



SUSTAINABILITY IN PACKAGING:
2009 study reveals growing role in industry practices. 22



 Reed Business
Information®

November 2009

PACKAGING DIGEST®

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Lighten up!

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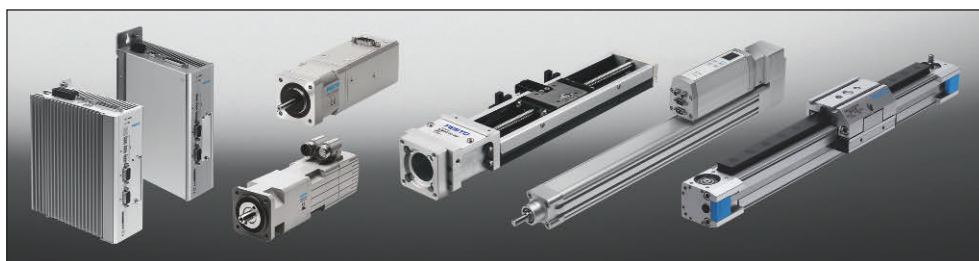
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new products equipment

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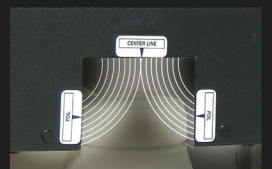
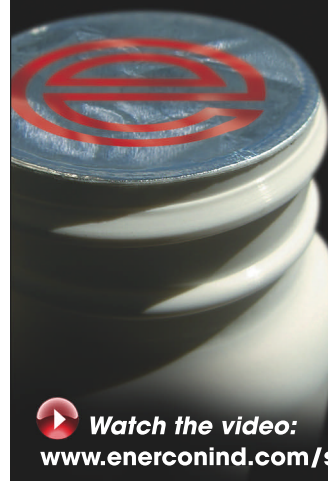
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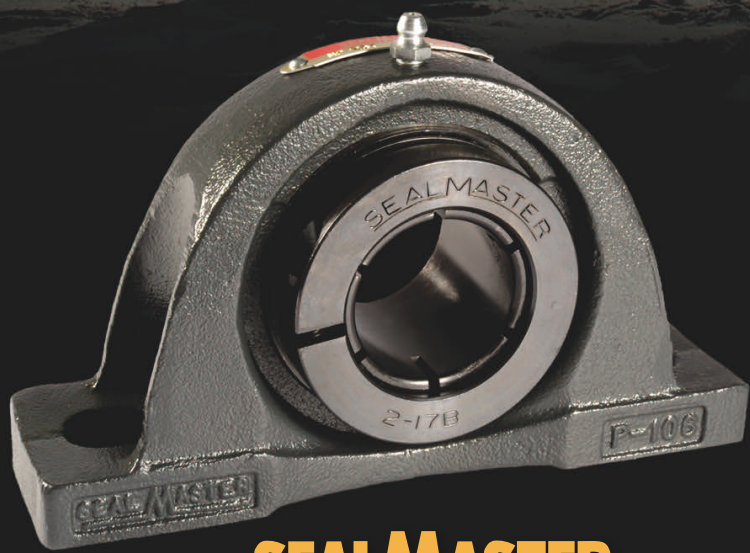
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design trends

Bissell cleans up with 'enviro-friendly' bottles



Bissell Homecare Inc. hopes the new bottles for its 2X Ultra concentrated carpet cleaner formulas will make a clean sweep for sustainability. Working with creative agency **Product Ventures** (www.productventures.com), Bissell redesigned the existing plastic packaging for the carpet-care formulas with downsized bottles to provide the same cleaning power with half of the packaging of the nonconcentrated formulas. This, it expects, will ultimately reduce the burden of plastic on the environment.

In order to meet this challenge, the package structures for the new concentrates incorporate optimized ergonomics and dispensing features to jumpstart the overall consumer experience. The smaller bottles occupy less shelf space, cut freight costs and make it easier for consumers to carry, store and pour the products, Bissell says.

