



**Agricultural film recycling**

Ton Emans



**CeDo Group**



**Products**


- Refuse sacks
- Bin liners
- Breakfast & freezer bags
- Ice cube bags
- Cling film
- Aluminium foils & -bowls
- Paper household products
- Fragrant Nappy Sacks™ & Pop-ins

**Employees**

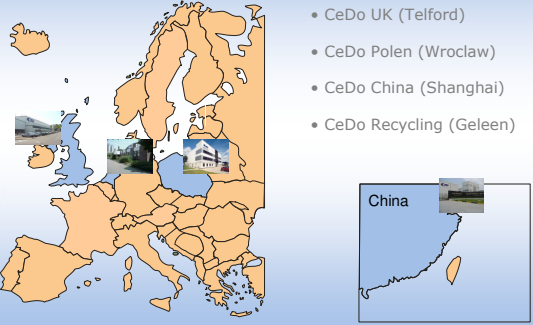
- 1950 Worldwide

**Turnover 2009**

- 230 m€



**Production sites**



- CeDo UK (Telford)
- CeDo Polen (Wroclaw)
- CeDo China (Shanghai)
- CeDo Recycling (Geleen)



**CeDo Recycling**




**Products:** LDPE regranulate and PET flakes

**Capacity:** 31 kton LDPE and 17 kton PET

**Allowed:** 44 kton annually

**Facility:** 36,000 m<sup>2</sup> land of which 10,000 m<sup>2</sup> build on

**Employees:** 50

**Licences/ Participations**

**Licences**

- Licence Wet Milieubeheer
- Licence Wet Verontreiniging Oppervlaktewater
- User licence city of Sittard-Geleen

**Management systems**

- ISO 9001 and 14001 and EN 15343

**Participations**

- Management committee EUPR
- Collective college of experts Refuse bags (KOMO)
- Participant LabelAgriWaste project
- Member VKR/ NRK

**PET suppliers**

**PET customers**

**End user market**

Bottles 30%

Sheet 70%

**LDPE Feedstock**

- Agriculture film
- Industrial bags
- Retailer film
- Industrial packaging
- Building film

**LDPE customers**

Poland

**Bioplastics vs PCR**

**Fossil Resources**

Big scenario	HDPE	LDPE	PCR	PCR	POE/PLG	POE/PLG	Biobag
Consuming oil	China	Poland	Poland	Poland	China	China	Poland
Thickness	10 µm	20 µm	20 µm	20 µm	20 µm	20 µm	20 µm
Volume used	11.1 t	11.08 t	10.8 t	10.8 t	10.8 t	10.8 t	20.2 t

**Climate Change**

Big scenario	HDPE	LDPE	PCR	PCR	POE/PLG	POE/PLG	Biobag
Consuming oil	China	Poland	Poland	Poland	China	China	Poland
Thickness	10 µm	20 µm	20 µm	20 µm	20 µm	20 µm	20 µm
Volume used	11.1 t	11.08 t	10.8 t	10.8 t	10.8 t	10.8 t	20.2 t

Legend:  
 ■ Waste collection + treatment  
 ■ Transport to point of use  
 ■ Converting feed in-house recycling  
 ■ Recycling of PCR waste into PCR  
 ■ Transport of waste into PCR  
 □ CO<sub>2</sub> emissions  
 ■ Additives and mineral components  
 ■ Eco. burden of waste bag  
 ■ credits for recovered energy  
 ■ Polymer raw materials  
 □ direct results

