International Journal of ChemTech Research
CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555
Vol.9, No.06 pp 270-276, 2016

# Observations of the effect of Chitosan and its nano compositions against the locust Schistocerca gregaria (Orthoptera: Acrididae )

**Sabbour M.M.***

**Department of Pests and Plant Protection, Dep. National Research Centre, Dokki, Cairo, Egypt**

**Abstract :** The effect of Chitosan and nano Chitosan tested on the target insect pest *Schistocerca gregaria.* Results obtained showed that, under laboratory conditions, the LC50of the newly hatched is recorded, 278, 244 233, 247 and 241 ppm for newly hatched, nymphs, Last nymphal stage Adult ♀ and Adult ♂ respectively. Also, when *S. gregaria* treated with nano- Chitosan, the LC50s obtained 268,204,213,231, and 132 ppm for Newly hatched, nymph, Last nymphal stage , Adult ♀ and Adult ♂, respectively after treated with nano-Chitosan. Also, results recorded that, the Number of egg laid/femal±se recorded, 158 ± 2.2 and 88±0.01 eggs/ female after treated with Chitosan and nano- Chitosanas compared to 258±3.11 eggs/ female in the control. The % of Adult ♀ and% of Adult ♂ significantly decreased to 18 and 10 after nano-Chitosan treatments as compared to 99 and 99% in the control. Our results showed, under semi field conditions, the number of *S. gregaria* were significantly decreased after the Chitosan and nano-Chitosan treatment, the number of infestations with *S. gregaria* decreased to 29 ±3.6 and 8 ±1.1 individuals after120 days of treatments.
**Key wards :** locust, *Schistocerca gregaria* , Chitosan, Nano.

**Sabbour M.M.**/International Journal of ChemTech Research, 2016,9(6),pp 270-276.

*****