Marketing of Compost - Strategy, Practice, Tools

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About the European Compost Network ECN

Exchange of Experience
Circulation of Information
Common Strategies
Exchange of Knowledge
European Reference Point on
European Standards
Separate Collection
Composting
Anaerobic Digestion
Quality & Markets

Sustainable solutions for the organic residues stream

www.compostnetwork.info
The Raw Material Potential
Collected and potential amount of source separated biowaste and green waste EU27

**Realistic potential**
- EU27 = 124 Mt
- EU27 = 80 Mt
- EU27 = 23.6 Mt (29.5%)

**Theoretical Potential**
- EU27 = 124 Mt

**Collected in 2005**
- EU27 = 23.6 Mt (29.5%)

### Realistic potential
National data or estimation of 150 kg/Inh*y collection

Successful bio-/green waste countries (AT, DE, DK, BE/FI, LU and NL)
Successful green waste countries DK, FI and NL -> NL: 200 kg/Inh*y = 137%
Future challenge: When to do what with the biomass?

Where are the overlapping areas?

Where are the borderlines of the options?

**Germany:** 10 mio. t of organic waste from households, gardens- + parks

| Ca. 8.0 mio. tons Composting (biowaste, garden- & park waste) | Ca. 0.5 mio tons Anaerobic digestion (biowaste, catering waste, grease trap) | Ca. 1.0 mio. tons Biomass incineration (Garden & park residues, residual wood) |

Source: Dr. B. Kehres
BGK, 2007

ISWA ITALY 2008
Quality defines market
Expectations of Compost Users

94% of the commercial compost users want to have:

A uniform, **high quality product** that is **independently monitored** and accompanied by product use specifications

=> Quality assurance for compost production
Quality Assurance and Labels for Compost and Digestion Residues

QAS Monitoring in total: 800 plants with capacity of 11 million tons composting and 2.5 million tons digestion
Quality Control Tools in the MS

Quality assurance in place (AT, BE, DE, IT, LU, NL, SE, UK) with quality standards and external control and evaluation only in 8 countries but 2/3 of the European compost production

QA in preparation (HU with pilot trial of 5 plants, IE, CZ, DK)

National compost standard and product registration (FI, FR, ES)

No substantial activities in compost quality monitoring (BG, CY, EE, GR, LT, LV, MT, PL, PT, RO, SI, SK)
Result of Quality Assurance

Common view of European compost producers:

Separate collection of organic waste (Clean source) + Quality Assurance = Product status for compost & digestate
Market Potential
Main areas of compost utilisation and market prices (2005/6) in EU27

<table>
<thead>
<tr>
<th>Range [n=12 MS]</th>
<th>Market range</th>
<th>Prices €/t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture 1)</td>
<td>45 - 78%</td>
<td>0 - (28) €</td>
</tr>
<tr>
<td>Horticulture</td>
<td>3 - 15%</td>
<td>1 - (29) €</td>
</tr>
<tr>
<td>Landscaping</td>
<td>6 - 20%</td>
<td>5 - 30 €</td>
</tr>
<tr>
<td>Blends/soil mix</td>
<td>10 - 15%</td>
<td>5 - 15 €</td>
</tr>
<tr>
<td>Land reclamation</td>
<td>2 - 10%</td>
<td>1 - 2 €</td>
</tr>
<tr>
<td>Hobby gardening</td>
<td>12 - 20%</td>
<td>5 - (320) €</td>
</tr>
<tr>
<td>Export</td>
<td>6 - 7%</td>
<td>-</td>
</tr>
</tbody>
</table>

1) Incl some special cultures like vinyards  2) in small bags.
<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Potential growth</th>
<th></th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>2005/06</td>
<td>2010</td>
<td>%</td>
<td>2020</td>
</tr>
<tr>
<td>Agriculture</td>
<td>1,032</td>
<td>1,903</td>
<td>3,021</td>
<td>~ 60%</td>
</tr>
<tr>
<td>Growing media</td>
<td>39</td>
<td>92</td>
<td>368</td>
<td></td>
</tr>
<tr>
<td>Retail soil improvers</td>
<td>257</td>
<td>328</td>
<td>535</td>
<td></td>
</tr>
<tr>
<td>Landscaping</td>
<td>212</td>
<td>271</td>
<td>441</td>
<td></td>
</tr>
<tr>
<td>Golf courses</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Sports turf</td>
<td>28</td>
<td>35</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>Landfill uses</td>
<td>227</td>
<td>232</td>
<td>232</td>
<td></td>
</tr>
<tr>
<td>Regeneration</td>
<td>142</td>
<td>210</td>
<td>210</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>165</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,105</strong></td>
<td><strong>3,074</strong></td>
<td><strong>4,869</strong></td>
<td></td>
</tr>
</tbody>
</table>

Potential of UK compost production = 3.6 mio. t
### Market Potential in Germany

**Case study Germany - a mature/developed market**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>German production of topsoils, horticultural substrates and growing media</td>
<td>25 - 27 Mio t/a</td>
</tr>
<tr>
<td>Potential of compost products herein (min. - max. estimation)</td>
<td>3.5 - 7.6 Mio t/a</td>
</tr>
<tr>
<td>Only 20 % of potential is realised today</td>
<td>0.7 - 1.5 Mio t/a</td>
</tr>
<tr>
<td>Compost production in Germany (2006)</td>
<td>4 Mio t/a</td>
</tr>
</tbody>
</table>
Main Markets
Main Markets:
No. 1: Agriculture

Market for 50 % of the compost (up to 75%)

Standard qualities, often fresh compost (D) or digestion residuals (D/SWE)

BUT! Small or no revenue

But! No longer restrictive to compost. Benefits become obvious. Farmer start to pay for compost.
The Agricultural Market

