INTRODUCTION
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Plant diseases and insect pest continue to be major constraints in agricultural production. Fungicides introduced during 1940s have been useful in combating the diseases but it has been done, at the cost of some unfortunate consequences. These fungicides pose danger to ecosystem as their action mostly remains ‘broad spectrum’ killing target and non target organisms to conserve our ecosystem. Now it is necessary to redefine our strategies and achieve disease management by following suitable alternative approaches. Biopesticides offer one of the best alternatives to tackle disease of crop plants and would promise in the future.

Objectives of the study

1. To study effect of different biopesticides (Leaf extracts) on the growth and sporulation of pathogenic fungi (*Alternaria alternata, Fusarium oxysporum, Rhizoctonia bataticola*).
2. To study effect of biopesticides in combination with systemic and non-systemic fungicides on the growth and sporulation of test fungi.
3. To study effect of passage on development of biopesticide resistance in the test fungi.
4. To study biochemical characteristic of biopesticides.
5. To study stability of biopesticides at different pH and temperature.
6. To study synergistic effects of biopesticides and agrochemicals on the growth of test fungi.
There are few reports of fungitoxic properties of higher plants. (Shivpuri et al 1998, Gehlot and Bora, 1997, Sigh 1999, Sharma & Nanda, 2000, Bansal and Gupta, 2000, Bhat & Shukla, 2001, Dargan & Saxena, 2002). Some of the biopesticides selected for this study are from family Meliaceae & Lamiaceae.

Samples of *Alternaria alternata* (on *Solanum melongena* L.), *Fusarium oxysporum* (on *Spinacia oleracea* L.) and *Rhizoctonia bataticola* (on *Cajanus cajan*) infected plant parts from different districts of Maharashtra were collected and the above-mentioned fungi were isolated. The pathogens were maintained on CZA medium.

Fresh leaves of biopesticides (family Meliaceae and Lamiaceae) were collected, washed, oven dried at 45°C and pulverized to obtain dry powder. Extract of each plant was prepared with ethanol. The toxicity of plant extracts was determined against the three test fungi by poisoned food technique. Extracts of *Azadirachta indica* A. Juss. (Neem), *Melia azedarach* Linn. (Limbara), *Swietenia macrophylla* Jacq. , *Swietenia mahogani* (L) Jacq. (Mahugani), *Ocimum sanctum* Linn. (Tulsi), *Ocimum gratissimum* Linn. (Ramtulas), *Ocimum thyrsiflora* L. (Sabja) , *Hyiptis suaveolens* (L.) poit. (Elaiti tulas), *Lavandula bipinnata* (L) O. Ktze. (Jangali lavander) , *Mentha spicata* Linn. (Pudina), *Salvia aegyptiaca* Linn. , *Leonotis nepetifolia* (L) R. showed complete inhibition of all the three pathogens. Effect of biopesticides along with systemic fucigides (Carbendazim and Benomyl) and non systemic fucigides (Mancozeb, Copper oxychloride and thiram) on the growth and sporulation of above mentioned fungi was studied.
Spray programme may influence the development of resistance in the pathogens therefore effect of passage on the biopesticides individually or alternately with other biopesticides was studied *in vitro* and *in vivo*. Biochemical characteristics of all the above used biopesticides were studied. Stability of biopesticides at different temperatures and different pH was also studied. Synergistic effects of biopesticides on the growth and sporulation of test fungi were studied.