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Article Title	First record nanotechnology in agriculture: Silica nano-particles potential new insecticides for pest control.
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SUMMARY: The cotton leaf warm *Spodopteralitt*oralis is considered the major important pest of plenty of vegetables, for causing severe injuries to the plants in all phonological crop stages, beside its rising resistance to several groups of pesticides. The overall objective of this investigation was to look for new control strategy through evaluate the effects of the application of hydrophobic nano-silica on the resistance of tomato plants to this pest. The experiments were carried out under semi field conditions; the experiment was conducted with two treatments, consisting of nano-silica application, and a negative control (distilled water) with five replications. Nano-silica LD50 found to be 212.045 ppm with slope 4.553, it was applied in six doses 100, 150, 200, 250, 300, and 350ppm of 50 ml/plant, neonates of *Spodopteralittoralis* were exposed daily to tomato leaves mortality was detected after 15 days post application. The following evaluations were performed: a) Mortality %; b) reproduction and development of the *Spodopteralittoralis*. Results of treatment of hydrophobic nano-silica in larval test indicated high toxic action at all concentrations used parallel with concentrations. High resistance in tomato plants was found against this insect-pest especially at

300, 350 ppm, respectively. It can be concluded that this is probably the first report that demonstrated that nano-silica could be used in *Spodopteralittoralis* control.