

RESEARCH ARTICLE

# Field evaluation of *Beauveria brongniartii* and *Metarhizium anisopliae* against white grubs damaging green gram in Assam

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ABSTRACT

Two entomopathogenic fungi viz., *Beauveria brongniartii* and *Metarhizium anisopliae* were evaluated as alone and in combination with insecticides against white grubs in green gram during 2007 and 2008. Experimental results indicated that *B. brongniartii* applied @  $5 \times 10^{13}$  conidia/ml in combination with imidacloprid 200 SL @ 48 g a.i./ha was effective in reducing plant mortality (12.82 and 14.25 %) caused by white grubs with a grain yield of 6.75 and 7.59 q/ha during 2007 and 2008, respectively. Likewise the combined application of *M. anisopliae* @  $5 \times 10^{13}$  conidia/ml and imidacloprid 200 SL @ 48 g a.i./ha resulted in lowest plant mortality (9.05 and 11.36 %) with highest yield (6.91 and 7.71 q/ha) during 2007 and 2008, respectively. The highest benefit cost ratio was registered in *M. anisopliae* @  $5 \times 10^{13}$  conidia/ml combined with imidacloprid 200 SL @ 48 g a.i./ha treated plots (5.69 and 5.32) followed by imidacloprid 200 SL @ 48 g a.i./ha (5.21 and 5.10), *B. brongniartii* @  $5 \times 10^{13}$  conidia/ml combined with imidacloprid 200 SL @ 48 g a.i./ha (4.69 and 4.57) and chlorpyrifos 20 EC @ 400 g a.i./ha (4.70 and 4.73).

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