Relations of Municipal Solid Waste Generation and Composition to Socio-Economic Factors of Households

T. Abiramy[1], R. Thivyatharsan[1*]

[1]*Department ofAgricultural Engineering, Faculty ofAgficulture, Eastern Univerrity, Sri Lanka*

There is a lack of knowledge about solid waste generation and composition, especially in rural areas because these types of studies were conducted mainly in cities. This leaves the relevant authorities with inadequate information to plan efficient solid waste management. The objective of the study is to determine the quantity of solid waste generation, composition and relationship to socio-economic factors. This study was carried out at Kolavil-01 (Grama Niladhari Division-16) of Alayadivembu Pradeshiya Sabha, Ampara district. Questionnaire survey covered hundred households and data were analyzed using Microsoft Excel and Statistical Package for Social Sciences. The results revealed that the total household waste generation was ranging from 0.35 kg day^{-1} to 3.41 kg day^{-1} with an average of 1.67 kg day^{-1}. The average amount of household's biodegradable, plastic, polyethylene, metal and glass wastes were 1.37 kg day^{-1}, 0.07 kg day^{-1}, 0.03 kg day^{-1}, 0.13 kg day^{-1} and 0.06 kg day^{-1} respectively. Generation of biodegradable waste was higher than the other wastes while the generation of polyethylene waste was lower. In addition, biodegradable waste contributed nearly 82.54% (by weight) of the total waste generation while plastic, polyethylene, metals contributed 4.04%, 1.87%, 7.72%, 3.84% respectively. Further, it was proved statistically that the household solid waste generation had positive correlation with family income and family size while it had non - significant negative correlation with age and significant negative correlation with education level and occupation of family head.

Keywords: Socio-economic, Municipal, Solid waste