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Stora Enso Packaging Materials Newsletter 1/2020



Dear reader,

Addressing the needs of today's eco-conscious consumers, we help customers and brands to find the best material for their packaging and to replace fossil-based materials with low-carbon-footprint, renewable and recyclable alternatives.

We are entering the 2020s with a stronger position in renewable materials than ever. The divisional structure of Stora Enso was reformed at the beginning of the year. Our ambition in the Packaging Materials division is to be a global leader in circular bioeconomy.

Our portfolio now covers both virgin and recycled board for different end uses, as well as kraft paper for packaging and industrial applications. Our wide selection of barrier coatings enables the design and optimisation of packaging for various demanding end uses.

According to Hannu
Kasurinen, EVP, Head of
Packaging Materials, this setup
combines different areas of
expertise and enables closer
collaboration for application
development and innovation.
As the development towards
a circular economy is
accelerating in society, our new
organisation strengthens our
ability to drive innovation and
sustainability with a common
agenda.

Sanna Heiskanen Editor



AvantForte – designed for premium corrugated packaging

AvantForte by Stora Enso will be a new option in our containerboard offering, available as brown and white-top kraftliner. Made from 100% pure virgin Nordic fibers, it enables corrugated packaging producers to design and produce premium, eco-friendly, plastic-free packaging with less packaging material and to expand into new, growing segments.

Stora Enso helps corrugated packaging producers to expand into new business segments and meet brands' increasing demands for circular and plastic-free packaging.

"Together with Pöyry, we conducted a global study that included more than 100 current and potential customers and peers in the industry on the characteristics of high-quality kraftliner, which is one of the raw materials for corrugated packaging. Our new AvantForte is designed to meet these demands, and it will reduce the total cost of packaging and create value for the whole value chain, including brands and retailers," says Product Manager Oscar Duarte.

AvantForte will serve the most demanding end uses that require strength, purity and excellent visual



appeal; for example, fresh, fatty or moist food that requires food-safe packaging, and high-end e-commerce to support brands' positioning and user experience. It is produced with patent-pending technology that enables the product's unique multi-ply structure. Boxes made from AvantForte will be recyclable and biodegradable.

Production of the new kraftliner will start at the end of 2020 in Finland, at the Oulu paper mill, which is in the process of being converted into a kraftliner production facility. The EUR 350 million investment is a major step in our transformation into a renewable materials growth company.

Ingman ice cream in fully renewable packaging

Supporting the company's environmental targets, Unilever Finland is introducing Ingman ice cream in a newly designed 1 litre carton made of fully renewable and recyclable packaging board in early March.

In Finland, 90% of households buy ice cream, and the per capita consumption is the highest in Europe. 1 litre packs remain popular, with 11.6 million packs in total sold in 2019. (Nielsen HomeScan December 2019.) Unilever is one of the biggest players on the market and the owner of Ingman ice cream, which has been sold in Finland since 1978.

New brand identity

Unilever wanted packaging that could help them meet their target of cutting the company's environmental footprint by half in ten years. Fully renewable and recyclable cartons made of Performa Cream™ by Stora Enso and with a plant-based PE Green™ barrier coating help Unilever reduce their use of fossil-based materials and reduce waste. The board for the new ice cream cartons is FSC Mix labelled, confirming its traceable origin in sustainably managed

forests. Not just the package, but the entire Ingman ice cream brand's visual identity is being reformed.

"We are beyond excited to introduce Ingman's new brand identity and the new fully plant-based packaging material in the 1 litre ice creams. The renewed Ingman delivers the joy of ice cream together with the sustainability that has always been an integral part of our ice creams and our factory policies, and now even more so with the new packaging material. We are very happy to take this step forward together with Stora Enso," says Hilla Carpén, Senior Brand Manager of Ingman ice creams.

"Unilever is responding to the needs of consumers who are looking for more eco-friendly solutions and packaging made from fully renewable and recyclable materials. Our paperboard with a plant-based barrier provides the same protection, sealability and food safety as a carton with a fossil-based barrier. The package can be recycled in Finland's carton recycling system," says **Sari Häkli**, Head of Brand Owner Accounts at Stora Enso Packaging Materials division.



