

## The potential use of plants extracts as inhibitor of phytopathogens

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There are concerns about the widespread use of chemicals in crop production in developing countries because of their possible adverse effects on human health and environment. According to a World Health Organization survey, more than 50,000 people in developing countries are poisoned annually and 5,000 die as a result of the effects of toxic agrichemicals. In India 35,000 – 40,000 tons of hazardous chemicals are sprayed on crops every year and this is considered to increase the risk of cancer, sterility and death. There is an urgent need, therefore, for the development of safer and more sustainable methods of crop production. Plants are known to possess antimicrobial secondary metabolites that can inhibit the growth of plant pathogens and it is possible that these compounds could be used to combat plant diseases. In the present study, experiments were carried out to evaluate the antifungal properties of 120 plant parts samples of 100 plants spanning over 45 families against seven plant pathogenic fungi by the food poisoning method. The results are promising and some of the plants have shown inhibitory activity against one or two fungi whereas others have shown a broader spectrum of activity, some plants showing good activity against all the test fungi. Plants samples of some families such as Apocynaceae, Caesalpinaceae, Combretaceae, Compositae, Ebenaceae, Liliaceae, Lythraceae, Meliaceae, Mimosaceae, Rosaceae, Salvadoraceae, Sapindaceae, Theaceae and Zingibraceae were found to be comparatively more effective against the test fungi. Hence eco-friendly management of crop's diseases is the only safe substitute to be explored to maintain sustainable agriculture and environment.

### Biography

Surender Kumar Bhardwaj has completed his M.Sc., M.Phil. & Ph.D. in Bioscience (Plant-Sciences) from Maharshi Dayanand University, Rohtak, Haryana, India. He is Superintendent Botanical Garden/Herbal Garden in Maharshi Dayanand University, Rohtak, Haryana, India. His research work is on Antimicrobial Activities of Plants Extracts against Phytopathogens. He has published more than 32 papers in reputed journals including one article in Employment News Paper.

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