

# Packaging the future



Danone plans to extend its use of PLA packaging to encompass other products in the Activia line.

Danone's decision to adopt PLA packaging in the form of Ingeo for its Activia yogurt brand is further evidence that major manufacturers are serious about investing in environmentally friendly alternatives to traditional materials such as polystyrene. **Barry Mansfield** reports.

**D**anone is the first company in Europe to move to PLA packaging for a leading yogurt product. Having made the switch this year from polystyrene to PLA, the French food and water giant says it will improve the packaging carbon footprint for its Activia brand by 25% and cut its use of hydrocarbons by around 43%. These

NatureWorks, the company responsible for developing Ingeo, claims that Danone's decision to adopt its material has addressed several product issues relating to the development of the Activia yogurt pack. The product is aimed at aiding digestive comfort and has up until now been packaged in polystyrene. Any new packaging solution would

the fact that PLA packaging can be recycled and reused in another PLA-based format. NatureWorks is now working with the industry to devise an end-of-life strategy for the Ingeo-based cup that will ensure the smallest possible environmental impact from sourcing, use, disposal, recovery and reuse.

The redesign of the Activia range now sees the paper components, including the banderole of the cup and the outer packaging, made primarily of recycling or FSC-certified paper. Danone plans to construct the lids out of paper PET instead of the aluminium and plastic that was used extensively in earlier versions.

The study carried out at Heidelberg compared the new PLA container with the original cup made of oil-based polystyrene along its entire life cycle, from the cultivation of the raw material (in this case forage maize) through to production, disposal and recycling. It discovered that the proportion of renewable raw materials was over 95%.

#### Seal of approval

Despite this latest research, biopolymers have attracted a certain amount of controversy this year in Germany, particularly from German Environmental Aid (DUH), which has

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claims were backed up by a detailed life cycle assessment study conducted by the Heidelberg-based Institute for Energy and Environmental Research (IFEU) in accordance with DIN EN 14040 and 14044 criteria.

Andreas Ostermayr, CEO for Germany and Switzerland, says he believes it is increasingly vital for companies and brands “to realise that the path ahead is one of technological investment, sustainable development and high quality in all aspects of product production, packaging included”. He describes the firm's adoption of Ingeo-based material as “a significant step in the packaging development of the future”.

need to combine high performance and quality with a stronger focus on sustainability – the entire process would have to be more environmentally friendly, but with little or no compromise on quality or performance for the customer.

The latest Activia yogurt cup containers are manufactured in packaging sizes of 4 x 115g, 8 x 115g and 460g. The Danone team is committed to ensuring that the remaining Activia products will also be constructed of renewable raw materials. Danone says its preference for PLA is partly driven by what it terms as a new ‘closed recyclable materials cycle’ made possible by

warned businesses in the country to refrain from using marketing spin, or 'greenwashing'. Scientists have found that PLA has some disadvantages, including the emission of fine particles and the possible contamination of soils and waters.

Against this background, NatureWorks, Danone and the World Wildlife Fund (WWF) are currently collaborating to achieve the International Sustainability and Carbon Certification (ISCC) for the latest version of Danone's Activia packaging. The ISCC seal will confirm that the entire supply chain for Ingeo raw materials is compliant with the most strict environmental and social criteria. The cooperation is noted in the WWF logo on the product, which declares itself a 'Partner for Environmentally Friendly Packaging'. Eberhard Brandes, CEO of WWF Germany, describes his work with Danone as part of their joint vision "for a world without oil. A material which is manufactured above all from sunlight, CO<sub>2</sub> and water is pioneering. In addition, the plastic can be a big success owing to its outstanding recycling potential".

Ostermayr himself points out that the firm's packaging "consists of approximately 18% of the CO<sub>2</sub> emissions of our products. That is a strong lever for sustainable changes



Ingeo-based Activia packaging can be recycled and reused in another PLA-based format.

and for the attainment of our environmental goals". For Danone, PLA made of maize starch has proven to be the most suitable material for the Activia cups.

The result is equivalent to 43kg less CO<sub>2</sub> per ton of Activia finished product compared to earlier materials. Already, according to Danone, PLA brings significant ecological improvements when contrasted with polystyrene; the company expects bioplastics to be enhanced still further in coming years, with the full environmental benefits yet to be realised. For example, within the next six months, the weight of the packaging for the PLA cup will continue to be optimised.

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#### The PLA revolution

Danone makes it clear that the adoption of Ingeo applies to around 80% of the total volume of all Activia products currently on sale in Germany, and that it plans to extend the application of Ingeo-based packaging to encompass the other items in its Activia line – drinks, yogurt fruit puree and the larger consumer formats – that account for the remaining 20%. This should prove popular, if the yoghurt cup's warm reception at 2011's Interpack event is any indication.

Hasso von Pogrell, managing director of European Bioplastics, claimed that through the development and presentation of the new Danone Activia PLA yogurt cup "we suddenly are winning over a quite new clientele and bioplastics have thus finally managed to reach the consumer." He says he is convinced that the Paris-headquartered multinational has helped trigger "a giant push for the entire industry. We are anticipating that production capacities will more than double in the next five years.

Bioplastics will continue to conquer the markets, and particularly in the packaging segment."

However, the company has hinted that PLA is merely the beginning of its sustainability drive. In early September a Haar-based spokesperson for Danone Germany, Dr. Susanne Knittel, described the material as being "only a stepping stone" and explained that as "an intermediate-term solution we would prefer other resources for our PLA-production, which are agriculturally less complex to produce, for instance Chinese silver grass, tapioca, prairie dropseed or agricultural by-products such as corn straw." ■

#### Company briefing: Groupe Danone

- French multinational Groupe Danone was established in 1919 and is currently a world-leading producer of fresh dairy products and bottled water.
- Groupe Danone realised profits of €1.870 billion in 2010 on revenues of €17 billion.
- The company's production site in Würzburg has been involved in the certification of environmental management systems since 1997.
- To date the Würzburg facility has implemented a total of 24 sustainability projects and has been certified in accordance with the international ISO 14001 standard.
- Groupe Danone's main sustainable objectives include a 30% reduction in company-wide CO<sub>2</sub> emissions by 2012 compared with 2008 levels.
- The company has also announced plans to produce Activia in "a completely CO<sub>2</sub>-neutral manner" over the medium term.