ABSTRACT

This study examines the organic waste management using Hermetia illucens larvae (Black Soldier Fly, BSF) at Pribadi Bandung School to reduce waste volume and produce maggot biomass as an alternative animal feed source. The organic waste processed includes food scraps and food processing waste, with a total of 10 kg of waste generated daily. The maggot processing successfully decomposed 80% of the organic waste, yielding 2 kg of dry maggot biomass per day. Over a 30-day breeding period, the BSF larvae produced 8 kg of fresh maggots, which, after drying, resulted in 5 kg of dried maggots with a 60% protein content. The program's socialization successfully engaged 50 students as volunteers, increasing their knowledge about organic waste management and the potential of maggots. Questionnaire results showed that 70% of students had a good understanding of organic waste management, and 90% expressed high interest in participating in similar future programs. Maggot-based waste management is not only efficient in reducing waste volume but also supports a circular economy by producing nutrient-rich animal feed. The program positively impacted students' knowledge, attitudes, and participation, while also contributing to reduced pollution and greenhouse gas emissions.

Keywords: organic waste management, Hermetia illucens larvae, maggots, animal feed, circular economy, sustainability, environmental education.