإرشادي والمصادر الرسمية الأخرى ذات الثقة إلى الريفيين أعضاء النظام الإجتماعى.

ونظراً لأن قضية الإسراف فى استخدام المبيدات تعتبر من أخطر القضايا التي تواجه إنسان العصر الحديث وتؤثر على بيئته نتيجة للاستخدام المكثف وغير الرشيد للمبيدات مما أدى إلى ظهور العديد من المشكلات والأضرار التي لها علاقة مباشرة بصحة الإنسان والحيوان مما أثر بالسلب على التوازن البيئي وسلامة الإنتاج الزراعى، رغم أنه لا يمكن إنكار أهمية المبيدات الزراعية فى الحفاظ على الإنتاج الزراعي عند الإصابة الحادة بالآفة، إلا أن الإستحدام غير الرشيد لهذه المبيدات بالإضافة إلى عدم وعى الزراع بالطرق والأساليب السليمة لاستخدمها أو

التعامل معها، ولذلك أصبح هناك قلقاً متزايداً من القضايا الخاصة بالمبيدات فى الزراعة وما يترتب عليها من مشكلات حطيرة ناتجة عن سوء الاستخدام وعن عدم مراعاة التوصيات الخاصة بالاستخدام الصحيح لها، وقد كان ذلك أحد الأسباب التي أدت إلى الحد من إمكانية تصدير الحاصلات المصرية.

ونظراً لأن القادة المحليين يقع على عاتقهم مسئولية نشر الرسائل الإرشادية وإقناع القاعدة العريضة من المسترشدين بالتوصيات الإرشادية المثلي، لذا فهؤلاء القادة يمثلون امتدادا طبيعياً وحقيقياً لعمل المرشد، فكان من الأهمية الاستدلال على القادة المؤثرين الذين يمكن أن يسهموا فى زيادة وعى الزراع بطرق ترشيد استخدام المبيدات الزراعية.

وإتساقاً مع المشكلة البحثية فإن هذا البحث يستهدف بصفة رئيسية التعرض لقيادة الرأى فى مجال ترشيد إستخدام المبيدات فى قرية الهندسة بمركز سيدى سالم بمحافظة كفر الشيخ وتناول خصائصهم بالدراسة والتحليل.

قسم البساتين

دراسات فسيولوجية على بعض شجيرات الزينة
PHYSIOLOGICAL STUDIES ON SOME ORNAMENTAL SHRUBS

أماني إسماعيل حسن مصطفى ادم

ABSTRACT

This work was carried out at Antoniadis Garden, Horticultural Research Institute, Alexandria, Ministry of Agriculture, Alexandria, Egypt. during the two successive season of ٢٠٠٥/٢٠٠٦ and ٢٠٠٦/٢٠٠٧ to study the effect of some fertilization treatments on three ornamental shrubs: Cassia didymobotrya (Fresen.), Cestrum aurantiacum L., and Tecoma stans L. grown in sandy, clay and sandy clay (١:١ v/v) soils.

The fertilization treatments were conducted as follows: Control (without fertilization), a full dose of NPK, ١/٢ dose of NPK + active dry yeast, ١/٢ dose NPK + compost and compost + active dry yeast.

The used full dose of chemical fertilizer was added at a rate of ٣٠ g /plant ammonium sulphate (٢٠.٥٪N) applied in five equal doses beginning from mid-may with ٣٠-day intervals, beside ٢٤ g/plant calcium super phosphate (١٥.٥٪P٢O٥) divided in to two equal doses added during the soil preparation before planting and ٩٠ days after planting, and ١٢ g/plant potassium sulphate (٤٨٪ K٢O) divided into three equal dose and added from mid-may with ٣٠- day intervals. Organic fertilizer (compost) was used at the rate of ١٥ % from the soil weight per pot and added before planting during preparing of the soil.

Active dry yeast (٢ g/ L) was applied as a foliar spray three times. The first one after ٢٠ days from planting. The second one after ٣٠ days later and the third one was done ٣٠ days after the second one.

