

PILOT PROJECT THE SELECTIVE COLLECTION OF BIOWASTE

*Tomasz Wojciechowski
CEO GWDA sp. z o.o.*

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



Project details

- ▶ 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

Project details



- ▶ 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:
- ▶ 1 100l container for plastic, metal and tetrapak (yellow bin)
- ▶ 1 100l container for paper (blue bin)
- ▶ 1 100l 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

Set for BIOWASTE given to residents

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



Results Summary – biowaste

Summary of the amount of biowaste received during the pilot program

March		April		May	
Date	Weight [kg]	Date	Weight [kg]	Date	Weight [kg]
06.03.2017	2	06.04.2017	80	05.05.2017	20
13.03.2017	10	13.04.2017	60	11.05.2017	40
16.03.2017	15	21.04.2017	20	17.05.2017	60
20.03.2017	20	27.04.2017	40	25.05.2017	40
23.03.2017	40			30.05.2017	40
30.03.2017	40				
SUM	127	SUM	200	SUM	200

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

Date	The amount of impurities by weight [%]
06.03.2017	0,5
13.03.2017	0,5
16.03.2017	10
20.03.2017	3
23.03.2017	0,25
30.03.2017	1,25
06.04.2017	0,875
13.04.2017	7,75
21.04.2017	2
27.04.2017	6
05.05.2017	0,75
11.05.2017	0,75
17.05.2017	1,25
25.05.2017	2,75
30.05.2017	1,75

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



Summary –other containers



- ▶ 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

A summary of the amount of waste received - the entire pilot program				
	Mixed waste (black bin) [kg]	Plastic (yellow bin) [kg]	Papier (blue bin) [kg]	Biowaste [brown bin] [kg]
	1950	360	370	527
SUM	3207			
	Part of total [%]	Part of total [%]	Part of total [%]	Part of total [%]
	61	11	12	16



Thank you

Tomasz Wojciechowski
wojciechowski@gwda.pl