

ABSTRACT

Despite its economic importance of tomato (*Solanum lycopersicum* L.), many growers are unable to achieve maximum yield of high quality due to insect pest infestation. This study was aimed at determining the effectiveness of parasitoid *Erectomocerus eremicus* and crude plant extracts of garlic and chilli as an integrated alternative control method of greenhouse whitefly (GHW) on yield of tomato variety 'Anna F1'. The study was conducted at Egerton University using a split plot arrangement in randomized complete block design, replicated three times. Parasitoid was the main plot factor at two levels (with and without *E. eremicus*) while sprays of distilled water (negative control), Abamectin (positive control), chilli and garlic extracts formed the sub-plot factors. Data on GHW incidence, population density, parasitisation rate, yield was collected. Data collected was subjected to analysis of variance and means of significant treatments separated using Tukey's test at $p = 0.05$. Combined use of botanical extracts and *E. eremicus* had better effects on the management of whitefly population, infestation, and in enhancing growth and yield of greenhouse tomato plants compared to where they were used alone. Botanical plant extracts and/or *E. eremicus* can be used in the management of GHW and to improve tomato yields.