تأثير قابلية العنب صنف طومسون اللابذرى للتخزين بمعاملات كيماوية واشعاعية بعد الحصاد

STORABILITY OF THOMPSON SEEDLESS GRAPES AS AFFECTED BY SOME POST-HARVEST CHEMICAL AND RADIATION TREATMENT

هديل سعد محمد البنا

SUMMARY

The present work was carried out during the two successive seasons ٢٠٠٣ and ٢٠٠٤ at the post harvest laboratory of the Horticulture Department, Faculty of Agriculture, Kafrelsheikh University on clusters picked from fifteen years old Thompson seedless grapes (*Vitis vinifera*) grown in a private Orchard located at Korasheia village, El-Santa district, Gharbia Governorate.

The study included the main point of the effect of some post harvest chemical and radiation treatments on quality and storability of grapes.

The studied treatments were as follows:

١. **Control (without any treatments).**

٢. **Sulpur dioxide (SO_2 pads):** SO_2 pads were changed with new ones every two weeks.

٣. **Fumigation treatments:**

- Acetaldehyde (٢٥٠٠, ٥٠٠٠ and ٧٥٠٠ ppm).
- Ethanol (٣١.٢٥, ٦٢.٥ and ٩٣.٧٥ ml/m^3).
- H_2O_2 (٣٪, ٦٪ and ٩٪).

٤. **Radiation treatment:**

- Ultraviolet (U.V irradiation):

Clusters were picked when the TSS reached (١٦.١ $\pm$ ٠.١٪) for both seasons. They were packed in plastic boxes (٥٠ x ٣٥ x ١٥ cm) with

perforated polyethylene liners each one contained ٧ clusters (٥ replicates, each one cluster for physical and chemical characters plus ٢ clusters for shelf life at each sampling date) and then stored at ٠°C and ٨٠-٩٠٪ RH for eight weeks.

Sampling schedule before and during cold storage was as follow:

١. At harvesting date (zero storage time).

٢. ٢ weeks in cold storage.

٣. ٤ weeks in cold storage.

٤. ٦ weeks in cold storage.

٥. ٨ weeks in cold storage (end of storage period).

قسم المبيدات

تطور وميكانيكية المقاومة لبعض حشائش الأرز ضد بعض مبيدات الحشائش
VOLUTION AND RESISTANCE MECHANISM OF SOME RICE WEEDS AGAINST SOME HERBICIDES

أماني محمد محمود حمزة

SUMMARY

The present study was carried out to monitor the resistance evolution of *Echinochloa crus-galli* and *Echinochloa colona* to fenoxaprop-P-ethyl and bispyribac-soduim herbicides during ٢٠٠٥, ٢٠٠٦ and ٢٠٠٧ seasons under the greenhouse of the Rice Research and Training Center, Sakah, Kafr-El-Sheikh. The chlorophyll content of the tested weeds was measured at ٥, ١٠, ١٥ and ٢٠ days after application with the tested herbicides to evaluate the physiological conditions of the selected weeds after treatment with the tested herbicides. Moreover, the resistance mechanism of the tested weeds against bispyribac-soduim was investigated by determining the activity of ALSase (the target of bispyribac-soduim) and the analysis of seeds and leaves protein in both susceptible and resistant biotypes of *E.crus-galli* and *E. colona* weeds. The enzymes activity was determined at Plant Pathology Research Institute, Agriculture Research Center, EL-Dokey, Egypt. Protein analysis was carried out in the Institute of Agricultural Genetics Engineering Research, Agriculture Research Centre, EL-Dokky Egypt. Furthermore, seeds and leaves protein of both resistant and susceptible biotypes of *E.crus-galli* and *E. colona* weeds was analyzed to investigate the resistance mechanism of these weeds to the fenoxaprop-P-ethyl herbicide.

