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Article Title	Silica as a promising alternative in control <i>Sytophillusoryzae</i> (L) (Coleoptera: Curculionidae).
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SUMMARY: *Sitophilusoryzae* (L.) is a serious primary insect pest of the stored rice, wheat and maize grain. The present study aims to determine the efficiency of the three nano-candidates (hydrophilic, hypophilic and lipophilic silicate). These nano-silicate products were tested against the rice weevil *Sitophilusoryzae* under laboratory conditions. Results showed that the number of mortality of *S. oryzae* were 51.0 ± 9.1 , 70.4 ± 9.6 and 73.0 ± 6.2 individuals after investigated with 5 mg/kg⁻¹, the number of mortality scored a higher mortality reached to 99.0 ± 6.7 , 89.0 ± 4.2 and 93.00 ± 2.2 with 10 mg/kg⁻¹. In 20 mg/kg⁻¹ treatments the number mortality of *S. oryzae* were significantly increased to 100.0 ± 0.0 , 100.0 ± 0.0 and 100.0 ± 0.0 14 days post application, as compared to 1.0 ± 2.8 , 1.0 ± 5.1 and 0.0 ± 3.1 , respectively in the control and 79.0 ± 3.2 , 69 ± 2.1 and 98 ± 3.1 with Deltamethrin treatments. Number of emerged adults and the original activity remaining OAR% were calculated where it gave with 20 mg/kg⁻¹ treatments 95.55, 95.16, 94.59, 74.24, 44.82 and 39.93 OAR% while it gave 94.07, 92.25, 88.54, 42.80, 26.20 and 0.00 OAR% with hydrophobic silicate. With lipophilic silicate the OAR% scored 94.81, 95.16, 92.36, 29.09, 16.55 and 7.29 after 20, 40, 60, 80, 100 and 120 days post treatment in comparison to 95.92,

94.51, 92.01, 60.20, 27.24 and 12.15 with deltamethrin. LC_{50} found to be 160, 220 and 330 mg/kg^{-1} for hydrophilic, hypophilic and lipophilic silicate; respectively while it is 40 mg/kg^{-1} in case of Deltamethrin. This investigation lead to open up newer pathway of using nanomaterial-based technology using hydrophilic nano silicate at 20 mg/kg^{-1} as an efficient candidate to control the rice weevil.