

Efficacy of laboratory prepared wettable powder formulation of entomopathogenous fungi *Beauveria bassiana*, *Metarhizium anisopliae* and *Paecilomyces fumosoroseus* against the *Polyphagotarsonemus latus* (Bank) (Acari: Tarsonemidae) (broad mite) on *Capsicum annum* (chilli)

ABSTRACT

The efficacies of wettable powder (WP) formulations of *Beauveria bassiana* (BbGc), *Paecilomyces fumosoroseus* (PfPp) and *Metarhizium anisopliae* (MaPs) as a single or combined treatments against the *Polyphagotarsonemus latus* (Bank) (Acari: Tarsonemidae) (broad mite) and its damage on one month old *Capsicum annum* (chilli) plants were compared with the acaricide amitraz in the field. The WP formulations were applied at four spray intervals on the chilli shoots at the rate of 1×10^{10} conidia ml⁻¹. Both *B. bassiana* and *P. fumosoroseus* significantly reduced the mite population and subsequently resulted in a high percentage of shoot recovery by the fourth spray compared with the control. Combined treatments of *M. anisopliae* and *P. fumosoroseus*, and *M. anisopliae* and *B. bassiana* could not adequately suppress mite population hence comparatively more shoots were infested. New shoots treated with *B. bassiana* resulted in excellent recovery (93.33% shoot protection) which was not significantly different from that of amitraz (96.67%). Amitraz could suppress the mite population faster whereby zero level of mite population was achieved after the second spraying. Nevertheless, WP formulation of *B. bassiana* as a miticide was as effective as amitraz against the broad mites.

Keyword: Entomopathogenous fungi; Efficacy; Wettable powder; *Polyphagotarsonemus latus* (broad mite); *Capsicum annum* (chilli)