قسم المحاصيل

استجابة بعض أصناف القمح للتسميد النيتروجينى والحيوى
RESPONSE OF SOME WHEAT CULTIVARS TO NITROGEN AND BIOFERTILIZATION

محمد حامد محمد كريم

ABSTRACT

The present investigation was carried out at the Experimental Farm of Faculty of Agriculture, Kafr El-Sheikh University, Egypt during ٢٠٠٤/٢٠٠٥ and ٢٠٠٥/٢٠٠٦ seasons to study the following. The effect of nitrogen levels on growth yield and yield components of four wheat cultivars namely Sakha٩٣, Sakha٩٤, Gemmeiza٧ and Gemmeiza١٠. The effect of biofertilization on growth yield and yield components of four wheat cultivars namely Sakha٩٣, Sakha٩٤, Gemmeiza٧ and Gemmeiza١٠. The effect of nitrogen fertilizer rates (٥٠, ٧٥ and ١٠٠kg N/fed) on growth yield, yield components of four wheat cultivars (Sakha٩٣, Sakha٩٤, Gemmeiza٧ and Gemmeiza١٠) in the two seasons ٢٠٠٤/٢٠٠٥ and ٢٠٠٥/٢٠٠٦. A split plot design was used with four replication in both seasons.

Wheat cultivars distributed in the main plots, nitrogen rates assigned to the sub plots. The results obtained could be summarized as follows: Significant differences among cultivars and all characters were found in both seasons. The results indicated that Sakha ٩٤ gave the highest values of dry matter accumulation at ٧٥, ٩٠ and ١٠٥ day, dry matter distribution (leaves-stems-spike) at ٧٥, ٩٠ and ١٠٥ days in spike ١ not significant in the first season, number of spike/m², number spikelets/spike, grain weight/spike, ١٠٠٠-grain weight, grain yield/fed., straw yield/fed. and harvest index in the two seasons. While, the lowest ones obtained at the first season were insignificant in dry matter distribution (spike %), plant

height, number of grain/spike. The second season was insignificant in spike length. Dry matter accumulation was significantly increased with increasing nitrogen rates in both seasons.

Dry matter distribution in form of leaves and stems revealed significant differences among the nitrogen rates at ٧٥, ٩٠ and ١٠٥ day especially with ١٠٠ kg N/fed in both seasons. Crop growth rate (g/m²/week) was significantly increased with increasing nitrogen rate in the two seasons.

Relative growth rate and net assimilation rate was significantly decreased with increasing the nitrogen rate in both seasons. Leaf area index (LAI) was significantly increased with increasing the nitrogen rate in both seasons. The results indicated that nitrogen had a significant affect on plant height. The tallest plants (١١١.٣٦ and ١١٠.٥٨ cm) were obtained with ١٠٠ kg N/fed in both seasons. Spike length and number of spike lets/spike were significantly affected by nitrogen rates in both seasons.

تأثير بعض المعاملات الزراعية على إنتاجية الأرز الهجين

EFFECT OF SOME CULTIRAL PRACTICES ON THE PRODUCTIVITY OF HYBRID RICE

شيماء عبد العظيم الطنطاوى بدوى

SUMMARY

Six field experiment were performed during ٢٠٠٣ and ٢٠٠٤ seasons, three experiments each season at Rice Research and Training Center (RRTC) farm, Sakha, Kafr El-Shiekh, Egypt. To study the effect of sowing dates, seeding dates, planting density, nitrogen and potassium fertilizer levels on growth characters, yield and its components of two hybrid rice cultivars and namely hybrid ١ (SK ٢٠٣٤), hybrid ٢ (SK ٢٠٤٦), and one inbred rice cultivar (Sakha ١٠٤). The preceding crop was barley in both seasons.

تأثير طرق وميعاد إضافة مصادر مختلفه من الآزوت على الأرز الهجين

EFFECT OF METHODS AND TIME OF APPLICATION OF DIFFERENT NITROGEN SOURCES ON THE PRODUCTIVITY OF HYBRID RICE

وائل حمدى محرم الكلاوى

SUMMARY

In order to find out the differential response of recently released rice hybrids, namely SK٢٠٣٥H, SK٢٠٥٨H and SK٢٠٤٧H as well as Sakha ١٠٤ rice cultivar as the best local check to various schedules of nitrogen application of various inorganic nitrogen sources namely urea and ammonium sulphate as NH_4^+-N forms and ammonium nitrate as NH_4^+-NO_3^--N in terms of their growth, yield, yield attributes, some milling recovery as well as some nitrogen use efficiency parameters under transplanted rice conditions.

