

RESEARCH ARTICLE

In vitro evaluation for the efficacy of the chemicals/ antibiotics, botanicals and bioagents against black rot (*Xanthomonas campestris* pv. *campestris*) of cauliflower in plains of Kerala

■ S. Lakshmi Prasanna and S. Ravi

SUMMARY

Cauliflower (*Brassica oleracea* var *botrytis*) is one of the important cool season vegetable crop grown in India. One of the major disease which causes huge loss (50-70%) is black rot of cauliflower caused by *Xanthomonas campestris* pv. *Campestris*. In the present study *in vitro* evaluation of chemicals/ antibiotics, botanicals and bio agents were studied and best selected treatments were studied at field level. Two antibiotics-Streptocycline, Tetracycline, (100,200,250ppm); Two chemicals- Copper oxychloride, Copper hydroxide, (0.15%, 0.2%); one combination of antibiotic and chemical Copper oxychloride + Streptocycline (0.15%+100ppm). Four botanicals leaf extract of tea, tea waste decoction, garlic extract, turmeric extract at two different concentrations 5 and 10 per cent and two bioagents *Bacillus subtilis* and *Pseudomonas fluoresces* were tested for their efficacy against *Xanthomonas campestris* pv. *Campestris*. The results were garlic extract 10 per cent was found to be effective against the pathogen followed by tetracycline 250 ppm. The untreated control recorded the maximum disease incidence, followed by turmeric extract 10 per cent application. But there observed no significant difference among the treatments Tetracycline 250, 200 ppm, *P. fluorescens*, copper hydroxide 0.2%, garlic extract 5 per cent and turmeric extract 10 per cent are found to be on par.

Key Words : Cauliflower, Black rot, Chemicals, Antibiotics, Botanicals, Bio agents, *Xanthomonas*

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