Each bottle has a built-in measuring cap that creates a simpler, greener way to clean "deep-down dirt" in carpet and upholstery. Explains CEO Peter Clarke, "The reduction of transportation resources needed to ship these smaller bottles cuts greenhouse emissions by 80 percent." The concentrated products carry the EPA's Design for the Environment (DfE) certification, recognized for safer chemistry. Partnering with DfE, Bissell says it's taking part in a national effort to improve the human health and environmental profile of chemical-based products.

Artisan tequila bottle sports a digital label

Tanteo tequila is a hand-infused spirit in a hand-crafted bottle designed by Tanteo Spirits' creative director and cofounder, Lincoln Mayne. The Australian-born Mayne boasts a background in both graphic and fashion design, during which he cross-branded, designed and provided creative direction for numerous brands, including Calvin Klein, Maxmara, PUMA and VH1.

Mayne also designed the logo, which uses handwritten lettering and ink blots to present an artisan feel. Ghost-written lettering and subtle variations of blue impart a sophisticated, contemporary air. The labels were digitally printed by **Tapp Technologies Inc.** (www.tapptech.com) using a **Hewlett-Packard** (www.hp.com) Indigo WS4000 press on **Fasson**, an **Avery Dennison** brand (www.na.fasson.com), 70# eggshell stock in four-color process with foiled-stamped silver and embossing.

Monster energizes drink line with 'Nitrous' in cans

Monster Beverage Co. makes 'Nitrous' convenient by launching the new drink line in a resealable 12 oz can. The company states that its Nitrous Monster line is the first energy drink to feature nitrous oxide gas technology.

"To communicate our Nitrous Monster product was unlike anything people had ever experienced before, we needed an equally innovative package that would attract consumer attention," remarks Mark Hall, president, Monster Beverage Co. The co. chose the **Rexam** (www.rexam.com) SLEEK™ Cap Can® with closure technology from **Dayton Systems Group (DSG)** (www.dsgtech.com) for its portability, recyclability, resealing features and shelf-appeal.

The resealing feature of the can is the result of technologies from both Rexam and DSG. Rexam manufactures and prints the aluminum can body. To this body, a Cap Can end and closure developed by DSG is sealed, thus making the can resealable.



Launch pad

New Product of the Month

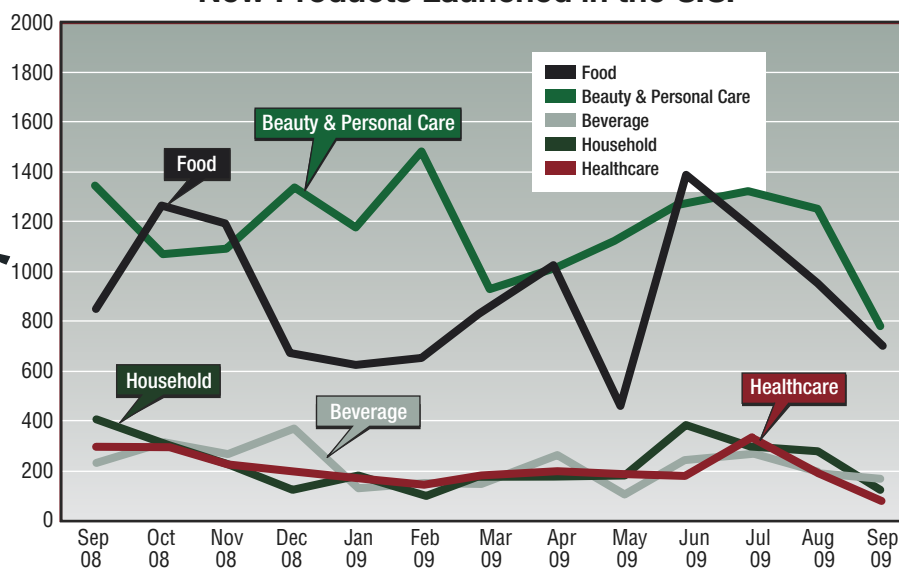
Makeup remover in aluminum

Physicians Formula is now offering packets of facial makeup remover towelettes in cylinders based on baby wipes canisters. An aluminum body holds the towelettes and is capped with a push-on, hinged, injection-molded closure in PP. The container is decorated with what appears to be gravure printing and carries an attached offset-printed information card.

