

RAIZ



Forest and Paper Research Institute

TECHNOLOGICAL
SCOUTING NEWSLETTER

September 2020

Highlights

- The packaging segment was the major topic of this September 2020 TS Newsletter, with the development/production of barrier solutions, formed fiber products, paper straws, paper wraps and paper bottles, by Omya, Stora Enso, BillerudKorsnäs and Cascades.
- Biorefinery stands out with a new investment in development and research by the Swedish Government for the RISE Institute.



Contents

- Metsä: excellence centre for paperboard and packaging innovation
- Omya: enhanced barrier portfolio of high-performance solutions
- Stora Enso: investment in the development of sustainable barrier solutions
- Stora Enso: starts the production of new-generation formed fiber products
- Lassonde: paper straws for beverage products
- Absolut: paper bottle prototype trials started
- BillerudKorsnäs: recyclable paper-based flow wrap
- Cascades: 100% recycled and recyclable thermoformed cardboard food tray
- RISE: support of the Swedish Government for upgrading biorefining pilot facilities
- RenCom: supply of lignin from Stora Enso for sustainable and bio-degradable polymers

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Technological Scouting Newsletter (monthly)
 Technological Scouting On Demand (specific technological issues, upon request)
 Industrial Property (IP) Survey (quarterly)

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START-UP OF THE MONTH



CRB Innovations (CRB) is a technology company based in Sherbrooke, Quebec, Canada, which has developed the FIRSST (“Feedstock Impregnation Rapid and Sequential Steam Treatment”) deconstruction and hydrolytic fractionation technology. Possible production products include cellulosic sugars, cellulose, furan-derivatives, lignin-derivatives and clean process residues. The company already owns a demo facility with a processing capacity of 3.6 tons/day of wood (dry basis). This September, CRB has been awarded a total investment of C\$8.6 million from different Canadian public agencies for helping CRB’s development of a commercial pilot project for converting forestry residuals and other biomass sources, through the FIRSST process, into intermediate products that will be converted into biofuels and co-bioproducts

Read more ➤ canada.ca | [CRB Innovations](#)

PACKAGING



photo: Metsä Board

Metsä: excellence centre for paperboard and packaging innovation

Metsä Board, part of Metsä Group, has a new Excellence Centre at its unique bioeconomy site in Äänekoski, Finland, aiming at accelerating material and packaging innovation and for providing means for collaborations between customers and technology partners along the entire value chain. The center includes R&D facilities, a packaging design studio, a customer feedback centre and a state-of-the art laboratory providing more than 100 different measurement methods and analytics. It additionally features a virtual store and a computer-aided engineering tool to allow sophisticated simulation and analysis of packaging performance.

Read more > [Metsä](#)

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photo:
PackagingEurope

Omya: enhanced barrier portfolio of high-performance solutions

With the acquisition of UK's Solar Inks Ltd, Omya has expanded its range of barrier solutions, with functionalities such as protection against oil and grease, water and vapor, mineral oil and aroma, along with sealing properties, while maintaining the recyclability of the coated paper and board material. The new products include water-borne barrier coatings for demand applications such as for food packaging, based on calcium carbonate and acrylic co-polymers, and a solution based on 100 % natural and sustainable ingredients, promising compostability and biodegradability, in the fast food and vending materials market.

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Stora Enso



photo: Cision

Investment in the development of sustainable barrier solutions

Stora Enso is investing EUR 10 million in a dispersion barrier technology for the development and production of paperboard with barrier properties, that are easier to handle in a recycling process, have a lower carbon footprint and can be compostable in industrial facilities, in its Forshaga site in Sweden. The new equipment is expected to come into use during the second quarter of 2021. Expected applications include packaging needing protection against liquid, moisture, oxygen or fat, such as liquid packaging, beverage cups and food packaging. From the shared information, the dispersion barrier technology is expected to be Stora Enso's Aqua™ and Aqua+™.

