

**FIELD CONTROL OF THE WHITE SCALE INSECT
"PARLATORIA BLANCHARDII" TARG.
(HOMOPTERA: DIASPIDIDAE)
WITH AQUEOUS SHOOT EXTRACT OF ARGEL
(SOLENOSTEMMA ARGEL)(Del) Hayne**

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B.Sc. (Honours) – Plant Protection
Sudan University of Science and Technology
October, 2003

A thesis Submitted In Partial Fulfillment of the
Requirements for the Degree of Master of Science in Plant
Protection

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APRIL 2006

وَنَزَّلْنَا مِنَ السَّمَاءِ مَاءً مُّبَارَكًا فَأَنْبَتْنَا
بِهِ جَنَاتٍ وَحَبَّ الْحَصِيدِ {9}
وَالنَّخْلَ بَاسِيقَاتٍ لَهَا طَلْعٌ نَضِيدٌ {
10}

سورة ق الآية (9-10)

[We send down from the sky
water which is full of
blessings, and we produce
there with gardens and grain
harvests, and tall palm trees
with spathes piled one above
the other].

True is the word of God, the Great.

*(Qaf chapter,
verses 10-11)*

DEDICATION

To my Father,

Mother,

Sister,

Brothers

And Frinds.

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e**

Acknowledgement

Firstly of all , I render my gratitude and praise to the Almighty "Allah" who offered me the health , patience and strength to under take this work.

I would like to express my deepest gratitude and my sincere thanks to my supervisor Dr – Awad Khalafalla Taha for his valuable guidance , fruitful encouragement and his endless help to tackle this work .

I am deeply grateful to prof. Siddig Ahmed Siddig , Faculty of Science, University of Khartoum for his valuable information.

I am also indebted to prof. Asim Ali Abd El Rahman Faculty of Agricultural Studies, Sudan University of Science and Technology .

Thanks are also extended to Mr .Mahdi Abd El-Rahman Ahmed , Asma Mohamed Ahmed Adam , Hatim Gomaa Elmardy and Population of Al Gourair area.

Finally , my deep gratitude and special thanks to my family for their patience, encouragement and continuous support.

ABSTRACT

This study was carried out under field conditions at Al-Gurair Agricultural Scheme in Marawi Governorate at Northern State, in two villages (Elssafa and Goss Hindi), during the period from November 2004 to September 2005 , to evaluate the efficacy of Argel (Hargal) *Solenostemma argel* (Del.) shoot aqueous extract against the White scale insect *Parlatoria*

blanchardii (Targ.) and their effect on the yield of date palm trees.

Argel (Hargal) shoot aqueous extract was tested at Three rates (which were: 1ounce / 6L. of water./ tree, 2 ounces / 6L of water./ tree and 3 ounces / 6 L. of water./ tree) as spray, using a knapsack sprayer, in addition to soil treatment.

The results showed that Argel (Hargal) shoot aqueous extract when used as spray at all tested rates increased mortality rate of adult females of *Parlatoria blanchardii* (Targ.) compared with untreated control after 7 days of application, when argel (Hargal) shoot powder was dissolved for (48hr.) in water .

Effect of Argel (Hargal) shoot powder and that of the aqueous extract on date palm yields were also studied. All tested rates when applied, increased the yields of date palm trees compared to untreated control. In farm (4) the increase of yield was significant ($P>0.05$).

Argel (Hargal) shoot powder or aqueous extract at (1ounce/ 6L. of water /tree) is recommended for control of white scale insect *Parlatoria blanchardii* on date

palm trees, to be applied once as a spray, at early April to late May of the year.

ملخص الاطروحة

اجريت هذه الدراسة تحت ظروف الحقل بمشروع القرير الزراعي بمحلية مروي بالولاية الشمالية في قريتي (الصفاء و قوز هندي) في الفترة من شهر نوفمبر 2004م حتى سبتمبر 2005م لتقييم فعالية المستخلص المائي لنبات الحرجل *Solenostemma argel* ضد الحشرة القشرية البيضاء *Parlatoria blanchardii* وكذلك تأثيره علي انتاجية نخيل التمر وتم استخدام ثلاثة معدلات من المستخلص المائي لنبات الحرجل كالآتي : (1اوقية /6لترماء /شجرة ، 2اوقية /6لترماء / شجرة و 3اوقيات /6لترماء /شجرة).استخدمت هذه التراكيز بطريقتين رش اشجار النخيل باستخدام الرشاشة الظهرية بالاضافة الى معاملة التربة . اوضحت النتائج ان استخدام المستخلص المائي للحرجل في كل التراكيز زادت فيه نسبة الموت للاناث البالغة من الآفة مقارنة مع الاشجار غير المعاملة (شاهد التجربة) وذلك خلال 7 ايام من المعاملة عندما تمت اذابة مسحوق الحرجل فى الماء لمدة 48 ساعة.

وتمت في هذه الدراسة المقارنة بين تأثير مسحوق الحرجل والمستخلص المائي علي انتاجية اشجار النخيل . واوضحت الدراسة ان كلا المعاملتين ادت إلي زيادة معنوية فى الانتاجية مقارنة بشاهد التجربة وذلك فى التجربة التى نفذت فى المزرعة رقم (4) .

ومن خلال نتائج هذه التجربة يوصى باستخدام الجرعة (1اوقية /6 لترماء /شجرة) لمكافحة حشرة *Parlatoria blanchardii* بمعدل رشة مرة واحدة خاصة في الفترة من اول شهر ابريل وحتى اواخر مايو.

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