The 25 towelettes are claimed to be 100-percent-natural and biodegradable and are premoistened with a cleanser enriched with aloe, organic orange water and lavender oils. Physicians Formula also produces an eye makeup remover in a similar aluminum drum with a foam seal and injection-molded cap.



New Products Launched in the U.S.



Source: Mintel Global New Products Database (GNPD)

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design trends beverages



Fitness drink in PET adds an option

FYXX Hybrid® is a new energy drink developed by fitness center owner/entrepreneur Steve Ondish, who believes that gymgoers need a healthy drink to give them an extra boost while working out. In September, Ondish and his partners introduced the line of caffeine-infused spring-water beverages with zero calories and zero carbs, which gets even more marketing muscle in a high-performance, 20-oz PET bottle from **Constar Intl. Inc.** (www.constar.net). Eye-catching in a cobalt blue color that reinforces the image of a refreshing spring water-based product, the bottle incorporates Constar's VCT technology, which it says generates hot-fillable beverage bottles with a panel-less structure to compensate for high-temperature filling and processing. The bottle's "hoop" geometry enables it to flex vertically to easily handle the vacuum created during the hot-fill process. An important sensory benefit is built into the bottles, as the hoop geometry imparts a rigid in-hand feel, though the container weighs only 38 g. A roll-fed label features bright flavor-specific graphics in white, orange and yellow, which stand out from the brilliant blue bottle and label. A 38-mm wide-mouth neck finish promotes easy "drinkability."

16 Mile Brewing opts for aluminum bottle

16 Mile Brewing Co., a regional brewer in Georgetown, DE, is packing its beer in a 22-oz aluminum bottle said to cut costs and offer a keg of marketing advantages. Developed by **Exal Corp.** (www.exal.com), the bottle looks distinctive and eliminates the need for separate labels, which reduces material costs and line downtime. Exal says its manufacturing process allows for vibrant, dynamic design options over the entire surface of the bottle. 16 Mile agrees that the colorful graphics and large size have been opening doors with retailers. "It really jumps out at customers in the beer aisle," beams Brett McCrea, owner of the brewing company.

The brewery's two mainstay and two seasonal beers will be sold singly and in cases exclusively in the aluminum bottle. "The aluminum bottle's lighter weight means lower shipping costs and its manufacturing process provides a more consistent, uniform size," says McCrea, who with partner Chad Campbell, discovered in their research that the single largest reason for downtime in the bottling process was bottle breakage on the production line. "We wanted to eliminate the traditional problems associated with glass right from the start," remarks Campbell.



Protica taps into shelf-stable dispensing

Protica Inc. specializes in the manufacture of protein and energy drinks such as protein shots. The nutraceutical firm now offers its Proasis protein shot in a large, shelf-stable format.

The brightly colored paperboard bag-in-box (BIB) was designed by Protica's in-house staff with graphic designer Paco Plaza leading the creative effort. **Tri-State Containers** (www.tssc1440.com) converts and prints the cartons.

But what Protica president Jim Duffy considers the most innovative part of the protein shot packaging design is the aseptic dispensing device. The Answer enables liquids in large-format packages, such as a BIB, to be dispensed safely and repeatedly over extended time without refrigeration. **Intl Dispensing Corp.** (www.idcdispensing.com) which manufactures The Answer and holds worldwide patent rights for the closure, says The Answer is the world's only aseptic dispensing device. "The Answer allows consumers to purchase many of the same beverages and liquid supplements they have bought in the past in a bulk format that requires no refrigeration and gives the consumer a tremendous cost savings at the register," says Greg Abbott, founder and chairman of IDC. "It enables the consumer to store the product virtually anywhere."



Synaura Intl. launches Avia time-release beverage

Synaura Intl. has released Avia (pronounced like the word "aviation"), a four-formula liquid supplement built around a unique berry called Maqui. In scientific studies, the Maqui berry has been shown to have the highest ORAC (Oxygen Radical Absorbance Capacity) value of any known fruit or berry on earth. According to Synaura, what makes Avia really stand out is its "SynPlex" technology, which allows Avia to become the world's first time-release beverage. Tiny microcapsules suspended within the liquid contain a powerful anti-inflammatory and powerful antioxidant. **Flow Design** (www.flowdesign.com), focused its attention on

the origins of the Maqui berry and the capsules and developed a brand image with a butterfly icon that represents life renewal. The dots surrounding the logo represent the time-released capsules in every bottle. The 750-mL glass bottle has tall, straight shoulders, which taper into a soft-footed base. The base has glass beads that wrap around 360 degrees, which mirror the dots of the brand logo.



