EFFECT OF ORGANIC FERTILIZER ON GROWTH, FLOWERING, FRUITING AND POSTHARVEST QUALITY OF TOMATO IN IMPROVED BRIS SOIL

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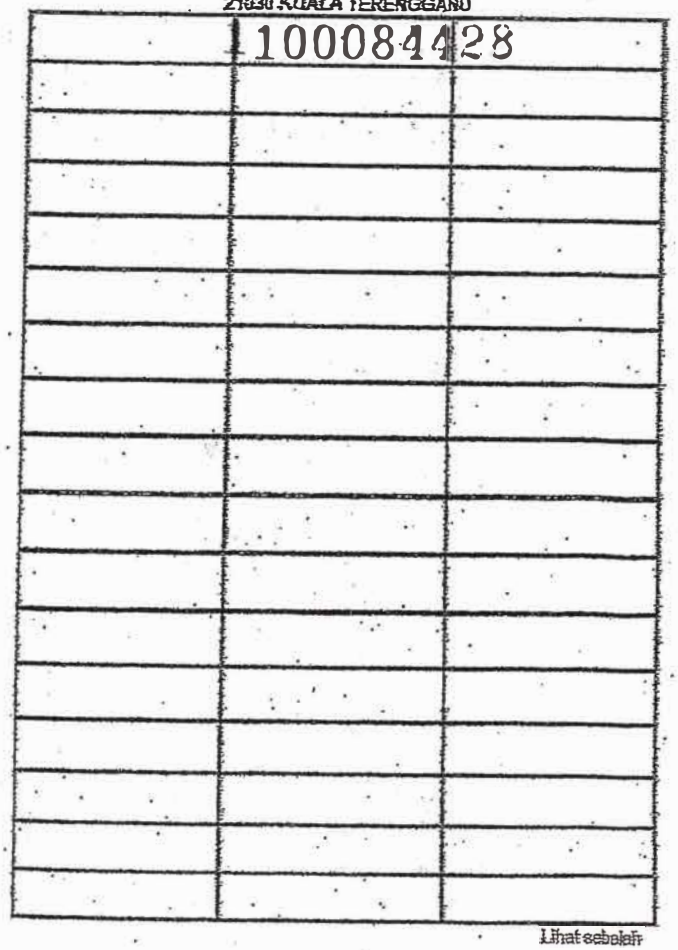
Effects of foliar fertilizer on growth, flowering, fruiting and postharvest quality of tomato on improved bris soil / Siti Nor Azurin Jamaluddin.



EFFECT OF FOLIAR FERTILIZER ON GROWTH, FLOWERING, FRUITING AND POSTHARVEST QUALITY OF TOMATO ON IMPROVED BRIS SOIL

By
Siti Nor Azurin Binti Jamaluddin

Research Report submitted in partial fulfillment of
the requirements for the degree of
Bachelor of Science in Agrotechnology (Post Harvest Technology)

DEPARTMENT OF AGROTECHNOLOGY
FACULTY OF AGROTECHNOLOGY AND FOOD SCIENCE
UNIVERSITI MALAYSIA TERENGGANU
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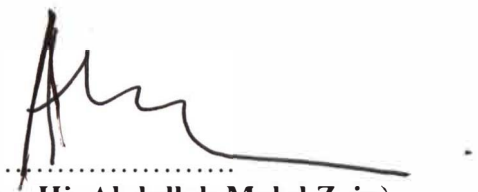
ENDORSEMENT

The project report entitled **Effect of Foliar Fertilizer on Growth, Flowering, Fruiting and Post Harvest Quality of Tomato on Improved Bris Soil** by **Siti Nor Azurin binti Jamaluddin**, Matric No. **UK 16013** has been received and corrections have been made according to the recommendations by examiners. This report is submitted to the Department of Agrotechnology in partial fulfillment of the requirement of the degree of Science in Agrotechnology (Post Harvest Technology), Faculty of Agrotechnology and Food Science, Universiti Malaysia Terengganu.



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Date: 22 APRIL 2010

.....(signed).....
(NAME)
Co supervisor

Date:

DECLARATION

I hereby declare that the work in thin thesis is my own except for quotations and summaries which have been duly acknowledged.

Signature : .....

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Matric No. : UK 16013

Date : 22 APRIL 2010

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ABSTRACT

Tomato is a climacteric fruit with have a very short life span. Tomato is suitable for planting at highland (above 100m). Nevertheless, some tomato cultivars can be planted in lowland. Rate of fertilization of tomato are different depends on soil type. Bris soil has lower in fertility or less suitable planting tomato and it needs higher fertilizer rate compared with mineral soil. Foliar fertilizers are widely used in vegetable and fruit crops, that contain various macro and micronutrients, which are essential for the proper growth and yield. This study was conducted to determine the effect of foliar fertilizer (Nutri Multi Liquid and Vita Grow Plus) on growth, flowering, fruiting and post harvest quality of tomato on improved bris soil. Physical characteristics were determined by quantitative measurements of plant height, stem diameter, number of flower and number of fruit. Chemical evaluation involved TSS and pH. The results obtained from these studies indicated that there were significant differences ($P<0.05$) in TSS between the application of foliar fertilizer and inorganic fertilizer (NPK Green and NPK Blue). Generally, plant height and stem diameter increased during plant growth but decreased during flowering and fruiting. Foliar fertilizers were found to improve the overall plant growth. However, inorganic fertilizer (NPK Blue) application affected the flowering, fruiting, TSS and fruit pH.

ABSTRAK

Tomato merupakan buah klimakterik yang mempunyai jangka hayat yang singkat. Tomato lebih sesuai ditanam di tanah tinggi (lebih 1000m). Walapun begitu, terdapat juga kultivar-kultivar tomato yang boleh ditanam di tanah rendah. Kadar pembajaan tomato berbeza mengikut jenis tanah. Tanah pasir yang kuraang subur atau sederhana sesuai untuk tanaman tomato dan memerlukan kadar baja yang lebih tinggi berbanding tanah mineral. Baja foliar banyak digunakan untuk sayuran dan buahan yang mengandungi pelbagai makro dan mikronutrien yang diperlukan untuk pertumbuhan dan hasil yang baik. Kajian ini dijalankan untuk menentukan kesan baja foliar (Nutri Multi Liquid dan Vita Grow Plus) ke atas pertumbuhan, pembungaan, pembuahan dan kualiti lepas tuai tomato pada tanah bris yang telah dibaiki. Ciri-ciri fizikal ditentukan melalui ukuran kuantitatif tinggi pokok, diameter stem, bilangan bunga dan bilangan hasil. Penilaian kimia pula melibatkan jumlah pepejal terlarut (TSS) dan pH. Keputusan yang diperolehi dari kajian ini menunjukkan perbezaan yang bererti ($P<0.05$) pada TSS di antara penggunaan baja foliar dan baja tak organik. Secara umumnya, pertumbuhan tinggi dan diameter meningkat sepanjang pertumbuhan tetapi kemerosotan sepanjang pembungaan dan pembuahan. Baja foliar dikenalpasti membantu dalam keseluruhan pertumbuhan. Walaubagaimanapun, baja tak organik (NPK Blue) yang diaplikasi berkesan untuk pembungaan dan pembuahan, TSS dan pH buah.