



CULTURED CIRCLES

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four trayforming machines from French-based equipment manufacturer **Meca-Systeme/SMP**, which distributes its equipment in North America through the company's **Meca-Pac Inc.** subsidiary in Mirabel, Que.

"The recent installation of trayformers on four of our major packaging lines has already result in a major reduction of board use, as well as streamlining of the of type of trays we use at the plant," says Liberté's sustainable development coordinator Dominic D'Amours, complimenting the new equipment's reliability, ease-of-operation, and robust operating speeds of up to 800 trays per hour.

"These trayforming machines use die-cut corrugated blanks to form the shipping trays, rather than the pre-formed corrugated boxes that generally used 13 per cent more board material," D'Amours explains.

"We estimate that we are now saving about 50 tons of board per year as a result of our switch to these trays," says



Vacuum-operated robotic suction grippers quickly place plastic containers into their exact spots inside the freshly-formed corrugated carrier trays.

D'Amours, citing other significant sustainability advantages of the new shipping carriers, including:

- About 77-percent recycled fiber content used to make the trays;
- Storage space-savings of up to 50 per cent, compared to pre-formed boxes;
- Internationally-recognized **FSC (Forest Stewardship Council)** certification for responsible forestry management.

To optimize the upgrade, the Brossard plant also purchased a Meca-Systeme case-packer to automate the repacking of cases of 175-gram containers shipped to U.S.-based clients from 20 containers per tray to 12 containers.

Like the trayformers, the new case-packer—also operated by **Allen-Bradley** control technology from **Rockwell Automation**—features sanitary stainless-steel construction and impressive line speeds of up to 800 trays per hour, or 9,600 containers per hour.

"Before the installation we had to manually repack some yogurt cups for shipment to the U.S. in cases of 12, whereas now that operation is performed automatically," D'Amours says, adding that the new trays have also provided "improved pallet stability for the finished products, as well as greater homogeneity in tray format and size."

D'Amours explains that Liberté began assessing way to reduce its carbon footprint in a concerted way in 2005 by using LCA (Life-Cycle Assessment) methodology to identify best opportunities for improving its environmental performance.

"In the packaging and manufacturing operations, the main objective was to implement sustainability goals such as raw material waste reduction and packaging weight reduction—to quantify the environmental footprint of Liberté and to put together an impact-reduction strategic plan."

Since then, D'Amours reveals, the Brossard plant has installed a brand new water tower for cooling down the process water; implemented plant-wide recycling of all the waste cardboard and plastic; introduced reusable fruit preparation storage containers into the plant's processing operations; and has conducted a comprehensive energy-efficiency study of the plant's operations.

Stressing that Liberté tries to use recyclable materials as much as possible for its packaging, while constantly working with key suppliers to improve the eco-friendliness of its packaging, D'Amours says it is important for companies like Liberté to approach manufac-



High-precision servo drives from ELAU help optimize performance on the Schuy overwrapper, used to wrap and stabilize the stacks of loaded trays.



An SEW-Eurodrive motor controls power distribution for moving machinery and components inside the newly-installed case-packing station.