Slim carton helps juice relaunch in Europe

Coca-Cola has relaunched its entire Cappy juice and nectar line in Bulgaria and Romania in new Slim® cartons from **Elopak** (www.elopak.com). Coca-Cola says it's counting on the packaging, introduced in June, to meet the rising consumer demand for new product offerings. The Elopak Slim® carton was selected following extensive consumer research that highlighted the new package as the best fit for Coca-Cola's premium, contemporary juice brand and met the consumer's desire for original beverage-packaging ideas. The tall, svelte carton design distinguishes the juices and nectars from the rest of the market. The stylish package is slimmer than a conventional gable-top carton, with harmonious curves and a large cap for easy pouring.

The Cappy line in Bulgaria comprises classic, premium and functional juices and nectars. Cappy Classic and Cappy Premium products have been repackaged in the Slim 1-L carton, and the functional range, Cappy BodyTime, was relaunched in a 750-mL size.

This is the first Elopak Slim package to be launched in Eastern Europe, and is only the second in the world, Elopak says. Coca-Cola chose it following extensive consumer research in 2008 that evaluated beverage-carton shapes and functionality. Consumers called the carton innovative and unique. When asked to rate it on a scale of 1 to 5 in terms of being easy to hold, 86 percent ranked it at a high level. Similarly, 94 percent of the respondents rated it highly on quality of liquid flow when pouring, indicating fewer spills and splashes thanks to the larger cap.



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comment

John Kalkowski, Editorial Director

Flexible packaging tightens its wrap on the market



The mature packaging market in the U.S. has been somewhat hobbled in the last few years by the lingering recession. However, flexible packaging is one segment that has kept growing.

The reasons are simple: Consumers demand the convenience, quality, functionality and value that flexible packaging can provide. In addition, flexible packaging substrates provide opportunities to cut costs and can offer sustainability advantages by reducing the amount of materials required to lower package weight.

Two recent global studies by Pira Intl. and the Freedonia Group indicate that flexible packaging is likely to continue gaining market share. The recent Pira study forecasts that the global flexible packaging market will grow from \$127.1 billion in 2009 to \$137.5 billion in 2014.

The Freedonia study predicts world demand for converted flexible packaging will increase 3.5 percent annually to more than 19 million tons in 2013.

Flexible packaging can be easily tailored to meet demanding specifications for a wide range of products, the Pira study states, citing development over the years from simple paper wrappings and bags to sophisticated, multilayer and multimaterial packaging for barrier protection and shelf-life extension that can last for years.

According to both studies, key market drivers and trends

identified for flexible packaging include:

- Biodegradable and recyclable flexible materials gain favor as retailers and brand owners seek to improve the environmental footprint of their packaging.
- Flexible films and bags are continually downgauged to reduce costs and minimize waste. However, this will restrain volume gains.
- Flexible packaging allays growing concern about excessive packaging being disposed of in landfills in developed countries.
- Stand-up pouches are replacing glass bottles and other traditional pack types for a range of food and beverage products.
- Laminated films, foils and paper are being designed to preserve product freshness and extend shelf life.

The Freedonia study says plastics will continue to make inroads due to their superior price/performance profile along with developments in biodegradability and high-barrier resins.

Meanwhile, both studies agree that the growth of flexible packaging will be greatest in the developing regions of Asia, Latin America and Eastern Europe. China already has surpassed Japan as the world's second-largest market for converted flexible packaging.

