Functional bio-based coating for moulded pulp trays
A comparison between coated and uncoated materials

Bumaga BV – KCPK

• Kenniscentrum Papier en Karton, founded by Royal VNP – knowledge gathering, dissemination and transfer

• Bumaga is 100% subsidiary of KCPK – industrial knowledge transfer

• Network of >100 SMEs in supply chain in close cooperation with industry association
Mission and goal

Mission:
To innovate for and together with the Dutch paper and board industry

Long term goal:
Contribution to the continuity of the Dutch paper and board industry through knowledge and innovation and adapting to changing conditions such as policies, regulations and infrastructure
Programmes

- Research and development
- Innovation advocacy
- Policies, regulations and infrastructure as parameters

Stofvoorbereiding: Fiber raw materials

Papiervorming: Production efficiency

Nabewerking: End products

International & scientific cooperations

Paper Week 2012 – November 13th, 2012
Developments and application of Sustainable and Smart Bio based packaging materials for the benefit of SMEs

- Cornet 11th call
- Funded by:
Project details

• 1 January 2012 – 31 December 2013

• SME associations

• Research institutes
Effects

Background:
• Meet market demands by material reduction, lightweight products, sustainable production and use of environmentally friendly raw materials
• Ensure future of paper and board producers

Goal:
• Replace oil-based packaging by renewable, reusable and sustainable food packaging combinations
• Reduce amount of base material with equal or better material properties
SME User Committee

• Implementation of innovative solutions, knowledge transfer to market, consulting and engineering services
• Immediate direct access to results and knowledge
• Representatives of complete food packaging chain
Project plan

Material development

Integration for lightweight bio-based packaging

Implementation on the market – business case studies

2012

2013
Materials

- Biobased, waterbourne coatings with appropriate barrier properties (water, vapour, grease, high temperatures, ....)
- Sprayable

- Fibre moulded pulp trays for dairy and meat (MAP)
- Folding boxboard for ovenable food
- Solid board for greasy food stuff and construction

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Coating technique

SPRAY COATING

- Blade coated
- Film transfer coated
- Spray coating

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Coating’s selection

- A decision making matrix table to select most suitable materials for coating application
- Considers material requirements and respective evaluation of each material
- Weighted in accordance to its importance for the project success and the needs of the industrial partners
Workpackages / Next steps

• WP1 Management (M1-24)
• WP2 Bio-based materials (M1-18)
  – (Inventory/Analysis/Development)
  – Selection 8 materials, production of samples
• WP3 Testing (Barrier, Mechanical, Printability) (M6-21)
  – Report on mechanical, barrier, and printing properties
• WP4 Business case studies (M13-23)
  – Report on functionalities, technical and economical feasibility
• WP5 Dissemination (M1-24)

>> Mid November coated samples can be compared to uncoated base materials
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