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COMPARATIVE EFFECT OF SOME INSECTICIDES ON THE HAEMOCYTES OF CHILO PARTELLUS (SWINHOE)

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ABSTRACT

Comparative effect of four insecticides viz. Thiodan 35 EC, Sumithion 50EC, Sevin 85 WP, and Danital 10 EC representing four different insectcidal groups i.e. chlorinated, organophosphate, carbamate and pyrethroid, respectively, on the haemocytes of Chilopartellus (Swinhoe) was observed during these studies on the basis of TPC, DPC, and abnormalities in haemocytes on account of these insecticides. It has been concluded that Thiodan is more toxic and comparatively has less chances of resistance development than other treatments.

INTRODUCTION

The haemocytes or blood cells develop in the embryo from differentiated mesodermic tissues. In post-embryonic development these cells originate by mitotic or amitotic division of the pre-existing haemocytes. Some of these haemocytes are phagocytic in action (10) and some are used for food storage, connective tissue formation, protein synthesis, phenol metabolism and hormone secretion, for growth stimulation (14). Arnold (2) stated that insects when recevering from the effect of insecticides, produce certain types of blood cells in large numbers.

Most of the work so far carried out on maize stemborer, Chilo