

Feed Consumption and Conversion Efficiency in Male and Female Bivoltine Silkworms (*Bombyx mori* L.) –A Comparative Study

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ABSTRACT

Food consumption, assimilation and conversion efficiency of male and female silkworm of the two Indian bivoltine hybrids (CSR2 × CSR4 and CSR18 × CSR19) were studied. Ingesta and digesta were not significantly different in male and female silkworm of both the hybrid races. The parameters like approximate digestibility percentage, reference ratio was recorded higher in males. However, the feed conversion efficiency parameters such as efficiency of conversion of ingested and digested food into larvae, cocoon and shell were significantly higher in the female sex of both races. Ingesta and digesta required to produce one gram of cocoon and shell were recorded higher in the male sex.

Key words: Food consumption, digestion, conversion efficiency, male and female silkworm, *Bombyx mori* L.

INTRODUCTION

Studies on the consumption and utilization of food in insects facilitate the understanding of the adaptability of insects. In insects the females have generally lower consumption and higher conversion of food into body matter. Difference in food consumption and conversion into body matter has been noticed among silkworm race quite early (Yamamoto & Fujimaki, 1982; Magadum *et al.*, 1996). The poor growth expressed by the tropical breeds compared with the temperate breeds may be due to low feeding rate, nutritional inadequacy and a combination of both (Waldbauer, 1968). In silkworm, the food consumption has a direct relevance on the weight of larva, cocoon, pupa and shell. However, these parameters of consumption and productivity vary depending on the season, breeds, instars and sex. Trivedy & Nair (1998) reported that feed conversion efficiency is considered to be an important criterion for evaluating the superiority of silkworm breeds. Kafian (1982) and Sumioka *et al.*, (1982) suggested that evaluation of strain must be made on the basis of the food utilization efficiency under favourable conditions for each sex. The food consumption and utilization of