سامية محمد مصطفى

شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

سامية محمد مصطفى

شبكة المعلومات الجامعية

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

سامية محمد مصطفى

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

سامية محمد مصطفى

شبكة المعلومات الجامعية

بعض الوثائق الأصلية تالفة

سامية محمد مصطفى

بالرسالة صفحات لم ترد بالأصل

Cairo University
Institute of African Research & Studies
Department of Natural Resources

SEROLOGICAL AND MOLECULAR BIOLOGY STUDIES ON WATERMELON MOSAIC VIRUS IN EGYPT AND MOROCCO

Thesis
Required for Master of Science degree in African Studies of Natural Resources (Plant Pathology)

By

ASHGAN ABD-ALLAH MAHMOUD

B.Sc. in Plant Pathology Fac. Of Agric.,Zagazig Univ. (1999)

Under the Supervision of

Prof. Dr. **Om-Hashem Mohammed Ebrahim El-Banna**
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Prof. Dr. **Mostafa Ahmed Salama El-Kady**
Head of Research, Virus & Phytoplasma Research Dept., Plant Pathology Research Institute, Agricultural Research Center.

Dr. Hassan Mohammed Sobhy Hassan
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2005

APPROVAL SHEET

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Ashgan Abdallah

ABSTRACT

An isolate of WMV obtained from commercial fields in Qualubya Governorate (Qualub and Toukh). The observed symptoms included yellowing, severe mosaic, green blisters, vein clearing, malformation, and foliar distortion with small fruits.

Reaction of sixty plant species and varieties belonging to ten different families was tested; the virus reacted positively with twenty seven plants. The virus had dilution end point of 10^{-4} – 10^{-5}, thermal inactivation point of 60 – 65°C /10 min and ageing *in vitro* (20- 25°C) lay between 15 and 20 days. The virus was transmitted by *Myzus persicae*, *Aphis gossypii* and *Aphis craccivora*, the percentages of transmission were 80 %, 50 %, and 30 % respectively. WMV was purified with a high degree of purity with a minimum at 245 nm and a maximum at 260nm. The $A_{260/280}$ and a max / min rations were 1.11 and 1.01 respectively. The estimated yield of the purified virus was 3.88 mg/100g. The virus had filamentous rod-shape particles ranged from 730 – 750 nm in length and 15 nm in width. The polyclonal antibodies developed against WMV obtained after the third bleeding (1/2048) were used in purification of IgG and conjugation of IgG with alkaline phosphatase. The optimum concentration of IgG and IgG conjugate for ELISA was 0.5 µg /ml and 1/2000, respectively.

The RT-PCR, IC-RT-PCR, Dot blot hybridization, and Southern blot hybridization assays were applied for detection and identification of WMV.

Om. Hashem El- Banna