INTRODUCTION

Due to the rapid increase of world population, especially in those already overpopulated areas of Asia, where paddy is the staple food crop, there has been since the war a greatly increased interest in ways and means of increasing the yield of the rice crop. Studies on the storage of paddy have not proceeded apace with these field studies however, and a great deal of potential food is still lost due to insect and rodent infestation, faulty storage and wasteful milling.

There are only a few primary pests of stored paddy, and one of the most important of these is Sitotroga cerealella which was first described by Oliver in 1789. The literature on the life history and habits of this moth is extensive, but much still remains to be investigated. One of the most controversial points is the extent to which cereals in the field can be attached, and the relevance this has to subsequent store infestation. Most of the literature relating to this aspect refers to wheat or maize in the U.S.A., and it is for this reason that a study of field infestation of paddy in a tropical country such as Trinidad is greatly to be desired.

Most of the work was therefore carried out on Sitotroga in the field, but incidental studies were also made on the life history and ecology.

In practice it was found impossible to divorce Sitotroga as a field pest from Sitotroga as a stored products pest, and so as to obtain a more comprehensive picture a brief survey (based on literature) is given of all aspects of the biology of this pest.

To elucidate points used in the identification of this moth illustrations have been made, using a camera lucida, from prepared specimens and slides.

For easy reference these drawings, plus photographs and statistical analysis have been placed at the end of the thesis.