

الآية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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صَدَقَ اللَّهُ الْعَظِيمُ (ةُ الْعَلَقِ)

DEDICATION

To my dear parents.

To my daughters, Wife's and all my family and
colleagues.

To my uncles, aunts, brothers and sisters.

To whom they own a great space in heart.

With great love and respect.

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ABSTRACT

This study was aimed to evaluate the effect of Neem (*Azadirachta indica*) seeds ethanolic extract on the groundnut seed beetle (*Caryedon serratus*), which considered as an economic important pest of groundnut in North Darfur especially Alliet Jar Elnabi locality the famous place of groundnut production.

The first survey was conducted in the month of April, 2015 to determine the infestation by *C. serratus*. Therefore five stores were selected randomly for investigation of presence of adults, any other stages and exit holes on groundnut fruits. Also a second survey was done in May, 2015.

The survey revealed the presence of all stages of groundnut seed beetle at all selected stores.

The laboratory experiments were carried out at the Faculty of Environmental Science and Natural Resource, University of El Fasher. During the period from April to June, 2015. The insects reared were done in plastic Jars under laboratory condition, temperature ranged from (30 to 35°C).

The results revealed that there were significant differences between all concentrations of Neem seeds ethanolic extract and the control on both adults and larvae.

The highest concentration 5% ethanolic extract of Neem seeds gave mortality 82.5% and 90% against both adults and larvae respectively and there was no significant differences between the tested extracts and the standard insecticide (Malathion). Also the same concentration 5% induced repellency (%) of 90% and 87.5% after 48 hours of treatment respectively on adults and larvae.

From these results we recommended that Neem seeds ethanolic extract 5% can be used for controlling adult and larvae of groundnut seed beetle. Also recommended that further studies should be made to confirm these results until this extract become one of the safe alternatives against this pest in the future.

المستخلص العربي

هذه الدراسة تهدف إلى تقييم تأثير فعالية المستخلص الإيثانولي لبذور النيم (*Azadirachta indica*) على خنفساء الفول السوداني (*Caryedon serratus*) والتي تعتبر من الآفات ذات الأهمية الاقتصادية على محصول الفول السوداني في منطقة شمال دارفور خاصة محلية اللعيت جار النبي والتي تعتبر من أشهر مناطق إنتاج الفول السوداني.

تم إجراء مسح أولي في شهر أبريل 2015 وذلك بغرض تحديد الإصابة بهذه الحشرة، حيث تم اختيار فحص خمسة مخازن عشوائيا لفحصها والتأكد من وجود هذه الآفة أو أحد أطوارها أو مظاهر الإصابة على ثمار الفول السوداني. كما تم إجراء المسح الثاني في مايو 2015.

أظهرت نتائج المسوحات وجود كل أطوار خنفساء الفول السوداني في كل المخازن التي اجرت عليها المسح. أجريت التجارب المعملية بكلية علوم البيئة والموارد الطبيعية- جامعة الفاشر في الفترة من أبريل إلى يونيو 2015م. تمت تربية الحشرة في أوعية بلاستيكية في درجة حرارة تراوحت ما بين 30-35 درجة مئوية. أظهرت النتائج أن هنالك فروقات معنوية بين جميع تركيزات المستخلص الإيثانولي لبذور النيم والشاهد وذلك على كل من الحشرات الكاملة واليرقات.

أعطى أعلى تركيز 5% من المستخلص الإيثانولي لبذور النيم نسبة موت 82.5% و 90% على كل من الحشرة الكاملة واليرقات على التوالي ولم يكن هنالك فروق معنوية بينه وبين المبيد القياسي (Malathion). كما سجلت تركيز 5% أعلى نسبة طرد 90% و 87.5% بعد 48 ساعة من المعاملة على الحشرة الكاملة واليرقات على التوالي.

من خلال هذه النتائج يمكن أن نوصي باستخدام المستخلص الإيثانولي لبذور النيم تركيز 5% في مكافحة كل من الحشرة الكاملة واليرقات لخنفساء الفول السوداني، كما نوصي بإجراء المزيد من الدراسات لتأكيد هذه النتائج حتى يصبح هذا المستخلص كبديل آمن للمبيدات الكيميائية التي تستخدم في مكافحة هذه الآفة مستقبلا.