

Estimating the Amount of Bio-Waste Recycled at Source - Survey Research

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Abstract

Proper management of municipal waste is important for the natural environment and one of the possible methods is processing at source. Selected groups of waste from kitchen activities as well as from gardens and parks can be composted. Composters can be used especially in households living in a single-family house, where there is both kitchen and garden waste.

Municipalities are required to report the amounts of municipal waste recycled. When users of composters are not directly required to present the amount of bio-waste collected in a given year, the municipality may have problems calculating the amount of bio-waste for the purpose of such reporting.

The aim of the publication is to develop a method for estimating the amount of bio-waste recycled at source, taking into account kitchen and garden waste from households living in single-family houses.

The theoretical assumptions for a questionnaire survey enabling the estimation of bio-waste recycled at source were presented. The method of selecting the research sample (commune inhabitants), the selection of research groups (excluding outliers and extreme cases) and the formulas used to estimate kitchen and garden waste recycled at source were discussed.

In addition, the amount of this type of bio-waste in 2021 in one of the municipalities in Poland was estimated. A questionnaire form was prepared for the purposes of the study. The survey was conducted at the turn of January and February 2022 and 134 respondents (household representatives) from single-family houses took part in it.

Keywords: municipal waste, bio-waste, recycling, questionnaire survey, statistical analysis