A wide selection of barrier solutions provide options for customers to choose the one that best supports their sustainability goals.

New dispersion barriers for eco-friendly food packaging

Our range of renewable packaging materials is expanding with new dispersion barrier materials for paper cups and food packaging. The new dispersion barriers Aqua™ and Aqua+™ by Stora Enso are fluorochemical-free and are used to produce paperboard for cups and food-service packaging, without the traditional plastic layer. Aqua is grease resistant while Aqua+ is both liquid and grease resistant, enabling optimal packaging performance and protection for food in different applications.

According to **Ebba Mannheimer**, Head of Business,
New Barrier Solutions, Stora Enso
Packaging Materials division, the

new barrier solution responds to market demands for ecofriendly, renewable and recyclable packaging materials to replace plastics in food-service business.

"All our boards are made of sustainably sourced, renewable wood fiber. The surface of the Aqua products is finished with water-based dispersion technology. That makes the board liquid and grease resistant during use, while it breaks down in a recycling process like paper, providing the highest fiber recovery and value in recycling," says Mannheimer.

Two different baseboards are offered with the dispersion barrier. CKB Nude Aqua™ by Stora Enso

is a natural brown kraft board for short-contact food packaging applications, including fast food and dry food. Cupforma Natura Aqua+™ by Stora Enso is a material for paper cups, available with a dispersion barrier on one side for hot drinks or on two sides for cold drinks and ice cream packaging. The materials can be printed and converted on existing machine lines

A wide selection of barrier solutions such as dispersion, compostable or fully renewable plant-based barriers provide options for customers to choose the one that best supports their sustainability goals.



Small straw to tackle big issues

The renewable and biodegradable straw launched by Stora Enso and Sulapac tackles the global problem of plastic waste. The first customers represent different business sectors but have one common interest: to be at the forefront of sustainability.

"Billions of plastic straws are produced and used every week, creating harmful waste that often ends up in the sea. This renewable and biodegradable material can replace fossil-based materials and help combat plastic waste. Our cooperation with Sulapac allows us to explore new types of innovative and scalable materials and widen our offering of renewable solutions," says **Marcus Dehlin**, Head of Business Alliances, Stora Enso.

The straws are based on Sulapac's patent pending material innovation. The main components are renewable materials such as wood and plant-based binders. The straw complies with existing waste systems and is designed to be recycled via industrial composting. The straws are produced with machinery originally designed to produce plastic straws.

"There is clearly high demand for our product, which both fulfils sustainability criteria and has superior usability. Like all Sulapac materials, the straw is 100% microplastic-free. It is designed to mimic nature; if the straw accidentally ends up in the ocean, it behaves like a birch leaf and does not harm the ecosystem," says Sulapac CEO **Suvi Haimi**.

The first customers include Finnair's lounges in Helsinki, replacing their plastic and paper straws, food delivery platform Wolt, the alcoholic beverage brand company Altia, Hotel St. George, and vegan café Kippo, among others. For consumers, the straws are available in different retail packaging e.g. via Biofutura.com, an online store specialising in compostable tableware and packaging, and online retailer Verkkokauppa.com.

"This renewable and biodegradable material can replace fossil-based materials and help combat plastic waste."

Natura Life qualifies for Nordic Swan Ecolabel

"Ecolabels are one way to communicate that materials are ecological and sustainably produced." Our fully renewable brown liquid packaging board Natura LifeTM by Stora Enso has received the Nordic Swan Ecolabel approval. Consumers are increasingly interested in materials and their origin and look for eco-friendly packaging options. Ecolabels are one way to communicate that materials are ecological and sustainably produced.

The Nordic Swan Ecolabel can now be applied for, for the packaging of liquid food for the first time. The Nordic Swan Ecolabel for liquid packaging promotes the use of renewable materials, which help combat global warming, and advocates for the circular economy by ensuring that the packaging can be recycled in existing recycling systems. Other key requirements include sustainably produced and certified raw materials and approved chemicals.

Tetra Pak, which provides liquid packaging globally, is the first to qualify their liquid cartons for the Nordic Swan Ecolabel. According to Tetra Pak, the ecolabel will help consumers make eco-friendly choices when shopping for food.

