Animal By-Products / Resource Disposal & Minimisation

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EC Regulation 1774/2002 bans landfilling of ABP-containing waste derived from industry after 31/12/05
Programme

• Chilled food characteristics & products

• ABPR
  – Key points
  – Key issues for the sector
  – Developing routes to compliance

• Next steps
Chilled Food Characteristics

- **£6bn+ UK retail market**
  - CFA represents manufacturers comprising ~85% market
  - ~Half of estimated value of total European chilled prepared food market

- **Wide variety of products**
  - 9,000 SKUs made by CFA members at any one time

- **Multiproduct factories**
  - Short runs made to order – forecasting, JIT
  - Generally 30-40 lines each day - changeovers

- **Multicomponent products**
  - Animal derivatives: 0-100%, but large proportion of products 5%-25% and 50-70% moisture
  - Remainder = carbohydrate, e.g. bread, pasta, and produce
Chilled Food Characteristics

• Complex ingredients streams $\rightarrow$ heterogeneous food waste

• Potential for re-working generally low

• Short shelf life products
  – Perishable waste requires efficient disposal routes

• Chilled foods are largely ready to eat/ready to (re)heat
  – RTE previously not covered by Animal By Products Orders
Chilled Prepared Foods

- Ready meals and side dishes
- Dressed salads (with/out protein)
- Dry salads (e.g. mixed leaf)
- Prepared vegetables & stir fry mixes
- Pizzas
- Fresh pasta (plain and filled)
- Soups, Sauces, Dressings and Dips
- Sushi
- Sandwiches and sandwich fillings
- Delicatessen products
- Prepared fruit
- Desserts
ABPR – Key Points

• EC Reg 1774/2002 bans landfilling ABP-containing waste derived from industry after 31/12/05

• ABP categories defined - determine disposal routes:
  – Cat 1: High risk e.g. body parts, SRM
  – Cat 2: Med risk e.g. gut contents
  – Cat 3: Lower risk e.g. ‘former foodstuffs’
    • "former foodstuffs of animal origin, or former foodstuffs containing products or animal origin, other than catering waste, which are no longer intended for human consumption for commercial reasons or due to problems of manufacturing, or packaging defects or other defects which do not present any risk to humans or animals.”
ABPR – Key Issues

• Animal/human health basis theoretically – TSEs, FMD

• Lacks logic in scope
  – Excludes catering and domestic waste
  – Covers heat processed animal protein although not a significant risk
  – Resultant lack of clarity of requirements

• Industry working party with DEFRA 2003 to clarify
  → Outline guidance

• Some legal details unresolved
  – Work ongoing in EC (e.g. dairy products, approved processes)

• The clock is ticking!
ABPR – Ongoing Problems

• **Paucity of sustainable, low waste miles solutions**
  – Obtained delay in implementation (June 2003-Jan 2006) to enable disposal infrastructure to be developed

• **Significant timescale and complexity of approval of treatment processes and premises**
  – Numerous agencies’ responsibilities
    • SVS, LAs - ABPR enforcement
  – **Multiple layers of legislation – animal/public health, waste**
    • Relationship between various legislation still subject to clarification
      – Discussions continuing – EC (DGs Sanco & Environment) and Member States
    • Municipal systems need to be approved to take Cat 3 waste
ABPR - Compliance

- Manufacturers want to remain so, not become waste disposal companies

- CFA route to solutions:
  - Obtained delay in implementation (June 2003-Jan 2006) to enable disposal infrastructure to be developed
  - CFA/DEFRA Workshop Sept 2003 → Compliance routemap
  - CFA/DEFRA Waste Technologies Workshop May 2004:
    - Resource/Waste mapping data
    - Technical solutions options
Former Foodstuffs Treatment Milestones Timeline

- Contracts in place for segregation, collection and treatment of raw meat already overdue!
- Management buy-in required, preferably with authority of waste audit, and legal ramifications.
- Resolution of mixed messages from Defra/EA over scope and application of ABP regs.
- Clear guidance from Defra/EU required on scope on unresolved products: pastries, biscuits etc..
- Industry waste arisings determined by volume and type.
- Match technology offerings to waste streams.
- Contracts in place for waste disposal.
- Planning for new infrastructure complete (earliest).
- CAPEX scheduled into company budgets.
- Waste segregation and operator training being implemented.
- Planning for new infrastructure complete (latest).
- Build, commission and operate waste plants.
- Catering waste derogation ends.

