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EFFECTIVENESS OF ETHANOLIC EXTRACTS FOR CHAMOMILE AND PROPOLIS AGAINST FUNGI (*RHIZOCTONAI SOLANI* KUHN) CAUSING ROOT ROT OF BROAD BEAN (*VICIA FABA* L.)

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ABSTRACT : The laboratory and field study was conducted to test the efficacy of ethanol extracts of the Chamomile plant and Propolis of a plant nature against the pathogenic fungus *Rhizoctonai solani*, which causes the root rot of the broad bean plant, as concentrations (0.00, 0.50, 1.00, 1.50, 3.00, 6.00)% were used in two experimental units. Both the ethanol extract of Chamomile plant and Propolis. The results of the laboratory experiment showed the effectiveness of ethanol extracts of Chamomile plant and Propolis in inhibiting the growth of pathogenic fungi R. solani and for all concentrations used, as the average of inhibition reached (7.91 and 5.78) cm for both chamomile extract and Propolis respectively. The results of the Efficiency test for the ethanol extract of chamomile and Propolis showed the concentration efficiency (6%) in preventing the growth and spread of pathogenic fungi *R. solnai* in the PDA growth medium, noting that there were no significant differences in the concentration (3%). As for the field experiment, the results showed the excelled of the ethanol extract of the Chamomile plant in preventing the growth and development of the pathogenic fungus *R. solani* through the positive results of the most important significant traits of the broad bean plant in the fresh pod's weight, the weight of one the fresh pod, the fresh root system weight and the 1000 seed weight, with a general average of 738.24, 37.54, 6.34, 1399.91 g respectively, while the ethanol extracts of Propolis had the least effective in preventing the growth and development of the pathogenic fungus R. solani of the mentioned specific traits at a general average amounted to (672.75, 30.95, 5.96, 1392.96 g), respectively.

Key words : Ethanolic extracts, chamomile, Propolis against fungi.

INTRODUCTION

Broad bean (*Faba vicia* L) is one of the plants belonging to Fabaceae family, spreadout in many countries of the world where it is considered an important source of food for millions of the world's population and among the poor communities and those with limited income, especially, because its seeds contain a high percentage of protein ranging from 22-36%, that have an important effect in reducing animal protein deficiency in these societies as well as containing carbohydrates, calcium, iron, vitamin, vitamin 1, vitamin B2, in addition to improving the characteristics of agricultural soils due to their ability to stabilize atmospheric nitrogen by Leguminosarum Rhizobium bacterial nodes (Sharma, 2004).

Broad bean plants infection from many fungal and insect diseases with an economic impact on this important crop. Among these diseases is the Rot roots, which is caused by the fungus *Rhizoctonia solani*, Kuhn and is considered one of the most widespread diseases and causes great losses to the crop under appropriate environmental conditions. This fungus has a very wide range as it, in addition to causing root rot, causes the seedlings of many of its widely spread families (Hibbett *et al*, 2007). The fungi live in the soil as an active Mycelium and can remain in the soil for a long time as well as forming stone bodies that are able to remain in the soil for a long time, that the use of chemical pesticides, systemic fungicides or antibiotics despite its effectiveness indicates that it causes soil and environmental pollution as well as its high cost (Al-Adil, 2006). Therefore, recent studies have directed to the use of natural extracts that are effective in many fungal and insect diseases, and because they are safe and environmentally friendly as well as easy to use and cheap in price. From this section, this research has been proposed using the following:

1. Chamomile : It is known scientifically as *Matricaria chamomilla*. The part used is the flowers and branches, where the flowers contain 1% of the essential oil, while the percentage in the branches is 20 - 35%. One of its most important compounds is the Azulin that is effective against infections. Its flowers also contain bitter materials. Flavonoids, polystyrene and nitrogenous materials contain proteins, including iron and lead, as well