

Toxicity of Biopesticide *Metarhizium anisopliae* var *acridium* "Green Muscle" on the Cuticle of the Desert Locust *Schistocerca gregaria* (Forskål, 1775)

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Abstract : Locust is causing significant losses in agricultural production in the countries concerned by the invasion. Up to the present control strategy has consisted only of the spreaders chemicals; they have proven harmful to the environment and. For this, a new control method appeared it comes to the biological control based mostly by using microorganism. It is in that sense is we've made our contribution by the use of a biopesticide which is entomopathogenic fungus *Metarhizium anisopliae* var *acridium* "Green Muscle" on part of the cuticle the larval of fifth instar locust *Schistocerca gregaria* (Forskål, 1775). Preliminary test on the study of the pathogenicity of *M. anisopliae* var *acridium* biocontrol agent, was conducted in the laboratory on L5 *S. gregaria*, on which we inoculated treatment in the digestive tract and it administrant 20µl of entomopathogenic solution orally at a dose DL50 = 3.25 x10⁷ sp./ ml (median lethal dose estimated at earlier), 5 days after treatment individuals are sacrificed. After dissection cuticles are recovered and then subjected to histological sections. The histological technique followed is that of Martoja Martoja-Pierson (1967). Microscopic observation revealed alterations in the architecture of the cuticle which leads to disorganization of cell layers.

Keywords : biopesticide, cuticle, desert locust, toxicity

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