

Turkish Journal of Zoology

Turkish Journal

of

Zoology

Comparative Toxicological Studies of RB-a (Neem Extract) and Coopex (Permethrin+Bioallethrin) Against *Sitophilus oryzae* With Reference to Their Effects on Oxygen Consumption and Got, Gpt Activity

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

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Abstract: The toxicity of a neem extract RB-a in comparison with a pyrethroid, Coopex, was studied along with their effects on GPT and GOT activities and oxygen consumption in *S. oryzae*. The LD 50 value of Coopex was found to be 6.128 $\mu\text{g}/\text{cm}^2$ whereas RB-a was found not to be an acute contact poison. Even at a dose of 1257 $\mu\text{g}/\text{cm}^2$ it could cause 34% mortality of *S. oryzae*. The oxygen consumption under the effects of Coopex was found to decline less i.e. at 6.12 $\mu\text{g}/\text{cm}^2$ from 0.0005191 to 0.0006589, as compared to RB-a where the rate of respiration declined more i.e. at 1257 $\mu\text{g}/\text{cm}^2$ from 0.0005191 to 0.0002076. Coopex brought about an inhibition of 62.77% in GPT activity and caused almost no inhibition of GOT activity in insects treated with its LD 50. In the case of neem extract it was noted that GPT was inhibited by about 57.47% and almost no effect on GOT was observed at a dose of 1257 $\mu\text{g}/\text{cm}^2$.

Turk. J. Zool., **22**, (1998), 307-310.

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