

Feeding preference and potential of *Anegleis cardoni* (Weise) (Coleoptera: Coccinellidae) across life stages under mixed diet conditions

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The preference and potential of *Anegleis cardoni* (Weise) (Coleoptera: Coccinellidae), including all stages in its life cycle, against aphids were studied. For this, two aphid species, namely, *Aphis gossypii* Glover and *Lipaphis erysimi* (Kaltenbach), were provided under choice conditions (mixed diet in varying prey ratio) and under no-choice conditions (single species of aphid). The fourth instars were found to be more voracious than the younger stages, however, they were less so than adult males and females. Except for the first and second instars, all other life stages showed a preference for *A. gossypii* over *L. erysimi* during all treatments. Mixed aphid diets had a significant influence on the number of aphids consumed; an increase in the number of aphids offered led to an increase in aphid consumption, but the proportion of those consumed dropped. The number of aphids consumed by the various life stages, except first and second instars, was maximum on the mixed diet (choice) compared with the single aphid diet (no-choice). We concluded that a mixed diet including aphids of varying qualities can be a better tool to use *A. cardoni* for integrated pest management. The present study aims to assess the preference of *A. cardoni* under mixed diets.

should maintain good growth, development, survivability, and reproduction of the predator. Prey preference is distinct from prey selection; the former refers to the mechanism by which particular prey are selected given equal or varied ratios with others, while the latter applies when the predator selects its prey conforming to certain characteristics².

General predators forage and display prey preferences, especially when considerably preferred prey are made available³. Here, the knowledge of what prey is to be chosen by a predator is necessary to know its predation potential in terms of the number or mass of prey consumed, where guilds of various prey species occur together⁴. The predator's ability to hunt some prey within its particular range can vary based on the changing relative densities of the prey species on offer. It is called prey switching and thus provides information regarding prey-predator interactions⁵.

A predator's preferences encompass various factors such as availability, quality, density, encounter rate, nutritional state, time for capture and feeding, among others. In each of these instances, the predator's voracity and predation rate are influenced by the factors related to the effectiveness and implementation of defensive strategies employed by the prey. The impact of a predator's predatory capacity can be assessed through both numerical and functional responses⁶, while the effects of predation can be analysed by managing prey-predator dynamics, such as