John Kalkowski

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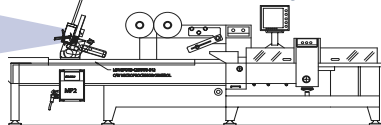
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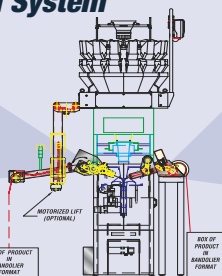
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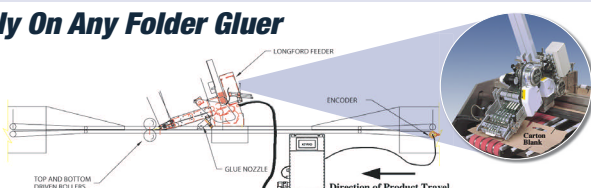


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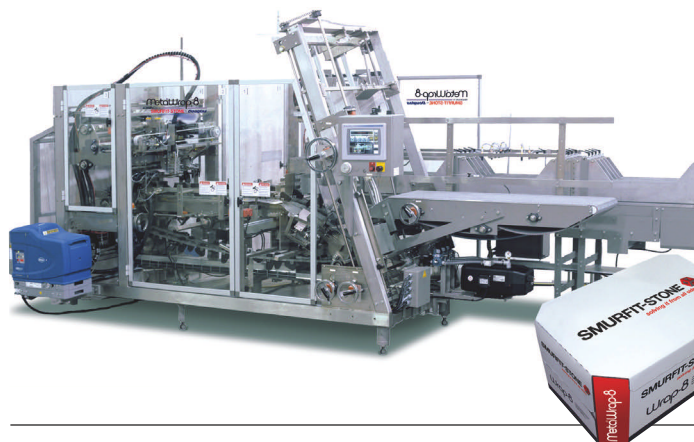
Control-panel displays In order to provide a reliable alternative for VersaView™ panels, the co. offers Versa View control-panel displays for quick replacement in 12- and 15-in. sizes. The co. has designed variants of CP6xxx series control panels and Panel PCs with modified enclosures to permit a simple drop-in after removal of alternate panels from machines and electrical cabinets. The 12- and 15-in. control-panel displays feature an aluminum front with a sheet-steel rear cover, an optional touchscreen,

optional function keys and/or an optional alphanumeric keyboard. The front side is rated with IP 65 protection and the rear side with IP 20.

Beckhoff Automation, 952/890-0000. www.beckhoffautomation.com

Bagger The SVI vertical bagger is an in-field upgrade to corner sealing that features low machine height, which increases overall efficiency, the co. says. The bagger is appropriate for a wide range of food and nonfood applications, the co. states, and it features a combination that allows the intermittent SVI machines to produce bags with corner seals and doy styles with optional zippers. For corner sealing, the manufacturer can upgrade the machine with an additional module. Produces doy-style bags when the machine cross seal jaws are turned to a 90-deg position. Whenever the package style is changed, there's no need to adapt the machine height or dosing platform, a changeover that reduces downtime during format change.

Bosch Packaging Technology, 715/243-2404. www.boschpackaging.com



Eight-sided shipping case The Meta® family of machines, including the Meta Wrap-8™ and Meta FS™, produce eight-sided shipping cases that feature mitered corners, resulting in increased stacking strength and reduced fiber requirements. The cases' corner panels allow additional high-impact graphics for on-the-shelf differentiation. The FS case former uses full servo or "smart technology" to form cases around a fixed mandrel, allowing quick changeover to different heights for boxes that share the same footprint. The case produced by the machine uses 17-percent less fiber to provide the full compression strength of a regular slotted case (RSC), and utilizes servo technology that minimizes the number of moving parts, machine maintenance and operating noise level.

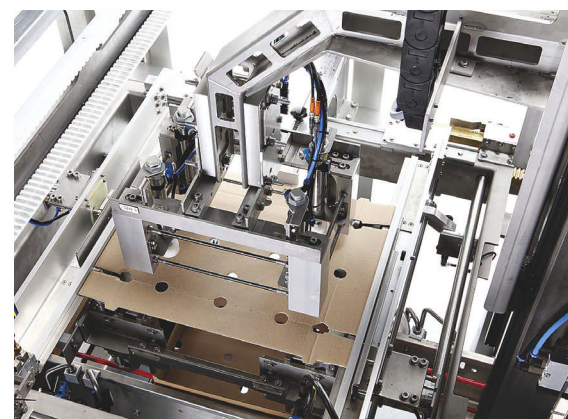
Smurfit-Stone, 314/656-5846. www.smurfit-stone.com

