

بسم الله الرحمن الرحيم

Sudan University of  
College of Graduate

الرحيم

Science and Technology  
Studies

**Effect of Wrapping Materials on Budding of Grapefruit  
(*Citrus paradisi* Macf.) cv. "Redblush"**

تأثير شرائط الربط على تطعيم الـ قریب فروت  
(*Citrus paradisi* Macf.)

By

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# **Dedication**

**To the Memory of my Late Father,**

**To my Dear Mother, Sisters and Brothers**

**And to all those who encouraged me to  
achieve this goal**

**Fatima**

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Praise is to Allah the Almighty who gave me the health, strength and patience to complete this study.

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## ABSTRACT

This experiment was conducted in the orchard of the College of Agricultural Studies Sudan University of Science and Technology, Shambat, during the last week of July to October 2006.

The aim of this work was to evaluate the effect of different wrapping tapes on budding efficiency and scion growth and development of grapefruit.

Buds of grapefruit (*Citrus paradisi* Macf.) culivar "Redblush" were budded on 12 month old sour orange (*Citrus aurantium* L.)seedlings. The buds were attached to the rootstock using one of these wrapping tapes as treatments : rubberized, cellotape, cellophane, plastic and electrical tapes

These treatments were conducted under 3 different environmental conditions namely cool fan-pad plastic house, lathe house and outdoor.

The randomized complete block design (RCBD) was used, with 5 tape types and 8 replications. Each condition consisted of 40 grafted plants.

Parameters measured at the end of the experiment, which included percent of bud-take, shoot length and number of leaves.

The results showed that the tape type material affected significantly the percent of bud-take, shoot length and number of leaves. Rubberized tape gave the highest values for all parameters measured, cellotape came second, while polyethylene strips gave the lowest values for all parameters measured. On the other hand, cool fan-pad plastic house conditions resulted in the highest values of parameters measured followed by the lathe house, while the outdoor conditions gave the lowest values.

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## الخلاصة

أجريت هذه التجربة بكلية الدراسات الزراعية - جامعة السودان للعلوم والتكنولوجيا بشمبات في الفترة من الأسبوع الأخير من يوليو وحتى نهاية أكتوبر 2006م بغرض تقييم أثر أنواع أشرطة ربط مختلفة على نجاح كفأة التطعيم ونمو وتطور طعم الـ قريب فروت.

صنف "رديلش" (*Citrus paradisi* Macf.) تم تطعيم براعم قريب فروت بعمر 12 شهر. ربطة البراعم على (*Citrus aurantium* L.) على أصول لارنجا الأصل بعد التطعيم بإستخدام نوع واحد من أنواع الأشرطة المختلفة التالية: المطاطي، سليتيك، سلفان، بلاستيك وشريط الكهرباء.

أجريت المعاملات السابقة تحت ثلاث ظروف بيئية مختلفة هي البيت البلاستيكى، البيت الخشبي وخارج البيت المبرد.

أستخدم تصميم القطاعات الكاملة العشوائية بخمسه أنواع أشرطة مختلفة وثمانيه مكررات حيث إشتملت كل بيئة على 40 نبات مطعم.

تم أخذ عدد من القياسات في نهاية التجربة شملت نسبة نجاح الطعم، طول الأفرع، وعدد الأوراق.

أوضحت النتائج أن أثر نوع مادة الشريط له تأثير معنوى على نسبة نجاح الطعم، طول الفرع وعدد الأوراق، حيث أعطى الشريط المطاطي أعلى قيم لكل

القياسات المرصوده وجاء السلتب في المرتبة الثانية بينما أعطت أشرطة البلاستيك أدنى قيم لكل القياسات المرصودة.

أوضحت النتائج كذلك أن بيئة البيت البلاستيكي المبرد أعطت أعلى قيم لكل القياسات المرصودة تلاه البيت الخشبي، بينما أعطت البيئة الخارجية أقل القيم.