

Dedication

*I dedicate this work to my
mother with love, late father -
may his soul rest in peace, my
husband Mohammed, brothers
and sisters... bless them all.*

Acknowledgements

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

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Abstract

This study was conducted to assess the effect of different soil media and temperature on acclimatization of banana propagules in cooled plastic house as well as the effect of some chemicals and growth hormones on their growth and development.

It was found that the medium composed of 2 sand:1 gurera or pure sand were respectively the best soil media for acclimatization of banana propagules. Un covered of the propagules in the plastic house were found to be better than covered ones. Placement of propagules on the house end near the cooling pads (the coolest part of the green house) gave better growth compared to placement far from the cooling pads. The addition of henna extract solution increased the fresh weights of roots. Application of 30 – 45 g/l of betaine increased, fresh and dry weights of vegetative parts.

After acclimatization addition of super phosphate gave the best result for all growth parameters. But the addition of 3 g urea in split dose of 1.5 g each gave better result than addition of 3 g urea in one dose. The growth was also enhanced by foliar treatment of a combination of 10 mg/l gibberllic acid (GA₃) and 50 mg/l benzyl adenine (BA).

ملخص الاطروحة

أجريت هذه الدراسة بغرض تقييم تأثير بيئات تربية مخلفة ودرجة الحرارة على تباتات الموز وذلك للتعرف على أثر بعض الاضافات الكيماوية ومنظمات النمو على نموها وتكثفها. أوضحت النتائج أن أفضل البيئات لاقلمة الشتول هي خليط من ٢ رمل + ١ قريره. أو الرمل منفردا وأن عدم تغطية النباتات في البيت المحمي افضل من تغطيتها. كما أن وضع الشتول في طرف البيت القرب من الوسادة الرطبة (أبرد جزء في البيت البلاستيكي) أدى أفضل معدل نمو مقارنة بوضعها بعيدا من الوسادة الرطبة. وأن إضافة مستخلص الحناء المائي زاد من الوزن الرطب للمجموع الجذري.

أدت إضافة البيتاين بتركيز ٣٠ أو ٤٥ جم/لتر الى زيادة في الوزن الرطب والجاف للمجموع الخضري.

أدت إضافة سوبر فوسفات الكالسيوم للشتول في طور ما بعد الاقلمة في المشتل أفضل النتائج لكل قياسات النمو. أما إضافة ٣ جرام يوريا على جرعتين بمعدل ١.٥ جم كانت أفضل من إضافة جرعة واحدة من اليوريا بمعدل ٣ جم. ولقد تحسن معدل النمو عند الرش بخليط من حمض الجبرلين بمعدل (GA₃) بمعدل ١٠ ملجم/لتر و البنزاييل ادنين بمعدل (BA) ٥٠ ملجم/لتر.

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