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Short Article

AN INVESTIGATION ON THE EFFECTIVENESS OF SOME PLANT EXTRACTS FOR THE CONTROL OF CUCUMBER POWDERY MILDEW*

A. SIROUS, A. H. JAMALI ZAVAREH and A. A. FADAEI TEHRANI[1]**

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Abstract

In this research, the effect of (spinach, capsicum, beet, turnip and radish) extracts the preventive and curative control of cucumber powdery mildew in greenhouse tests was investigated for. The acetonic, methanolic or water extracts of leaf tissues of each plant at concentrations one and 5% (w/v) was sprayed on the plants at either one day before, or 1 day after the plant inoculation with spore suspension of pathogen. Disease severity was evaluated based on the number of disease spots per leaf ten days after inoculation. The effectiveness of this extracts was also compared with Penconazole fungicide and *Reynoutria sachalinensis* (*Rs*) extract, two commercial compounds for the control of disease. Results showed that all tested extracts reduced the disease severity on the treated leaves, but in varying degrees. In comparison with *Rs*, the acetonic extracts of pepper and beet, and the methanolic extracts of spinach and turnip at the concentration of 5% showed relative effectiveness in prevention of disease. On the other hand, the methanolic extract of turnip at the concentration of 5% showed the highest curative effect and its curative efficacy was the same as penconazole. Also, the most effective time for application of extracts of spinach and *Rs* was 24 hours before pathogen inoculation, the application of extracts of pepper and turnip at 24 hours after pathogen inoculation, was more effective for the control of disease. Thus, application time and concentration and kind of solvent influence the efficacy of the extracts.

Keywords: *Podosphera fusca*, Plant extracts, Penconazole fungicide*, Reynoutria sachalinensis.*

See Persian text for figures and tables (Pages ۴۳۳ -۴۳۷).

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**: Corresponding Author, Email: azamsirous31@yahoo.com

1. MSc. Student and Assis. Prof.s of Plant Pathol., College of Agriculture, Shahrekord University, Shahrekord, Iran.

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