ABPR Compliance Routemap (9/03)
CFA ABP/Resource Mapping

• ‘Waste’ = ‘resource’, i.e. raw material for e.g. energy

• Quantified and located biodegradable (packaging and Category 3) resource produced by the sector

• Aimed to assist industry in identifying investment requirements
  – Appropriate disposal systems
  – Locations

• Identified resource minimisation potential
Mapping Data

- **Three parameters collected:**
  - Daily tonnage total biodegradable resource, of which
  -  % Biodegradable packaging, and
  -  % Category 3

- **Sample = 85 sites:**
  - CFA Members (69 sites)
  - Estimates for non-members (16 sites)
  - Sites may have more than one factory

- **Data sorted by town, county and EA region**
Mapping – Main Findings

- ~172,000 tonnes p.a. (470 t/day) biodegradable packaging & Cat 3 resource, of which
  - 91% - 155,000 tonnes (426 t/day) is Cat 3 food waste
- Estimate plus 10% for small plants → Total ~190,000t p.a.
- Biodegradable packaging content range: 0-45%
- Resource composition dependent on products produced at each site
- Identified county and regional resource hotspots
County Resource Hotspots

- **Lincs:** 19% (89 t/day) 16 sites
- **Cambs:** 14% (64 t/day) 5 sites
- **Lancs:** 9% (43 t/day) 5 sites
- **Yorks:** 8% (37 t/day) 9 sites
- **Notts:** 8% (36 t/day) 4 sites
- **London:** 6% (29 t/day) 2 sites
- **Derbyshire:** 5% (22 t/day) 3 sites
- **Northants:** 4% (17 t/day) 3 sites
- **Dorset:** 3% (15 t/day) 1 site
- **Other:** 24% (118 t/day) 37 sites
County Resource Coldspots

- Argyll & Bute, Sussex, Tyneside, Worcs: all 0.1%
- Hants: 0.2%
- Gwent: 0.3%
- Avon: 0.5%
- Warwks: 0.9%
- Gloucs, West Lothian: both 1.1%
- Bucks: 1.5%
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<tr>
<th>Region</th>
<th>Resource Share</th>
<th>Daily Capacity (t/day)</th>
<th>Sites</th>
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Regional Level Resource

North East & Yorkshire
37 tonnes
8.2%

North West
62.4 tonnes
13.3%

Wales
1.5 tonnes
0.3%

West Midlands
16.4 tonnes
3.5%

London
41 tonnes
8.7%

South West
35.3 tonnes
7.5%

East & East Midlands
252 tonnes
53.6%

South East
15.3 tonnes
3.3%

Scotland
7.0 tonnes
1.5%
## Resource Breakdown (Towns)

<table>
<thead>
<tr>
<th>Town</th>
<th>EA Region</th>
<th>Total daily tonnage food (cat 3) &amp; biodegrad pack waste</th>
<th>% Biodegrad packaging</th>
<th>% cat 3 food waste</th>
<th>Region Total</th>
<th>Total daily tonnage biodegrad waste by region</th>
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Total Tonnages Determined

Total daily tonnage food (Cat 3) & biodegrade pack resource

Total Cat 3 food resource

Total Daily Tonnages: 470 426

Total Annual Tonnages: 171,590 155,490

Est £4.5K/tonne cost of raw materials, processing → >£750M
Next Steps

• Final resolution of ABPR details by EC
  – No great specific impact on chilled prepared food sector – waste must go somewhere other than landfill, soon!

• ABPR implementation by [chilled] food companies requires
  – Knowing site waste characteristics
  – Identifying viable disposal technologies and solution providers
  – Potential liaison with
    • Other local manufacturers to share solutions (volumes)
    • Local Authorities – piggy backing with local systems
  – Investing in compliance
  – Doing all of this now
Minimising Waste – Best Practice

• DEFRA-funded project for CFA members
• Focus on production processes and waste arisings in relation to:
  – ready meals
  – pizzas
  – sandwiches
• Aim to run 2004+ and generate generic minimisation guidance
Sources of Further Information

• Presentations from CFA/DEFRA Waste Technologies Workshop (May 2004)
  – http://www.chilledfood.org/Content/Presentations.asp

• CFA resource mapping data
  – By town and county
    http://www.chilledfood.org/_Attachments/665_101CMS.pdf
  – By town and EA region
    http://www.chilledfood.org/_Attachments/666_101CMS.pdf

• DEFRA
  – http://www.defra.gov.uk/animalh/by-prods/