Multipacker The R-300 multipacking system can be configured as a multipacker, a shrink labeler and a combination multipacker/shrink labeler for individual products. Multipacking using this system produces high product visibility, as the shrink sleeve acts as an appealing and convenient unit, the co. states. Printed sleeves also eliminate the need to orient the product within the pack and cover individual bar codes, avoiding scanning errors. For rigorous applications, the system is integrated with special product handling that groups and orients products in dual counter-rotating timing screws, then hands them off to servo-controlled gripper belts for precise product handling.

PDC Intl., 203/853-1516. www.pdc-corp.com



Tray erector The A+F servo-controlled baseline tray erector features a modular design that allows the machine to operate as a standalone unit or be integrated with downstream A+F packaging machines. This helps to keep interfaces and material-handling components to a minimum. It can also be configured as a single- or dual-head machine and can process up to 76 cartons/min. The machine can handle trays with maximum dimensions



of 200x400 mm and heights up to 150 mm. In order to achieve 100-percent accuracy in repeated folding movements, a stamp is used to ensure precise internal dimensions after the first fold.

OYSTAR USA, 732/536-8770. www.oystarus.com



Automatic bagging machines The 3CM-5 Series of automatic bagging machines is low-cost and specifically designed for tight spaces, the co. says. The baggers place an empty bag on a spout, fill it (typically with 20- to 50 lb of product) and close the bag top using heat sealing or sewing, all within the confines of the baggers. The systems maintain bag-top control through this process in order to achieve consistency and deliver maximum throughput. The series includes the 3CM-52, 3CM-55 and 3CM-5U machine models with bagging capacities ranging from a maximum of 350 to 600-bags/hr.

American-Newlong, 317/787-9421. www.american-newlong.com



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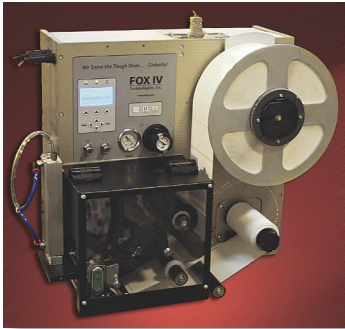


www.harmongp.com

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new products equipment



Mini label printer/applicator Model 2010 BASIC mini label printer/applicator incorporates the Datamax M-Class Mark II printer and boasts the smallest footprint in the world, the co. states: 18x13.6x18 in. Operators are able to change label and ribbon supplies by following the label and ribbon paths screen-printed directly on the center wall. An easy-access cover and modular components simplify service and repair. The machine is part of the co.'s "Intelligence Built-In" series of label printer/applicators, which don't need PCs for many applications. Menu prompts and messages are available in five languages: English, Spanish, French, German and Italian, and standard communication includes USB and RS232 with options for wired or wireless Ethernet and remote printer monitoring from a standard web browser.

FOX IV Technologies Inc., 877/436-2434. www.foxiv.com



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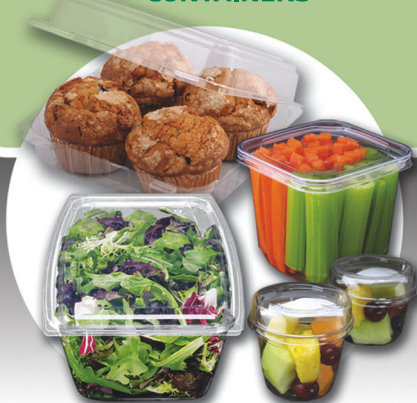
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EarthClear™ Thermoformed Containers are produced from modified plant-based Ingeo™ (PLA) and PET using recycled content and are offered under the Renewable Raw Materials and Recycled Content product lines. These containers are used to package produce, baked goods, deli items, candy and meal kits.

FLEXIBLE ROLLSTOCK



EarthClear™ Flexible Films are offered under the Renewable Raw Materials and Lightweighting product lines. These materials are used to package a variety of food and non-food products.

RIGID ROLLSTOCK



EarthClear™ Rigid Rollstock is offered under the Renewable Raw Materials and Recycled Content product lines. These materials are used for food products as well as electronics and personal health care products.



