INTRODUCTION

Sunflower, Helianthus annuus is one of the most important oil crops in the world, as seeds contain about 24-35 % oil. The cultivated sunflower area was found to increase during the last decade. Where, the annual acreage was 1832 feddans in 1968 and became 20126 feddans in 1976. On the other hand, total yield of seeds obtained was 1,184,045 Kg. in 1968 increased to 13,475,320 Kg. in 1976.

Attempts are made to increase the amount of sunflower seeds. This can be achieved by increasing the yield per feddan beside the increasing of the growing area.

Sunflower plants suffer from infection with several fungal diseases in the field. Sclerotium rolfsii, [illegible] and Fusarium [illegible] one of the most destructive fungi causing serious damage to sunflower during [illegible] and Khattab, [illegible]

The present dissertation was planned to study pathogenicity of the isolated fungi, singly or incombined with each others, some fungal physiological properties, saprophytic behaviour, and reaction of different sunflower varieties to the diseases. The effect of various fungicides on fungal growth and their distribution in the different plant organs were also studied. Control measures by means of fungicides were tested in the green-house.

Experiments were carried out in the laboratories and in the green-house of Faculty of Agriculture, Al-Azhar University, and the National Research Centre.