

**CUMIN WILT IN NEW RECLAIMED REGIONS
IN EGYPT AND ITS CONTROL.**

BY

WAFAA MOHAMED EL-SAYED HAGGAG

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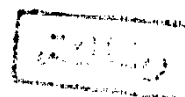
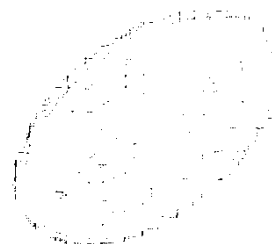
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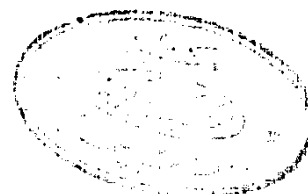
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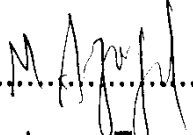
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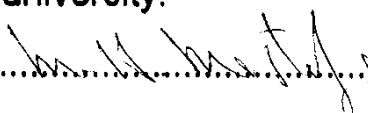
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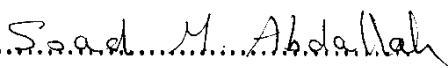
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Abstract

Wilt is the serious one of the plant diseases of the cumin crop. The causal organism is Fusarium oxysporum f.sp. cumini. It

had the higher frequency of isolation from Giza and Assiut of the old clay soil than from the new reclaimed sandy soil of Sharkia or Beheira. The fungus was the only one isolated from the endosperm of the decoated seeds as seed transmission. Growth regulators, i.e. Ethephon, Indole acetic acid and Gibberellic acid were used for controlling the diseases as induce resistance. They depressed the fungal growth and sporulation. Seed soaking treatment was exceeded than foliar spray plants with the growth regulators. Ethephon 800 was the effective treatment on increasing the cumin seed germination. They reduced pre-or post-emergence of damping-off and wilted plants as seed soaking than with foliar spray the plants. They decreased the wilt disease incidence and delayed the emergence of the wilt symptoms. Growth regulators increased the different growth parameters and yield components. They also increased the oil content and the different main components.

Fungicidal treatments inhibited the fungal growth and sporulation specially by Benlate and Homai 80. They also increased the seed germination. Benlate was the more effective fungicides on decreasing the wilt disease incidence, delaying the wilt symptoms and increasing the plant growth parameters and yield components. Fungicides had no any effect on oil content. The male percentage of cumin plants was depressed as affected with growth regulator treatments. The new reclaimed sandy soil proved that it had a low

wilt disease incidence, delayed the symptoms of the wilt, increased the different parameters of the plant growth and yield components and also the seeds had a higher oil content than in the old clay soil cultivations.

KEY WORDS

- Cultivars
- Daconil
- *Fusarium oxysporum*
- pathogenicity
- Indole acetic acid
- Gibberellic acid
- Growth regulators

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INTRODUCTION