A study of Rose Leaf Spot Diseases and Araucaria Wilting and yellowing with Their Chemical and Biological Control

By

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Abstract

The present study was conducted in the laboratories of the Plant Protection Department / Faculty of Agriculture / University of Basra during the period from 2015-2016. The study was aimed to study some of the ornamental plant diseases such as spotted leaves on roses and wilting and yellowing of uraucaria tree, the survey showed the spread of diseases in all nurseries and showed the highest rate and disease severity of spotted leaves roses in Khurh nurseries, amounting to 62.3% and 53.3% respectively, and the lowest rate and the severity of injury in Zubair nurseries, amounting to 21.6% and 23.3% respectively, while the wilt disease on uraucaria tree stood at the highest rate and the severity of injury 80.5% and 85.1% in the Zubair nurseries.

Results showed the two fungi *Diplocarpon rosa* and *Pestalotia macrotricha* were isolated from the roses leaves with spotting disease. While the isolation of two fungi *Fusarium culmorum* and *Fusarium chlamydosporum* from uraucaria trees infected by yellowing and wilting. The results of laboratory study also showed that the best temperature for the growth of fungus *Pestalotia macrotricha* is 25 °C where the growth rate was 8.4 cm while stunted growth was observed at 35 ° C. On the other hand, the best PH for highest rate of growth was 6, Reaching the highest rate of growth of the fungus radiographic 8.5 cm. and it reached the lowest rate of growth radiographic 5 cm at PH 5. Furthermore, The study showed that the best media for growth of fungus is PDA as the radial growth rate was 8.5 cm and the

less growth in the media CMA, where the growth rate was 3.5 and it was a mild growth as seen in magnifying lens.

The results showed the effect of some pesticides in the growth of fungus *Pestalotia macrotricha* and *Fusarium culmorum* and *Fusarium chlamydosporum* that the pesticide Dazim and Revous Top were the most inhibitory of the growth of fungus *Pestalotia macrotricha* were the percent of inhibition was 100% compared to 55% of the pesticide Hunter. On the other hand, the Dazim and Hunter showed the highest effect in the growth of the two fungi *Fusarium culmorum* and *Fusarium chlamydosporum* with percentage of inhibition of 100% in the laboratory for both insecticides Dazim and Hunter while for Revous Top amounted to 33.3% of the fungus *Fusarium chlamedosporum* and 30% of the fungus *Fusarium culmorum*. In addition both Dazim and Hunter decrease the severity of wilting and yellowing diseases of uraucaria. Also the results demonstrated the ability of Dazim and Revous Top in reducing the severity of disease with *P. macrotricha* on rose leaves treated with these pesticides. The results show 42.81% in dazim and 37.74 % in Revous top compared to the control group 62.16%.

The results also showed the ability of fungus *Chaetomium globosum* and *Psedomonas fluorescens* bacteria in vitro in biological resistance against the fungus *Pestalotia macrotricha*. The results also showed that the plant extract Quercetin, which is one flavinueld (polyphenol), derived from a number of plants such as onions and apples, was most efficient in the inhibition of fungus *p. macrotricha* compared with extract Silibnin from plant Sylibum marianum.