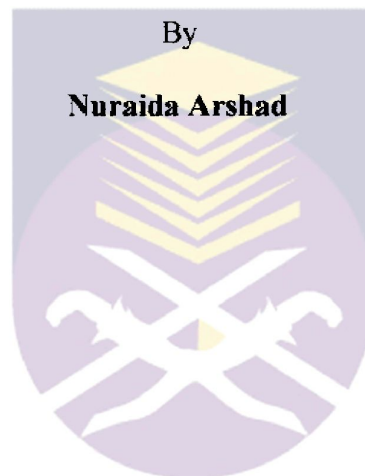


**PRELIMINARY OBSERVATION OF THRIPS POPULATIONS  
IN CAMERON HIGHLANDS AND MALACCA**



**Final Project Paper Submitted in Partial Fulfilment for the Degree of Bachelor  
of Science (Hons.) on Plantation Technology and Management,  
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## ABSTRACT

### PRELIMINARY OBSERVATION OF THRIPS POPULATIONS IN CAMERON HIGHLANDS AND MALACCA

By

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Thrips is one of important pest on vegetables especially in the family of Cucurbitacea, Solanaceae and Leguminosae. Thrips infestation (severe leaf bronzing) has been reported especially on eggplant, cucumber, chilli, bell pepper, legumes and ornamental such as chrysanthemum. Adults and larvae of thrips feed on flowers, suck out the contents of the cells, including pollen grains as well as the cells around the bases of anthers, and on developing fruits. In other groups of thrips, adults and larvae feed on leaves. In Cameron Highlands, four species of thrips were found namely *Thrips palmi*, *Megalurothrips usitatus*, *Frankliniella schultzei* and *Frankliniella occidentalis*. In Malacca, six species were found namely *Thrips palmi*, *Thrips taiwanus*, *Thrips hawaiiensis*, *Megalurothrips usitatus*, *Haplothrips gowdeye* and *Microcephalothrips abdominalis*. *Frankliniella occidentalis* was predominantly has been identified on selected crops in Cameron Highlands whereas *Thrips palmi* and *Thrips taiwanus* have been identified in Malacca. From my study, it was found that thrips mostly attacked the flowers, shoots and leaves of crops. Many crops are damage by thrips, which results in economic losses. Application of chemicals is the only available way of controlling thrips on vegetables in Malaysia.

# **CHAPTER 1**

## **INTRODUCTION**

Thrips are small or minute insects belong to order of Thysanoptera and about 4000 species exist in the world (Fenemore, 1984). Thrips is an economically important pest of various crops, especially vegetables in Asia and Pacific Island. This species also probably native to the Malaysian-Indonesian region and parts of Asia including Thailand, India, Japan, Hawaii, Philippines and Taiwan (Waterhouse and Norris, 1987). These small insects can cause severe damage to crops by destroying buds or blossoms, whitening or curling foliage and deforming or scarring fruits.

Thrips is a one of the pests, which is becoming important in vegetables and other crops cultivation. Now, it becomes a serious threat to vegetables such as chilli, tomato, French bean and cucumber as well as flowers such as orchids, chrysanthemum and roses. Thrips have been observed spreading to other crops from time to time.

### **1.1 OBJECTIVE**

1. To determine the current status of thrips on the selected vegetables and flowers.
2. To identify and characterise the thrips species.