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photo: Cision

Production start of new-generation formed fiber products

In November 2019, Stora Enso has announced a new collaboration with a producer of plant-based barrier coatings, the HS Manufacturing Group (HSMG), for applying HSM's PROTĒAN™ barrier technology to Stora's renewable and recyclable PureFiber product offering. The PureFiber is a range of single-use products that are renewable, recyclable, biodegradable and plastic free. Now, Stora Enso has announced the start-up of the production of these formed fiber food service products at its Hylte Mill in Sweden. An additional production capacity investment is expected at the Hylte Mill and at Qian'an Mill in China for meeting the demand for formed fiber solutions. The annual capacity at both mills will be approximately 115 million units of products.

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photo: Cision

Lassonde: paper straws for beverage products

Lassonde Industries Inc., a North American manufacturer of a wide range of fruit and vegetable juices and drinks, has announced to be the first in the Canadian market to replace plastic straws with bendable paper straws in its single-serve boxes of beverage products. This move follows a successful market testing in 2019 on adding paper straws to Lassonde's 200-ml containers, which showed a relevant interest by the consumers. Not much information is made available about the straws, only that are made from FSC-certified paper.

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photo: [beveragedaily.com](#)

Absolut: paper bottle prototype trials started

The first result of the joint venture Paboco, for the development and scaling-up of the production of paper bottles, appears as the rolling out of 2,000 paper bottle prototypes by the Absolut Company (TAC), with the first production run going into controlled testing this November. The prototype is composed of 57% paper and 43% plastic, recyclable and itself made of 100% recycled content. The rollout, with Absolut Vodka and Absolut Mix, is set to start in Sweden and the United Kingdom. If the initial consumers' feedback is positive, a second pilot production run is predicted for next spring.

Read more > [www.environmentalleader.com](#) | [beveragedaily.com](#)

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photo: Cision

BillerudKorsnäs: recyclable paper-based flow wrap

Along with Syntegon Technology, BillerudKorsnäs has developed the Recyclable Flow Wrap, an innovative paper packaging solution which is based on primary fibres, has a high barrier performance and can be recycled as paper. With applications such as in chocolate bars and bakery products, requiring medium to high barrier properties, the new product can replace the use of conventional plastic packaging.

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photo: Cision

Cascades: 100% recycled and recyclable thermoformed cardboard food tray

Cascades has developed a 100% recycled and recyclable thermoformed cardboard tray to be applied in the packaging of fresh foods. The tray is made of 100% recycled fibres and has Cascades's patented water-based coating SurfSHIELD® for protecting it and its contents from moisture. This combination makes the tray easily recyclable and able to be inserted in the common recycling bins. Mentioned food applications are meat, poultry, fish, fresh fruit and vegetables.

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BIOREFINING



RISE: support of the Swedish Government for upgrading biorefining pilot facilities

The Swedish Research Institute RISE is receiving a supplement of SEK 350 million (about EUR 3 million) over two years from the Swedish Government. This supplement aims stimulating the development and modernization of RISE's test beds and pilot facilities for biorefineries around Sweden. Ultimately, the Government investment can improve the conditions for the commercialization of new solutions, contribute to business start-ups and international investments, as well as for the establishment of a world-class center for a resource-efficient, non-toxic and circular bioeconomy.

Read more > [RISE](#)

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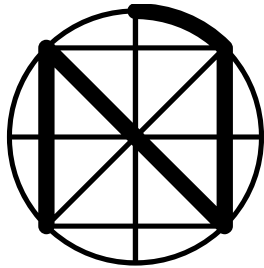
photo: lignin.se

RenCom: supply of lignin from Stora Enso for sustainable and bio-degradable polymers

Swedish innovation company RenCom has started a collaboration with Stora Enso, based on the supply of thousand tonnes scale of the lignin Lineo™ by Stora Enso to RenCom's new demo plant unit for the production of RENOL®, a sustainable and biodegradable polymer. This biomaterial will be introduced, as soon as in 2021, as an alternative to infill materials in football pitches, as a replacement of packaging plastics and, as well, as an advanced material for the automotive industry.

Read more > [lignin.se](#)

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