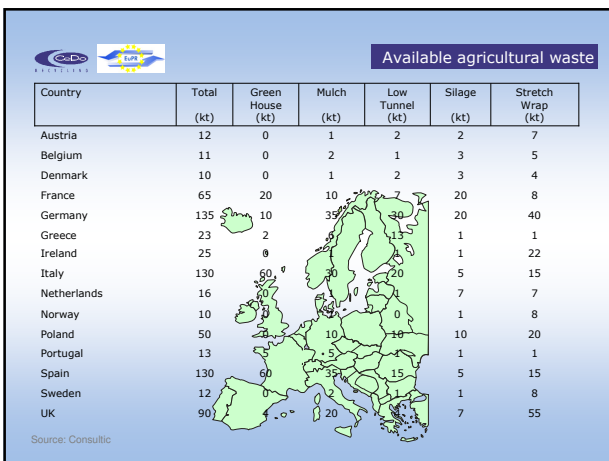
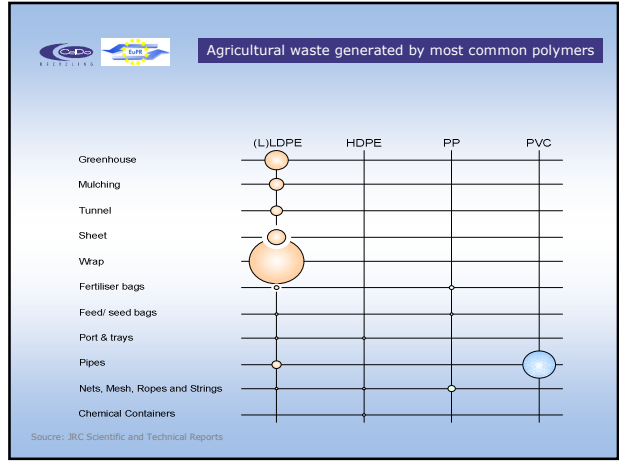
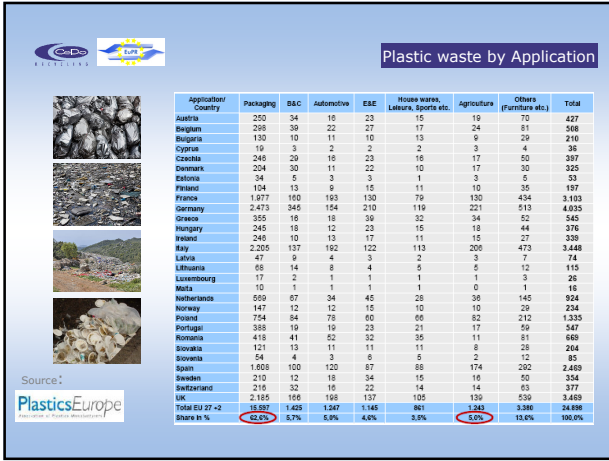
In June 2009 a Life-cycle Assessment was published by IFEU, which concluded that polyethylene sacks made from Post Consumer Recyclate have generally the smallest environmental impact profiles and can be considered the most —eco-friendly materials for waste bags.

*Provided the bags can be made and also perform (i.e. are technically fit for purpose) at thicknesses similar to those made from virgin materials.*

Source: OXO-BIODEGRADABLE PLASTICS ASSOCIATION

**Plastic recycling**

- Availability of raw materials
- Availability of technology
- Customers
- Price
- Support/ grand/ funds






**Mulching film & pipes**





<b>Item no.:</b>	910123
<b>Film:</b>	100 % LDPE, sweep-clean
<b>Ex-used:</b>	Weed killer
<b>Thickness:</b>	30-70 micron
<b>Wrapping film:</b>	Should not be present
<b>Colour:</b>	Black
<b>Pollution:</b>	The material should be free of strings, net wraps and foreign bodies such as metal, stones and tyres.
<b>Delivery:</b>	<ul style="list-style-type: none"> <li>• in bales</li> <li>• dry</li> <li>• bales with 4 wires</li> <li>• max. dimensions: 2.0 x 1.4 x 1.2 m;</li> <li>• max. weight per bale: 700 kg.</li> </ul>

**Crop cover film (low tunnel film, clear)**

<b>Item no.:</b>	910124
<b>Film:</b>	100 % LDPE, sweep-clean
<b>Ex-used:</b>	Film to cover crops (gherkin, asparagus, etc.)
<b>Thickness:</b>	30-70 micron
<b>Wrapping film:</b>	Should not be present
<b>Colour:</b>	Clear
<b>Pollution:</b>	The material should be free of strings, net wraps and foreign bodies such as metal, stones and tyres.
<b>Delivery:</b>	<ul style="list-style-type: none"> <li>• in bales</li> <li>• dry</li> <li>• bales with 4 wires</li> <li>• max. dimensions: 2.0 x 1.4 x 1.2 m;</li> <li>• max. weight per bale: 700 kg.</li> </ul>




**Agricultural bale stretch wraps**






<b>Item no.:</b>	910125
<b>Film:</b>	100 % LLDPE, sweep-clean
<b>Ex-used:</b>	Bales stretch wrap from farmers
<b>Thickness:</b>	> 10 micron
<b>Colour:</b>	White, black or green
<b>Pollution:</b>	The material should be free of strings, net wraps and foreign bodies such as metal, stones and tyres.
<b>Delivery:</b>	<ul style="list-style-type: none"> <li>• in bales</li> <li>• dry</li> <li>• bales with 4 wires</li> <li>• max. dimensions: 2.0 x 1.4 x 1.2 m;</li> <li>• max. weight per bale: 700 kg.</li> </ul>