Two successive field experiments were carried out at the farm of Rice Research and Training Center, Sakha, Kafr El-sheikh, Egypt during ٢٠٠٤ and ٢٠٠٥ seasons. The experiments were laid out in split-split plot design with four replications.

التربية للمحصول و مكوناتة و صفات جودة الحبوب بأستخدام أختبار تحليل الهجن الثلاثية فى الأرز

BREEDING STUDIES ON YIELD, ITS COMPONENTS AND GRAIN QUALITY TRAITS USING TRIPLE TEST CROSS ANALYSIS IN RICE

حماده محمد حسن عبدالله

ABSTRACT

The present investigation was carried out at the experimental farm of Rice Research and Training Center, Sakha, Kafr El-Sheikh, Egypt during ٢٠٠٥, ٢٠٠٦ and ٢٠٠٧ growing seasons. To study the genetic behavior of yield and its components, and some grain quality traits in rice following triple test cross analysis involving three testers ($P_١$, $P_٢$ and $F_١$) and eight pure lines of rice.

The results revealed that epistasis was found to be an integral part of genetic variation for all yield and its components studied characters except ١٠٠-grain weight and panicle weight. All grain quality characters exhibited the grate estimates of epistasis except grain shape and hulling (%). The partitioning of total epistasis illustrated that *i* type (additive x additive) were highly significant for plant height, number of panicles/plant, number of filled grains/panicle, sterility (%), grain length, milling (%) and grain yield/plant, while such estimates were non-significant for other remaining traits. in addition, *j* and *l* types (additive x dominance and dominance x dominance) were played remarkable role in the inheritance of plant height, number of panicle/plant, number of filled grains/panicle, sterility (%), grain length, milling (%) and grain yield/plant with predominant effect of *i* type interaction. *J* and *l* types epistasis also played significant role in the inheritance of grain yield, and its components and grain quality traits. The expression of epistasis was influenced differentially by particular genotypes, indicating that a limited

number of genotypes may not be sufficient to detect non-allelic interactions for some rice traits.

The magnitude of heterosis over better-parent and superiority were found to be either significant or highly significant in the positive or negative direction for yield and, its components and grain quality traits in most of the studied crosses. The cross GZ ٨٧٩٣-٣-٣-١-١ x Giza ١٨٢ was the highest heterotic for grain yield. The crosses, GZ ٩١٦٨-٢-١-٢-١ x Giza ١٧٨ and GZ ٩١٦٨-٢-١-٢-١//Giza ١٨٧/Giza ١٨٢ were exhibited highly significant heterosis desirable direction for gel consistency and amylase content traits when it measured as a deviation from better and superiority parent.

تأثير التسميد النيتروجينى وصنف الذرة على الزراعة المنفردة والمحملة للذره الشاميه وفول الصويا

EFFECT OF NITROGEN FERTILIZATION AND MAIZE CULTIVAR ON SOLID AND INTERCROPPING OF MAIZE WITH SOYBEAN

أحمد محمد محمود شيحة

الملخص

أجريت تجربتان حقليتان لتحميل الذرة الشاميه وفول الصويا بالمزرعة البحثية لمحطة البحوث الزراعية بالجميزة- غربية وذلك خلال الموسمين ٢٠٠٤، ٢٠٠٥. وتهدف هذه التجارب إلى دراسة تأثير تحميل الذرة الشامية مع فول الصويا على النمو ومقاييس ناتجات التمثيل الضوئي لأصناف الذره، علاقات التنافس للمحصول ومكوناته وجودة الحبوب وكفاءة استعمال الأرض للمحاصيل المحملة ، وذلك تحت تأثير ثلاثة مستويات من السماد النتروجينى هى ٦٠، ٩٠، ١٢٠ كجم آزوت/فدان مع استخدام أربعة أصناف من الذرة الشاميه البيضاء والصفراء هى هـ.ف ١٠ (أبيض) هـ. ث ٣٢٥ (أبيض) هـ.ف ١٥٥ (أصفر)، هـ.ث ٣٥٢ (أصفر) مع صنف واحد من فول الصويا وهو صنف جيزه ١١١.

