Theme: Life Sciences and Agricultural sciences

# Management of Wilt disease in Chilly crop by application of leaf extract of *Adathoda vasica*

E. Kashamma*# (Shravya Puri) and A. Sabitha Rani
Department of Botany, Osmania university college for women,
Hyderabad., TS, India
Email: asharam341@gmail.com

Indiscriminate use of chemical pesticides resulted in serious environmental problems, accumulation of residues and resistance in target organisms. Hence, much attention has been paid towards the exploitation of higher plant products as novel pesticidal agents.

The present study was undertaken to control the wilt disease (*Fusarium oxysporium)* of Chilly crop by application of plant extracts. Chili (*Capsicum annuum* L.) belongs to the family *Solanaceae,* is one of the important vegetable and commercial cash crop, cultivated throughout the world. In the present study, locally available plant, *Adhatoda vasica* was selected for development of formulations for control of fungal diseases. *Adhatoda vasica* belonging to family *Acanthaceae,* is a commonly grown plant, which is widely employed in various traditional systems of medicine.

Various concentration of leaf extract of *Adhatoda,* was evaluated *in vitro* for its antifungal activity by Agar cup method. All the conc. of plant extract showed high zones inhibition against different species of fungi. Based on *in vitro* studies, various formulations of *A. vasica ( A1, A2, A3 & A4)* were developed and evaluated against wilt disease, in Pot experiments. Highly effective A 4 formulation was selected and evaluated against the wilt disease of chilly in the field experiments. Formulation of A4 was applied at different time intervals i.e 30, 60, 90 and 120 days and observed for the disease incidence. There is a significance reduction in wilt disease incidence was observed in all the treated plants, with an improvement in size, number and yield parameters of Chilly. The present work contributes for the development of effective plant protection agents for eco-friendly management of wild disease of Chilly, which is an important spice crop of India.