



J. Appl. Biosci., 43(1): 48-53, June, 2017

ISSN (Print) 0975-685X

ISSN (Online) 0975-864X

PREY SPECIES BASED RESOURCE FLUCTUATION AFFECTS PREDATION ATTRIBUTES OF A LADYBIRD BEETLE, *MENOCHILUS SEXMACULATUS* (FABRICIUS)

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ABSTRACT

In present study, prey species *Aphis craccivora* Koch and *Lipaphis erysimi* (Kaltenbach) based resource fluctuations and their impact on predation attributes of a ladybird beetle, *Menochilus sexmaculatus* (Fabricius) was assessed. For this, predators were abruptly changed from their rearing density of scarce prey to optimal and abundant prey supply and vice versa; and effects of sudden change of prey species fluctuation on consumption rate, conversion efficiency and growth rate were observed. It was hypothesized that irrespective of prey species, larvae reared on scarce prey would have better predation attributes on optimal and abundant prey supply than in the reverse scenario. Results revealed that irrespective of three rearing conditions, fourth instars had highest consumption rates on abundant prey and lowest on extremely scarce prey testing conditions. However, conversion efficiency was recorded highest when larvae were reared on abundant prey but tested either on extremely scarce supply of *L. erysimi*, or abundant supply of *A. craccivora*. In contrast, growth rate was recorded highest when larvae were both reared and tested on abundant prey. Results also revealed higher consumption and utilization of *A. craccivora* over *L. erysimi* by the larvae. Thus, fluctuations in prey availability promote more suitable prey species to be consumed, converted and utilized much efficiently than less suitable prey species by *M. sexmaculatus* larvae. However, field based studies are still needed to make broad conclusions.

KEY WORDS: Resource fluctuation, Aphid, Ladybird, Prey species