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STUDIES ON THE HOST RANGE OF BRUCHID BEETLE,  
(*Callosobruchus chinensis*.L)

By

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## ABSTRACT

*Callosobruchus chinensis* (Linnaeus) endanger stored legume seeds throughout Sri Lanka. The present study was conducted to test the host range of *Callosobruchus chinensis* on cowpea (*Vigna unguiculata*), green gram (*Vigna radiata*), black gram (*Vigna mungo*), soybean (*Glycine max*) and masur dhal (*Lens culinaris*). The development period, number of adult emergence and host preference of *C. chinensis* are the parameters considered in this study. Olfactometer bioassays were performed to evaluate the effect of host preference on the orientation of selected pulse species.

Significant differences were observed in development period, number of adult emergence and host preference of *C. chinensis*. Adult emergence occurred  $22.78 \pm 0.02$  days in cowpea followed by green gram  $24.78 \pm 0.04$  days, black gram  $24.45 \pm 0.3$  days and soybean  $28.34 \pm 0.29$  days. No adult development occurred in masur dhal. Mean adult emerged on cowpea was high  $241.00 \pm 9.33$ , the black gram and green gram has  $225.11 \pm 6.52$  and  $220.22 \pm 4.69$  respectively.  $72.33 \pm 7.70$  mean adult emergence was recorded in soy bean.

The host preference of *C. chinensis* towards cowpea was high followed by green gram, black gram and soybean. However masur dhal was not preferred at all. The affinity towards cowpea by this insect reared with different host species shows that storing these pulses together may lead to significant losses. So that, storing of masur dhal along with these pulses has the potential to reduce the attack of *C. chinensis* due to preventing the dissemination.



	Page No .
CONTENTS	I
ABSTRACT	II
ACKNOWLEDGEMENT	III
CONTENTS	VI
LIST OF TABLES	VII
LIST OF FIGURES	VIII
LIST OF PLATES	1
CHAPTER 1	1
1.0 Introduction	6
1.1 Objective of this study	7
CHAPTER 2	7
2.0 Review of literature	7
2.1 Classification	7
2.2 Origin and distribution	8
2.3 Morphology	10
2.4 Biology and Ecology	11
2.5 Host range of <i>Callosobruchus chinensis</i>	31
2.5.1 Host specificity in relation to chemical composition of seeds.	12
2.5.2 Host specificity in relation to seed characteristics	14
2.5.3 Host specificity in relation to olfaction	17

2.5.4 Host specificity in relation to preference	18
2.6 Mating behavior of <i>C. chinensis</i>	19
2.7 Oviposition behavior of <i>C. chinensis</i>	20
2.8 Life history and variation in development	21
2.9 Biotypes	22
2.10 Damages	24
2.11 Control	25
CHAPTER 3	29
3.0 Materials and methods	29
3.1 Collection of material	29
3.1.1 Insect	29
3.1.2 Seeds of pulses	29
3.1.3 Disinfection of pulses seeds	29
3.1.4 Mass cultures of <i>C. chinensis</i>	30
3.1.5 Collection of one day old weevil	31
3.1.5 Separation of males and females	31
3.2 Experiment	31
3.2.1 Method 1	31
3.2.2 Method 2	33
3.3 Measurements	33