**Agricultural greenhouse cover film**

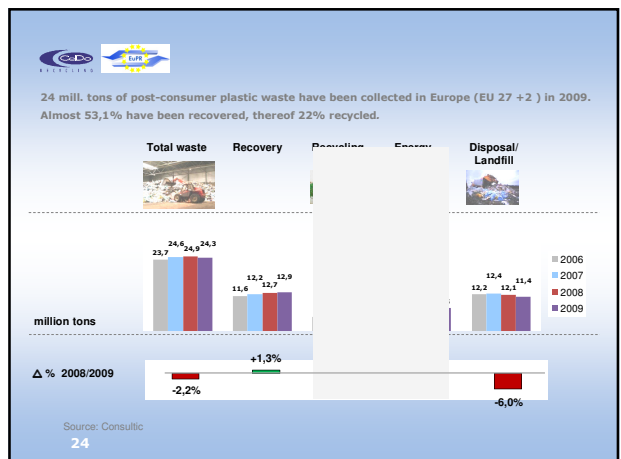
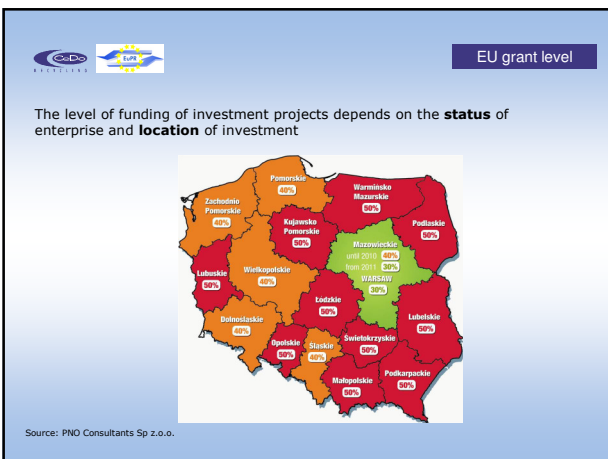
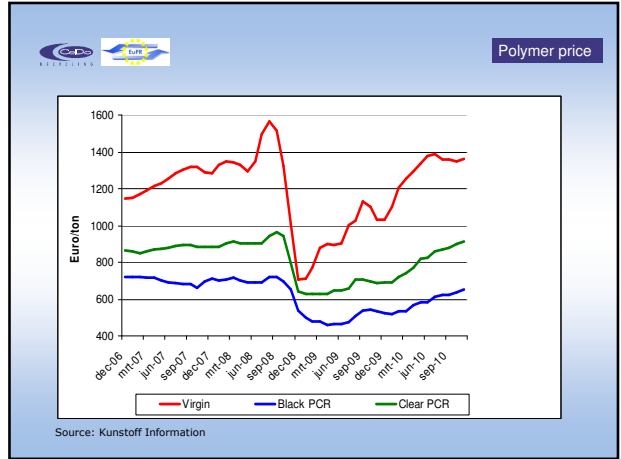




<b>Item no.:</b>	910305
<b>Film:</b>	100 % LDPE
<b>Ex-used:</b>	Building greenhouses
<b>Thickness:</b>	> 100 micron
<b>Wrapping film:</b>	Should not be present
<b>Colour:</b>	Clear
<b>Pollution:</b>	The material should be free of strings, net wraps and foreign bodies such as metal, stones and tyres.
<b>Delivery:</b>	<ul style="list-style-type: none"> <li>• in bales</li> <li>• dry</li> <li>• bales with 4 wires</li> <li>• max. dimensions: 2.0 x 1.4 x 1.2 m;</li> <li>• max. weight per bale: 700 kg.</li> </ul>

**Fertilizer / animal food bags**



Item no.:	910010
Film:	100 % LDPE
Ex-used:	Bags ex content fertilizer/ animal food
Thickness:	> 100 micron
Wrapping film:	Should not be present
Colour:	-
Pollution:	The material should be free of strings, net wraps and foreign bodies such as metal, stones and tyres.
Delivery:	<ul style="list-style-type: none"> <li>• in bales</li> <li>• dry</li> <li>• bales with 4 wires</li> <li>• max. dimensions: 2.0 x 1.4 x 1.2 m;</li> <li>• max. weight per bale: 700 kg.</li> </ul>







- **Exports for recycling**
- 1/3 of totally collected European plastics waste are recycled within Europe.
- European recycling industry is well developed and many recyclates are used in the production of new products.
- Recycling in Europe prevents the export of valuable resources, stimulates the local recyclers and creates jobs.
- 2/3 of the totally collected European plastics waste is still sold to recyclers in Asia, PE-film is by far the largest fraction exported out of Europe.
- Overseas recyclers do not have the same legal standards and conditions as recyclers in Europe.
- For more transparency, statistics should show a split between recycling in Europe and Overseas



There is money to be found in regranulate






Contact



Take care of us

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