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Efficiency of the adjuvant sure shot on increasing the efficacy of insecticides on the melybug

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Abstract

The out-break of cotton mealybug *Phenacoccus solenopsis* (Tinsley) (Hemiptera: Pseudococcidae) on many crops belong to different families making a real worry for both farmers and research scientists. *P. solenopsis* belongs to the family Pseudococcidae which is the second largest family of scale insects. *P. solenopsis* is a major threat to agriculture and horticulture in many countries which was found to attack large number of plant species. As a result of *P. solenopsis* dispersal, reproductive and survival capacity, this invasive pest has the potential to damage or kill native plant species that could be displaced by other more aggressive plant This experiment was conducted at Gezira Research Station Farm, during summer season to evaluate the efficacy of the agricultural adjuvant Sure Shot, Sure shot is Silicon based Wetting & Dispersing Agent, on increasing the efficacy of the insecticides Hitcel 44 % EC (profenofos 40 % and cypermethrin 4 % EC) and Celenour for the control of cotton mealybug in the field and the laboratory. The product was tested at the different concentrations of the adjuvant solutions in addition to mixtures of the adjuvant with the insecticides under test.plus Untreated Control. A field experiment was conducted at Gezira Research Station Farm (GRSF) during the summer season 2018/2019, where the insecticide Celenour 720 EC (profenofos % EC) at a dose rate of 0.6 L/fed was sprayed once with or without the adjuvant Sure Shot. The results indicate, that mixing of the adjuvant with insecticides had a positive effect in increasing the efficacy of the insecticides.

Keywords: Cotton mealybug, Gezira, Sudan, wetting and dispersing agent

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