Labeling system The Model 1500 Wrap System with a Three Point wrap station applies long, narrow labels and works well in applications that require orientation of the container to a certain physical feature, such as a seam or container handle. With the system's spacer wheel or dual spacer-belt assembly, the unit creates spacing between products appropriate for the labeling application. After triggering a photoeye, two rollers capture the product against a third drive roller for greater control through the labeling process. The system is available with a variety of options, including a bar-code scanner, rejection system and product orienter.

Labeling Systems, 201/405-0767.
www.labelingsystems.com

Printer The A-Class Mark II print engine incorporates several features and quality enhancements to meet diverse requirements. A stainless-steel enclosure offers protection from the most challenging environments found in warehouse distribution and food and beverage manufacturing plants. Available with 203-, 300-, 400- and 600-dpi configurations, the print engine offers a broad range of print resolutions and has an enhanced graphic display for easy setup. **Datamax-O'Neil**, 407/523-5562.

www.datamax-oneil.com



earthclearpkg.com

For more information, please contact: Clear Lam Packaging, Inc.
1950 Pratt Blvd., Elk Grove Village, IL 60007, 847-439-8570, clearlam.com



Conveyors The first Flex™200 model for light/medium-duty applications has a strong, tubular steel frame and resin skate wheels with internal steel ball bearings and a specially engineered internal structure that produces low friction. The co. reports it has superior load-bearing capacity in medium/light duty applications. With a capacity of 90 lb/ft, the 300 model offers the same strong, steel frame and heavy-duty steel skate wheels with a more than 10,000,000-revolution service life. It has a rated capacity of 300 lb/ft. Both models can easily be adjusted for heights from 18 to 40 in. with the turn of a knob.

1st Source Products Inc., 877/338-9403.
www.1stsourceproducts.com



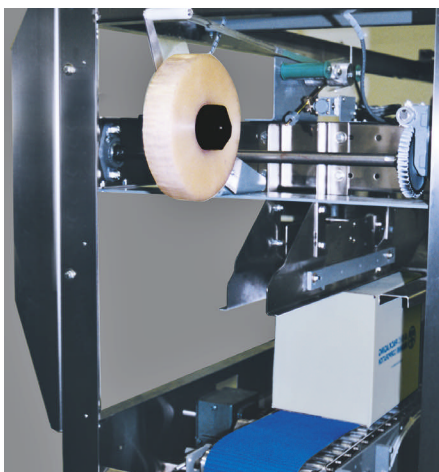
Bagging system The SidePouch® FAS SPrint Revolution™ bagging system presents a conveyor of pre-opened bags that are ready for immediate loading from a 60-in.-wide workspace. The loading speed is fully adjustable to optimize productivity for one or more operators or infeeds. The system operates in continuous,

intermittent or batch modes, and cycles on pre-set parameters or by using a foot switch. This system is fast, packaging at speeds up to 150 bags/min. The system has a stainless-steel construction that has been specifically designed for use in food packaging applications where it is in contact with moisture, oils, chemicals and foods in areas that require daily washdown procedures.

Automated Packaging Systems, 330/342-2000.
www.autobag.com

Tape sealer Model 436 tape-seals cases at speeds to 50 cases/min. This tape sealer provides automatic case feeding and spacing and squares cases as the tape is applied for neat, securely-sealed cases that form straight, stable pallet loads. Clear, high-visibility gull-wing doors enclose the machine and stop the sealer when opened to allow quick access to all operating components.

A-B-C Packaging Machine Corp., 800/237-5975.
www.abcpackaging.com



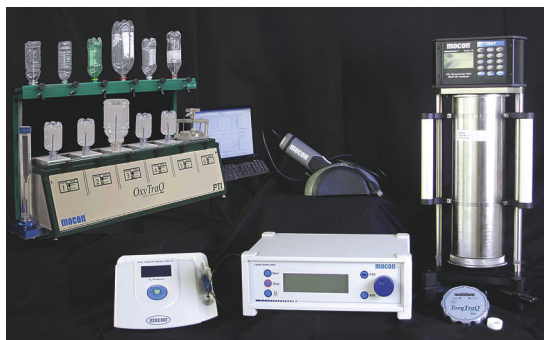
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As the world's largest supplier of OEM print engines, SATO continues to manufacture print engines that set the standard of operation for the print/apply industry. Designed especially for integration to the markets most reliable print/apply systems, each engine provides reliable performance day in day out for the most demanding, high duty-cycle applications around the world. When reliability and performance are a must, demand your print & apply vendor uses SATO OEM print engines. Visit www.satoamerica.com/demand_SATO for greater detail.



