

## Evaluation of public perception on Black Soldier Fly (*Hermetia illucens*) Larvae (BSFL) production domestically as a substitute for fish meal in Ratnapura district

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### Abstract

Marine overexploitation to produce quality fish meal to meet the increasing livestock feed demand is threaten to the natural resource sustainability. Black soldier fly larvae (BSFL; *Hermetia illucens*) as non-pest, is positively proven for its exceptional bio-waste degradation ability into crude proteins and fats and spinning-off organic fertilizer. It can be used as a protein replacement for expensive fish meal. Locally it is hardly evidenced and present in media on this concept. The current study aimed to evaluate the public perception on producing BSFL based protein production by own generated bio-degradable waste using a BSFL based compost bin. Further the research outcomes are looking forward for linking to protein production for local livestock sector while addressing the overwhelming urban waste management consequence. Random sampling technique was adopted to select 296 households and administrated a structured questionnaire in Ratnapura district. Descriptive statistics and Pearson correlation coefficient techniques were used to evaluate results. Average 0.956 kg of daily bio-degradable waste was generated and 66.9% were practiced to collect their waste into a bin. 84.1% of them were using public waste collection service and 90.5% of the amongst were practiced to separate waste as per the local authority request. Among the respondents, 8.4% were aware on BSFL based protein production mainly through newspapers (64%) and there were positive responses (51.2%) for adapting to BSFL production and composting processes. People who disliked producing BSFL, mainly, less experiences on this regard (47.22%). 64.2% and 61.85% people were willing to use and purchase BSFL based compost bin, respectively. People, who rejected to utilize BSFL based compost bin, stated mainly due to the less experiences and knowledge on this regard. 33.8% were aware on BSFL based composting technology mostly through newspapers (62%). Even though majorities were not aware on BSFL composting, 74.7% were willing to initiate BSFL based compost production. Noteworthy, space unavailability was one of the main reasons for their rejection of compost production. Negative but poor correlation indicated in-between socio-economic status and adaptation to BSFL production technologies. Less popularity of BSFL was highlighted and further public awareness is needed prior to commercialize of this concept.

**Keywords:** Bio-Degradable, BSFL, Fish Meal, Perception, Waste

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