Customers benefit from the ecolabel, since it provides third-party-verified proof of superior environmental performance throughout the lifecycle of the product, and the label is today widely recognised by Nordic consumers.

Stora Enso also produces a Nordic Swan qualified board for paper cups, Cupforma Natura[™] PE Green by Stora Enso. The approved boards have a plant-based barrier coating, so they are fully renewable and recyclable.



Fresh eggs in plastic-free, easy-to-recycle packaging

Stjärnägg AB in Sweden is switching from plastic to paperboard in their egg packaging to reduce plastic. The company supplies fresh eggs from about 70 certified farmers to shops and restaurants across the country and wanted to do away with unnecessary plastic.

Instead of the traditional shrink film plastic, the eggs lie on a plate made of pressed cardboard wrapped in a sleeve made of our kraft back board CKB™ by Stora Enso. The first three products of Stjärnägg packed in paperboard include 20-packs of the best-selling 'Stora Öland' eggs, 'Ekologiska' organic eggs and 'Utehönsägg' free-range eggs, which is the fastest growing trend in the egg market.

"A large pack of high-quality eggs packed in environmentally friendly, easy-to-recycle packaging is just what consumers want. We are constantly working on making our products and operations more sustainable and environmentally friendly, and by avoiding plastic packaging we can contribute to a reduced use of plastic and smaller environmental impact," says **Håkan Burlin**, CEO of Stjärnägg.

The packaging solution is provided by Schur Pack Sweden AB and

packaging machine supplier Schur Technology A/S. The structure of the package allows the consumer to see the eggs inside while being stable enough to put on top of a shopping bag to carry home. The use of low-migration materials, colours and varnish ensures inert packaging that has no impact on the packed product.

Peter Tegström from Schur Pack Sweden confirms that the new package has been well received and has opened doors to new customers. The key is its low carbon footprint and large print surface, which enables customers to provide plenty of product information and convey their brand messages effectively.

> "A large pack of highquality eggs packed in environmentally friendly, easy-torecycle packaging is just what consumers want."





Demand for flexible packaging paper grows

Flexible packaging is a growing business, and there is increasing demand for paper over finite raw materials such as plastic. Flexible packaging papers are a good option for food and beverage brands who prefer renewable and recyclable packaging that meets the needs of eco-conscious consumers.

Our flexible packaging papers are one-side-coated, light-weight speciality papers produced at our Veitsiluoto paper mill in Finland. LumiFlex Light™ by Stora Enso is a food-safe flexible packaging paper that can be used in direct food contact, such as voghurt cup banderoles or bags and pouches for dry food. LumiLabel Light™ by Stora Enso is used in flexible packaging and in wrap-around labels on cans and jars. We also offer a specially designed grade for partial wetstrength applications.

Reusable biocomposite lids trialled by Valio



Roughly a third of the food produced in the world for human consumption gets thrown away or wasted every year. Besides wasting resources, it also produces unnecessary greenhouse gas emissions that contribute to global warming. The packaging – and the lid – play an important role in reducing food loss and waste by protecting the food items during transportation and storage.

To encourage consumers to reduce their food waste, 10 000 wood-fiber-based biocomposite lids were distributed at the Finnish dairy company Valio's sales demonstrations in January. The reusable lids are also part of a pilot for a new biocomposite food package application.

"With this pilot project, we want to encourage people to take small concrete actions to prevent food waste. The lid helps to cover any leftover crème fraiche and quark in the cups, and thereby prevent food waste," says Jussi-Pekka Lumme, Packaging Development Manager at Valio.

The co-operation also intends to trial how a biocomposite works when combined with a traditional food package. The reusable lids are made of the durable and hygienic biocomposite material DuraSense® by Stora Enso. It

has a smaller carbon footprint, which makes it a climate-friendly alternative to fully fossil-based plastics.

"Valio was the first in the world to start using fully plant-based one-litre milk cartons in 2015. In 2018, we converted all of our 250 million gable-top milk, yoghurt, cream, and sour milk packages to fully plant-based ones. These packages are part of broader efforts in which Valio aims for carbon-neutral milk, i.e. resetting milk's carbon footprint in 2035. We continue to explore new package innovation possibilities that we can try out and implement," says Lumme.

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