PILOT PROJECT
THE SELECTIVE COLLECTION
OF BIOWASTE

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Introduction

- Project duration: 03.03–30.05.2017
- 25 families (58 people) residents of Housing Cooperative „Student” located at Dąbrowskiego street placed in Piła
- Participants of the project: PRGOK (inter–municipal union) in cooperation with companies: GWDA Ltd., Altvater Piła Ltd. and Biorecykling Association

Scientific patronage: SGH Warsaw school of economics
Aims

- Evaluation:
  1. The efficiency of selective collection of biowaste
  2. The effectiveness of the education campaign of residents
  3. The effectiveness of selective waste collection with using video camera
  4. The composition and morphology of collected waste and possibilities of their further management
Waste shed has been equipped with a brown bin for biowaste (capacity 240l)

The reception periodicity of the brown bin was initially set at 2 times per week, which after 2 weeks of project carrying out was reduced to 1 per week

The brown bin was delivered to the composting plant owned by GWDA Ltd. where it was divided for material suitable for composting process and impurities

Before starting the project, all containers placed in the waste shed were emptied to provide an equal starting point
At the same time, during the pilot project of biowaste collection, the remaining containers placed in the waste shed of the "Student" Cooperative were supervised:

- 1100l container for plastic, metal and tetrapak (yellow bin)
- 1100l container for paper (blue bin)
- 1100l container for mixed / residual waste (black bin)

All pointed containers, after its receiving, were weighed and their contents were photographed and checked if they were collected in accordance with current waste segregation rules in municipality
Set for selective collection of biowaste

- Free recyclable biodegradable bags
- Free waste container
- Welcoming letter, information leaflet on the pilot program and information on selective waste collection in the municipality
What can we put to brown bin?

- Grass
- Leaves
- Branches
- Potted plants and flowers
- Garden flowers
- Christmas tree
- Kitchen waste: peels and residues of fruit and vegetables
- Nutshells
Brown bin content
Impurities placed to brown bin – examples
Total 527 kg of waste was collected. On average, 9.08 kilograms of biowaste was generated per 1 resident during the three months of program.

The minimum impurities content was 0.25%, maximum 10%, mean value was 2.63%. Major impurities were: foil bags, multi-material packages and plastic packaging.
Summary biowaste collection

- It was noticed, that residents despite receiving from the authorities of the Cooperative the biodegradable bags, often directed waste to a brown bin in a plastic (non biodegradable) bags. Kitchen waste and other food waste very often was wrapped in foil. Many waste—such as outdated food was directed to brown bin packaged.

- Weights values of impurities are not high because the main contaminant fractions are lightweight (foil bags).

- The main fraction of supplied material was kitchen waste of vegetable origin (fruits, vegetables), bread, flowers and green waste.

- In some batches of waste animal–by products (raw meat and fish cold meats) was noticed.
The largest fraction was mixed municipal waste/residual waste (black bin), which was collected 1950 kg, which represents 61% of the total waste received.

Biowaste represents 16% of the total weight waste collected.

Paper and plastic, which respectively account for 12% and 11% of all waste collected in the pilot project, are the least numerous.

<table>
<thead>
<tr>
<th>A summary of the amount of waste received - the entire pilot program</th>
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<tbody>
<tr>
<td><strong>Mixed waste (black bin) [kg]</strong></td>
</tr>
<tr>
<td>1950</td>
</tr>
<tr>
<td><strong>SUM</strong></td>
</tr>
<tr>
<td><strong>Part of total [%]</strong></td>
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<tr>
<td>61</td>
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</tbody>
</table>
Thank you

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