Management of edible oils and fats from households (Used Cooking Oils UCO’s)

Periklis Kafasis
Director of Supplies- Services-Programmes

Corfu, 17-06-2022
Definition and categorization of Used Cooking Oils (UCO’s)

- UCOs are oils and fats that have been used for cooking or frying in the food processing industry, restaurants, fast foods and at consumer level, in households.

- According to European Waste Catalogue, UCO’s are categorized as Municipal Wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions, under the code 20 01 25 (edible oils and fats)

Source
http://www.eubia.org
Current Situation in Europe

- Global UCO accurate production is unknown
- In Europe, recent estimates suggest that 1.66 Mt of UCO are available: 0.854 Mt from the household sector and 0.806 Mt from the commercial sector
- Commercial UCO has been actively collected in many European countries, initially to serve the needs of the animal feed market.
- Recycling on a household level is still not gaining traction, even though it represents a significant part of the overall production. Out of the estimated 854,000 tons of domestic UCO produced in Europe, only about 48,000 tons are collected (5.6%), with collection being quite fragmented

### European Used Cooking Oils quantities (Mt)

- **Commercial**: 0.804, 48%
- **Domestic**: 0.856, 52%

**Sources**

Current Situation in Western Macedonia

Estimation of production, composition and evolution of biowaste (ton/year) in the Region of Western Macedonia

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
<th>2029</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production of MSW (t)</td>
<td>117.775</td>
<td>120.915</td>
<td>120.846</td>
<td>120.800</td>
<td>120.779</td>
<td>120.785</td>
<td>120.767</td>
<td>120.780</td>
<td>120.826</td>
<td>120.906</td>
<td>121.023</td>
</tr>
<tr>
<td>Biodegradable</td>
<td>49.701</td>
<td>51.026</td>
<td>50.997</td>
<td>50.978</td>
<td>50.969</td>
<td>50.971</td>
<td>50.964</td>
<td>50.969</td>
<td>50.989</td>
<td>51.022</td>
<td>51.072</td>
</tr>
<tr>
<td>Food Waste</td>
<td>43.240</td>
<td>44.393</td>
<td>44.367</td>
<td>44.351</td>
<td>44.343</td>
<td>44.345</td>
<td>44.339</td>
<td>44.343</td>
<td>44.360</td>
<td>44.389</td>
<td>44.433</td>
</tr>
<tr>
<td>Green Waste</td>
<td>4.970</td>
<td>5.103</td>
<td>5.100</td>
<td>5.098</td>
<td>5.097</td>
<td>5.097</td>
<td>5.096</td>
<td>5.097</td>
<td>5.099</td>
<td>5.102</td>
<td>5.107</td>
</tr>
<tr>
<td>Used Cooking Oils</td>
<td>1.491</td>
<td>1.531</td>
<td>1.530</td>
<td>1.529</td>
<td>1.529</td>
<td>1.529</td>
<td>1.529</td>
<td>1.529</td>
<td>1.530</td>
<td>1.531</td>
<td>1.532</td>
</tr>
</tbody>
</table>

Used Cooking oils represents the 3% of biodegradable MSW

Source
Regional Waste Management Plan of Western Macedonia
Collection of UCO’s

A typical household UCO collection supply chain

1. Frying or cooking at home
2. Pouring the used cooking oil to bottles
3. Leaving the bottles at special collection points
4. Bottles are picked up and taken to the cleaning plant
5. Biodiesel production and blending into diesel
6. Use in transportation

Source
Collection Network in Western Macedonia region

Development of a collection network at regional level through the establishment of specific machines (ATM’s) and 240lt capacity bins
Development of a rewarding collection system

Phase 1

Barcode printing

Household registration and supply of specific group of barcodes per household

Barcode placement to bottles
Development of a rewarding collection system

Phase 2

Registration of the household to the e-platform

Data collection history / household
Development of a rewarding collection system

Phase 3

Redemption of points and offer option
Collection and utilization of collected data

Bottles per Municipality
1st semester 2022

Collected bottles
1st semester 2022
Collection and utilization of collected data

Participating companies

Points collection

Coupons

Cancelled
Expired
 Redeemed
Activated

Companies with 1 or more offers
Companies with no offers
Public awareness activities

Events at establishment’s points of ATM’s
Thank you for your attention!!!!