تم زراعة كل مكون في نظام تحميل الذره الشاميه مع فول الصويا بنظامي الزراعة المنفردة والمحملة بنظام تبادل خطين ذره مع خطين من فول الصويا على خطوط بعرض ٧٠سم.

تم زراعة مكوني التحميل في نظام الزراعة المنفرده وبالمثل مكون الذره والمنزرع بنظام التحميل على ريشه واحد للخط، بينما زرع فول الصويا المحمل مع الذره على كلا جانبى الخط علاوه على ذلك تم زراعة جميع مكونات التحميل في نظام ٢: ٢ باستعمال نفس المسافات بين وداخل الخطوط المتبعه في نظم الزراعه المنفرده وهى ٣٠×٧٠ سم للذره الشاميه وكذلك الذره الشاميه المحمل بفول الصويا و ١٠×٧٠سم لفول الصويا.

وفي جميع التجارب احتوت الجوره على نباتين عدا الذره المفردة والذي احتوت الجورة فيها على نبات واحد وبذلك وصلت الكثافة الكلية في نظام التحميل إلى ٢٠٠% (١٠٠% من كثافة كل مكون في النظام).

وتمت زراعة فول الصويا قبل زراعة الذره بثلاثة أسابيع أي أنه تم زراعة الذره الشاميه مع ريه المحاياه لفول الصويا.

استخدم تصميم القطع المنشقه مرتين في ثلاثة مكررات حيث شغل نظامي الزراعة المنفرده والمحملة القطع الرئيسية بينما شغلت مستويات التسميد النتروجيني الثلاثة القطع الشقيه الاولى ووزعت أصناف الذره الشاميه الأربعة عشوائياً في القطع الشقية الثانية.

قسم أمراض النبات

دراسات تشخيصية على فيرس موزيك البطيخ فى مصر
DIAGNOSTIC STUDIES ON WATERMELON MOSAIC VIRUS IN EGYPT

محمد عبد الحميد العدل

SUMMARY

Squash is one of the most important crop in Egypt. There are many viruses affecting squash plants. i.e. CMV, WMV-2, WMV-1, SqMV , ZYMV and others. These viruses cause losses of squash crop and also they are highly affecting in the quality of squash in commercial production.

The present study aimed to detect watermelon mosaic virus-2 (WMV-2) on the basis of symptomolgy, host rang, mechanical transmission, insect transmission, physical properties, serological studies, electron microscopy and molecular studies. Also, the effect of the virus on squash plants and the effect of some materials on the virus were studied.

WMV-2 reduced the growth of squash plants, the number of internodes, flowers, leaf area, fresh & dry weight and chlorophyll contents.

of xylem and phloem with increasing the diameter of xylem and petiole .

دراسات متقدمة عن طبيعة المقاومة فى القمح على مرض الصدأ الأصفر فى مصر

FURTHER STUDIES ON THE NATURE OF RESISTANCE OF WHEAT YELLOW RUST IN EGYPT

عاطف عبد الفتاح شاهين

ABSTRACT

The present work was conducted through out three seasons *i.e.* during (٢٠٠٥-٢٠٠٧), respectively at Sakha Agric. Res. Sta. It included annual three surveys of stripe rust in Northern governorates of Egypt. ٢٦ physiologic races through out the ٣ seasons were identified, effective genes of stripe rust resistance, postulated genes included in the commercial cultivars and common genes included in the cultivars were determined through the seasons. Varietals resistance was detected in both seedling and adult stages on the basis of yield components and disease parameters.

Likewise, comparative resistance was determined in ٤٩ wheat monogenic lines and entries during two seasons. The study also included a comparative study between race identity in both seedling and adult stage to indicate the difference between them. The results were correlated between postulated genes and the results of a genetical studies in a unique experiments in both field and greenhouse.

