EVALUATION OF *ALLIUM SATIVUM* L. (GARLIC) EXTRACT AGAINST *BEMISIA TABACI* GENN (WHITEFLY) ON *LYCOPERSICON LYCOPERSICUM* L. (TOMATO)

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ABSTRACT

Field experiments were conducted during the dry seasons of 1999 and 2000 to evaluate *Allium sativum* L. (garlic) bulb extract against *Bemisia tabaci* Genn (whiteflies) population on *Lycopersicon lycopersicum* L. (tomato) at the Department of Crop Protection teaching plot, Institute for Agricultural Research, Ahmadu Bello University, Zaria. The treatments consisted of garlic bulb extract, insecticide (Sherpa-plus®) and untreated control, each replicated four times and laid out in a randomized complete block design (RCBD). Other experiments were conducted during the 2001 and 2002 dry seasons to determine the minimum effective concentration of garlic bulb extracts found to be effective. Insects were sampled on a per plant basis. Data was subjected to statistical analysis of variance (ANOVA) and means were separate during least significant difference (LSD). Aqueous garlic bulb extracts was effective at 15% concentration in reducing whitefly population. The performance was effective as that of a conventional chemical insecticide, Sherpa plus® (Cypermethrin and Dimethoate). In the second experiment, different concentrations of garlic bulb extract equivalent to 10%, 7.5%, 5.0% and 2.5% w/v were tested against whitefly on tomato; their efficacy in reducing whitefly population on tomato increased with increase in concentration of the extracts. The efficacy of the aqueous extracts at 10% of garlic bulb extracts was significantly higher (P<0.05) than lower concentrations (7.5%, 5.0%, 2.5%). This study has shown that garlic bulb extract at 100g/l present a good potential insecticide against *B. tabaci* population on tomato.

Keywords: Garlic, Sherpa plus®, tomato, whiteflies.

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How to cite this article: