

**COMPARATIVE BIO-EFFICACY OF BIO-INSECTICIDE, *METARRHIZIUM ANISOPLIAE* (METCHNIKOFF) SOROKIN AGAINST CHILLI THRIPS, (*SCIRTOTHRIPS DORSALIS* HOOD).**

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**Abstract:** The field investigation was carried out during Kharif season of 2014-15 in the research farm of College of Agriculture, Indore (M.P.) in randomized block design with eight treatments and three replications with plant spacing of 45x60 cm on Pusa Jwala variety of chilli against thrips. Six repeated application of Metarrhizium annisoplae in the name of Met 52 with different doses at 10 days interval were made and it was also alternated with thiacloprid and different doses of fipronil 5 S C. The treatments were named as T<sub>1</sub>. Untreated control, T<sub>2</sub>. Fipronil 5 SC @ 1000 ml/ha and alternated with Thiacloprid 21.7 SC @ 300 ml/ha, T<sub>3</sub>. Met52@ 250ml/ha foliar spray, T<sub>4</sub>. Met52@ 500ml/ha foliar spray T<sub>5</sub>. Met52@ 1000ml/ha foliar spray, T<sub>6</sub>. Met52@250ml/ha foliar spray alternated with Fipronil 5 SC @ 850 ml/ha, T<sub>7</sub>. Met52@ 500ml/ha foliar spray alternated with Fipronil 5 SC @ 900 ml/ha and T<sub>8</sub>. Met52@ 1000ml/ha foliar spray alternated with Fipronil 5 SC @ 950 ml/ha. The population of thrips was counted at ten days interval on five tagged plants from each plot and five leaves from each plant with the help of 10X magnifying lens. Overall population reduction was calculated based on pre treatment observation and last observation of final spray. The overall highest population reduction was also calculated in T<sub>5</sub> (99.63%), and followed with T<sub>4</sub> (99.27%), T<sub>3</sub> (98.65%), T<sub>8</sub> (97.36%), T<sub>7</sub> (96.45%), T<sub>6</sub> (95.13%) and T<sub>2</sub> (85.52%). The highest dried chilli yield with highest cost benefit ratio was noted in T<sub>5</sub> (2256kg/ha. and 2.34) and differed significantly with all the treatments.

**Keywords:** Alternation, Bio-insecticide efficacy, Chilli, insecticides, Metarrhizium annisoplae, Scirtothrips dorsalis

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