Finally, the study included the evaluation of certain systemic fungicides in conditioned field experiment on the basis of yield and diseases parameters during two seasons.

دراسات على بعض أمراض العدس فى مصر
STUDIES ON CERTAIN LENTIL DISEASES IN EGYPT

عـزة محمـود يـوسف

ABSTRACT

The present work was investigated the effect of certain antioxidants as well as some isolates of fungal and bacterial on the most important lentil diseases. Among of tested antioxidants , salicylic acid and benzoic acid followed by hydroquinone were the most effective, they recorded the highest reduction in the linear growth of the tested pathogenic fungi, i.e. *Botrytis cinerea* , *Rhizoctonia solani* and *Fusarium solani* at ٥mM, while ascorbic acid was the least effect one.

On the other hand isolates of bioagents *Pseudomonas fluorescens*١, *Bacillus subtilis* ١ and *Trichoderma harzianum* exhibited broad spectrum of antagonism against the tested pathogens. Under greenhouse application of the abiotic and biotic agents significantly reduced disease severity of grey mould and damping – off caused by *Botrytis cinerea* and *Rhizoctonia solani* respectively compared to untreated infected control when used as foliar sprays or seed treatments. Bion at ٠.١٨ g/ L, salicylic acid at ٥ mM and benzoic acid at ٥ mM, *Pseudomonas fluorescens* ١ were the most effective treatments. However, the application of fungicides Dithane M – ٤٥ and Rizolex - T were used for comparison were superior .

Results of grey mould reduction due to application the previous treatments before inoculated with the pathogen was accompanied by a gradual increase in peroxidase and polyphenoloxidase activities during experiment periods, *i.e.* ٢٤, ٤٨, ٧٢ then the activity was declined after ١٦٨ h. At the same time recorded the lowest reduction in Polygalacturonase (PG) and Pectien methyl estrase (PME) activities.

Field experiments were carried out during season ٢٠٠٦ in Zarzora and Gemmiza experimental stations at El – Behira and El – Gharbia Govs., respectively to tested the most effective treatments performed in the greenhouse experiments against grey mould and Rhizoctonia root – rot .

At harvest stages samples taken from each treatments with abiotic and biotic agent were used as a foliar or seed treatment to determine the following crop growth characters including dry weight, No. of pods, No. of seeds per plants, weight of seeds per plants, ١٠٠ weight of seeds, seed yield , total carbohydrates and crude protein in lentil seeds.

قسم إنتاج الدواجن

تقييم وراثي لصفات خلفة البطن لخط امى مخلق جديد من الأرانب تحت برنامج انتخاب في مصر

GENETIC EVALUATION OF LITTER TRAITS OF A NEW SYNTHETIC MATERNAL LINE OF RABBITS UNDER SELECTION PROGRAM IN EGYPT

جلال صبحى مصطفى ابو خديجة

ABSTRACT

An experiment to evaluate a new synthetic maternal line of rabbits (APRI), recently formed in Egypt, compared to V line for litter traits has been carried out. Data on ١٤٠٠ and ١٩٠٦ litters were evaluated from APRI and V lines, respectively. Selection criterion was litter weaning weight in both lines.

The selection method was based on BLUP estimations under multi-trait repeatability animal model. V line was significantly superior to APRI line in most litter weight and litter size traits in earlier ages, while the reverse was generally observed in later ages as well as all litter survival traits. Environmental trends showed more stability of APRI line against environmental changes.

Heritability estimates were generally low and comparable in both lines with ranges of ٠.٠٧٥ to ٠.١٠٨ for litter weight, ٠.٠٣٤ to ٠.١١٧ for litter size and ٠.٠٠٥ to ٠.٠٩٤ for litter survival. Low to moderate estimates of repeatability were observed for all studied traits. Ranges of values were ٠.١٣٨ to ٠.٣٠٩ for litter

weight, ٠.٠٨٨ to ٠.٣٤٢ for litter size and ٠.٠٠٦ to ٠.٢١٧ for litter survival traits.

