

## INHIBITORY EFFECT OF PLANT EXTRACTS AND PLANT OILS ON *XANTHOMONAS ORYZAE* PV *ORYZAE*, THE BACTERIAL BLIGHT PATHOGEN OF RICE

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### ABSTRACT

Bacterial blight caused by *Xanthomonas oryzae* PV *oryzae* is a major disease of rice causing yield losses in all the major rice growing countries. The disease remains as one of the major production constraints in India also. The present study was conducted to evaluate plant oils and plant extracts against bacterial blight pathogen *Xanthomonas oryzae* PV *oryzae*. Five plant oils and twenty five plant extracts were tested *in vitro*. Extract of garlic bulb (*Allium sativum*) recorded highest zone of inhibition, followed by tamarind fruit (*Tamarindus indica*), gooseberry fruit (*Phyllanthus emblica*), green mango (*Mangifera indica*) and lemon juice (*Citrus aurantifolia*). Among the plant oils tested, five per cent and one percent concentrations of palmarosa oil (*Cymbopogon martinii*) exhibited highest inhibition of the pathogen followed by lemongrass oil (*Cymbopogon flexuosus*), cinnamon oil (*Cinnamomum zeylanicum*) and vetiver oil (*Chrysopogon zizanioides*). These inhibitory plant oils and plant extracts can be tested in the field and can be utilized for developing botanical formulations for the management of bacterial blight of rice.

**KEYWORDS:** Bacterial Blight, Plant Extracts, Plant Oils, Rice, *Xanthomonas oryzae* PV *oryzae*