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Project Report

**ENVIRONMENT FRIENDLY OPTIONS FOR THE CONTROL OF SESAME
LEAF WEBBER AND POD BORER; *Antigastra catalaunalis* Duponchel
(LEPIDOPTERA: PYRALIDAE)**

A PROJECT REPORT PRESENTED

BY

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Environment friendly options for the control of sesame leaf webber and pod borer***Antigastra catalaunalis* Duponchel (Lepidoptera: Pyralidae)**

by

J.P. Marasinghe**M.Sc. (Environmental Science)****ABSTRACT**

Sesame is a drought tolerant crop grown in the dry zone of Sri Lanka. It can withstand water stress conditions. The major pest recorded to attack sesame is a Lepidopteran which webs the leaves and bores the pods. It is *Antigastra catalaunalis* Duponchel, known as the sesame leaf webber and pod borer. Although there are number of controlling methods used all over the world, chemical control is the most effective. A large number of insecticides belonging to different chemical families are in use for the control. In Sri Lanka, acephate is the recommended compound but carbaryl is also in use. These are broad spectrum insecticides which can be harmful to the other organisms in the environment too. The objectives of this study were to observe the efficacy of these chemicals on the targeted pest and some other natural enemies of pests as well as to find more environmental friendly natural products to control the pest. The study was carried out at Regional Agriculture Research and Development Centre at Angunakolapelessa. The trial was with seven treatments (including the control) which were replicated five times. The treatments included acephate, tebufenozide, chlorfluazuron, carbaryl, citronella oil

and neem seed extract. Both citronella oil and neem seed extract are botanicals with insecticidal properties being less hazardous to many other organisms. Tebufenozide and chlorfluazuron are two insect growth regulators which are more specific and less hazardous to the other organisms in the environment. Experiments were carried out with the pest, predatory spider species and three life stages of the lady bird beetle. Spider species and lady bird beetles are natural enemies of the pests of sesame. According to the results of the study, although acephate and carbaryl are effective against the pest, they are very harmful to the other observed creatures. Considering the overall effectiveness tebufenozide, chlorfluazuron and neem seed extract are the best options.