Estimates of genetic correlations ranged from ٠.٧٣٨ to ٠.٩٢٥ for litter weight, ٠.٥٠١ to ٠.٩٨٠ for litter size and -٠.٠١٩ to ٠.٨٩٣ for litter

survival traits. Genetic correlations among litter weaning weight and litter size traits were relatively high (>٠.٧٦). Corresponding litter survival traits ranged from ٠.٠٤٤ to ٠.٧٣٣.

Non-additive plus permanent environmental effects correlations were mostly lower than genetic correlations and ranged from ٠.٤٧١ to ٠.٩٠٥ for litter weight, ٠.٣٨٤ to ٠.٩٥٣ for litter size and -٠.٣١٨ to ٠.٨١١ for litter survival traits.

Correlations of non-additive plus permanent environmental effects ranged from ٠.٠٤٤ to ٠.٦٥١among litter weaning weight and litter size traits and from -٠.٢٤٨ to ٠.٨٧٠ among litter weaning weight and litter survival traits. The direct selection response for litter weaning weight was significant and valued ١٠٢.٦٥٠ and ٩٧.٣٦٨ gram (٣٤.٢١٧ and ٣٢.٤٥٦ gram per generation) in APRI and V lines, respectively. Correlated response was found to be significant (P< ٠.٠٥) for other litter weight and litter size traits, while it was mostly negative and insignificant for litter survival traits in both lines. These results indicate that the current selection program was effective to achieve genetic improvement in litter traits .

بعض الدراسات الإنتاجية والتناسلية علي الأرانب النقية والخليط تحت الظروف المصرية

SOME PRODUCTIVE AND REPRODUCTIVE STUDIES ON PUREBRED AND CROSSBRED RABBITS UNDER EGYPTIAN CONDITIONS

آيات عبد المقصود مرسي رجب

ABSTRACT

Experiments of the present study were carried out on a Flock of the Spanish synthetic V-Line, which is highly productivity and superiority in litter traits. Also, to evacuate the performance of the cross, which is by crossing V-Line with the Local Baladi Red (BR) breed, this is highly adapted with the Egyptian conditions.

The study tasted for two years started at September ٢٠٠٥ and ended in May ٢٠٠٧ at Sakha Experimental station belong to Animal Production Research Institute, Ministry of Agriculture, Egypt. Throughout the whole experimental period, each animal was offered a concentrate commercial diet (٨٦.٤٥٪DM; ١٧.٨٪ CP, ٢.٢٤٪ EE, ١٤.٠٣ CF; ٤٦.٥٥٪ NFE; ٥.٨٣٪ ash) feed and water were available ad-libitum. The current study amid to evaluate the litter traits, pre-weaning mortality, Reproductive traits, Measuring of milk yield and milk composition, some blood constituents, digestibility of nutrients, Caecotrophy trial, and semen physical characteristics under Egyptian condition.

In Conclusions it could be concluded that it is possible to Use crossbred does on commercial scale, i.e. crossing V-line rabbits with local rabbits (Baladi Red) if BR used as a buck and V-Line as a doe associated with an improvement in milk production, milk components and feeding efficiencies.

Crossbred does resulting from crossing Baladi Red with V-line of rabbits could be effective to develop synthetic maternal line characterized by high milk production associated with rich components and consequently higher productivity in does could be attained.

Crossbred bucks could be used a suitable genetic for production of rabbits under Egyptian conditions.

قسم ميكنة زراعية

تصنيع و اختبار آلة لدراس البذور الصغيرة
Manufacturing and testing a machine for threshing small seeds.

أمل عثمان زين العابدين شعبان

SUMMARY

Due to lack of machine for threshing and cleaning small seeds such as onion and parseem to be used as seeds which makes farmers abstain from planting these crops for such aim.

The main purpose of this study is serving small cultivated areas for obtained clean seeds due to the lack of these probabilities especially in new lands; this machine is a small one gives a relative high production.

The present study included a new design of threshing and cleaning machine. This machine is suitable for small seeds.