Case study of Germany - a mature/developed market:
53 % of produced compost is applied to agricultural land

Only 2-3 % of arable land is necessary to apply the annual production of compost in Germany (4 Mio t)

Development in agriculture leads to further compost demand:
• Further specialisation in intensive agriculture
• Increase in growing of renewable energy crops
• Idea of humus management
• Increase of market prices for mineral fertiliser
• Shortage in nutrient resources
Proportion of stable humus compounds and humus substitution potential

<table>
<thead>
<tr>
<th></th>
<th>Organic Carbon</th>
<th>C-org in stabilised humus</th>
<th>Humus-C reproduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mature compost (40 t/ha in 3 yrs)</td>
<td>21 %</td>
<td>51 %</td>
<td>870 kg/ha</td>
</tr>
<tr>
<td>Slurry/Digestate (30 m³/ha * yr)</td>
<td>43 %</td>
<td>21 %</td>
<td>100 kg/ha</td>
</tr>
<tr>
<td>Straw (7 t/ha * yr)</td>
<td>49 %</td>
<td>21 %</td>
<td>600 kg/ha</td>
</tr>
<tr>
<td>Green manure (60 t/ha * yr)</td>
<td>52 %</td>
<td>14 %</td>
<td>500 kg/ha</td>
</tr>
</tbody>
</table>

Bundesgütegemeinschaft Kompost e.V., 2005

www.compostnetwork.info

ISWA ITALY 2008
## Development of Nutrient Value of Compost

2005 to 2007, Value in € per t fresh matter FM and ha

<table>
<thead>
<tr>
<th>Fertiliser</th>
<th>2005</th>
<th>2007</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compost</td>
<td>5.30 €/t FM</td>
<td>8.10 €/t FM</td>
<td>+ 52 %</td>
</tr>
<tr>
<td></td>
<td>212 €/ha</td>
<td>320 €/ha</td>
<td></td>
</tr>
<tr>
<td>Digestion products solid</td>
<td>7.80 €/t FM</td>
<td>11.70 €/t FM</td>
<td>+ 51 %</td>
</tr>
<tr>
<td></td>
<td>156 €/ha</td>
<td>235 €/ha</td>
<td></td>
</tr>
<tr>
<td>Digestion products liquid</td>
<td>4.45 €/t FM</td>
<td>6.72 €/t FM</td>
<td>+ 48 %</td>
</tr>
<tr>
<td></td>
<td>123 €/ha</td>
<td>181 €/ha</td>
<td></td>
</tr>
</tbody>
</table>

Additional benefit: Water holding capacity
Main Markets:
No. 2: Landscaping

Market for 20% of the compost

High quality product for e.g. potting soils and growing media

Product development is necessary in accordance with end-user requirements

Solutions (mixtures) are required, not only compost

Strong competition with peat and bark based products
Recommandations and Specifications for Use

Main tool to develop compost markets if properly done!
Application Specifications

UK landscaping fact sheets:

Compost use for
- planting bed establishment
- turf establishment and renovation
- tree and shrub planting
- manufacturing topsoil
- as a mulch
- in growing media mixtures

Similar information exist in Germany, Belgium and Sweden.

Fact Sheet 08

Compost use in fruit production
Producers Co-operative VKN

3 Bio- + 6 Green waste plants - 100 x 150 km area
40,000 t of compost - 70 % to agriculture,
20 % for landscaping, 10 % for hobby gardens

Advantages of Central VKN Office
1. Cost savings by bundling of activities for
   - Application advice
   - Acquisition of customers
   - Purchase and sales
   - Production control
   - Authority contracts
2. Uniformity of products and prices
3. Common PR and advertisement

Transport distances up to 50 km
Main Markets:
No. 3: Private / hobby gardens

Market for 20 % of the compost
Large target group (= the Public)
Important for the compost image
Expensive public relation
Expensive to package and to sell to

BUT! deliverers of the raw material
Professional Marketing - Competitive to Peat/Bark Industry

FLORATOP compost products presentation in a supermarket chain. Return of up to 70 Euro/cbm!!!!
Nationwide Brand Floratop in 4 Regional Modifications

Up to 10 different products per plant!
Main Markets:
No. 4: Land Reclamation

Market for 5 % (?) of the compost

Past and present:
Large volume market for compost,
also for low quality products
(e.g. landfill covers)

Future
as a reaction to ‘landfilling of compost’:
=> compost use according to needs of
reclaimed site, i.e. mainly for poor soils (limitation of K
and P nutrients)

=> Main market for MBT/MSW output
Marketing Trends
Two Marketing Trends for Compost

**Little or no marketing** for high volume markets that require only standard product quality, such as agriculture

- Organic waste treatment plant

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**Specialised marketing** for high quality compost products supplied to high value markets e.g. growing media
- large range of value added products
- specialised, tailor-made mixtures

- Humus and soil production plant
- SMS Saturday Morning Service
Large Range of Compost Products

Provide a large range of different compost / bark products

Bagged for residents

Bulk for commercial clients
SMS = Saturday Morning Service

SMS at sites provides everything what gardeners need on a Saturday morning e.g. compost, bark, sand, stones, gravel.

Bulk supply  Drop-off area for gardenwaste  Compost super market
Conclusions of European Market Experiences

The compost market in every EU country is big enough, but not developed and mature.

Compost can be marketed on a large scale, if

- end-user needs are met,
- adequate quality assurance is provided
- local or regional marketing aspects are utilised,
- similar product development and marketing efforts are undertaken as is the case in the peat and bark industry
- therefore co-operations are required.

At quality focused compost sites in Europe,

>> Compost demand exceeds the supply <<
It is never too early to start with quality compost marketing

Thank you!