

ABSTRACT

Using plant extractions is a new approach for controlling pests without environment pollution. Biological effects of three ready-made neem products compared with an insecticide and IGR compound were evaluated for controlling the black cutworm, *Agrotis ipsilon* which is considered one of the most important pests of many crops, especially, cotton in Egypt. Cotton protection of this pest by using that natural compounds could increase the cotton yield and safe natural enemies of pests and also, keep environment unpolluted. Results revealed that, *A. ipsilon* 4th instar larvae were more sensitive to triazophos (OP) than other tested compounds. The three products of neemix, neemazal and neemolin and chlorfuluzuron (IGR) acted as antifeedant agent decreasing the weight of full grown larvae as well as the weight of resulted pupae. With regard to liver functions, data show the hepatotoxicity of three tested neem products with concern to increase or decrease the level of SGOT, SGPT, and Alkaline – phosphatase, specially at the early time after exposure. Neemolin and neemazal caused increased in haemoglobin but the neemix caused decrease in haemoglobin. Three tested neem products decreasing glucose levels in treated rat after 2, 12 hrs.