Beverage instrumentation Beverage-instrumentation products address a broad spectrum of beverage package shelf-life concerns for both rigid and flexible packages, the co. states. Among the beverage products is the OpTech-02® Platinum, an oxygen analyzer using a fluorescence-based system for measuring total package integrity for both rigid and flexible beverage packages. The platinum "fluoresces," or gives off light in an amount directly related to the amount of oxygen present in a package. The fluorescence can be read optically, making it suitable for nondestructive permeation analysis, headspace and leak determination.

MOCON Inc., 763/493-6370. www.mocon.com



Temperature controllers Zelio® control and measurement relay products include the REG Series of temperature controllers and accessories for temperature regulation in heating and refrigeration applications. The controllers can interface with solid-state relays, electromechanical relays, PLCs, variable-speed drives and HMI displays. They're also designed to automatically control the temperature at multiple points during the manufacturing process. This control enables the execution of critical processes, such as the creation of complex recipes in the food and beverage industry or exact solder temperatures control in electronics assembly. Three industry-standard formats are available: 24x48-, 48x48- and 96x48 mm.

Schneider Electric, 888/778-2733.
www.schneider-electric.us



www.satoamerica.com

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Pharma cartoner The Stealth II continuous-motion pharmaceutical cartoner offers flexibility, with predesigned infeed solutions that accommodate the handling of tubes, vials, bottles and pouches, as well as literature insertion, at speeds up to 400 packages/min. Reducing maintenance while providing greater accuracy, the servo-based design features an easily loadable, ergonomic, powered carton magazine as well as a standard carton pre-break feature that eliminates setup failure. Walk-in access for cleaning, servicing and quick changeover is afforded by a patent-pending guarding scheme.

MGS Machine, 763/425-8808.

www.mgsmachine.com



Handle applicator A

continuous-motion, multipurpose handle applicator runs 60 cycles/min and utilizes 5-axis Fanuc robots to apply TwinPak handles. The machine also features robotic arms and heads that allow for flexibility in application and can apply TwinPak handles to every other case. An integrated vision system identifies position, orientation and speed of incoming product and feeds the information to the robot arms, which adjust to the location of each case. If a case is askew, the robotic arm senses it and rotates accordingly.

PakTech, 541/461-5000.

www.paktech-opi.com



Filler/sealer Models SP-64

and SP-160 filling/sealing machines feature long-reach, positive shutoff spouts with adjustable blow-off features to maintain clean seal zones and accurate fills. The models 2P-64 and 3P-32 are used over horizontal vacuum formers and feature positive shutoff spouts and additional options such as agitated hoppers, diving spouts, traveling spouts and heated or cooled machines.

Hinds-Bock Corp., 877/292-5715.

www.hinds-bock.com



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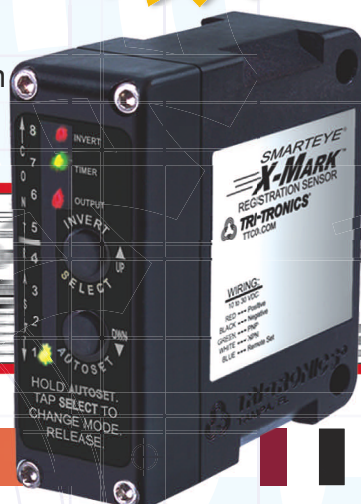
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new products materials

Smart & Secure Packaging

Thermochromic ink Thermochromic ink changes color to indicate when a beverage inside a container has reached its ideal temperature for consumption. The ink is spot-applied to packaging label graphics, helping specific design elements emerge as the temperature of a container decreases. At room temperature, the ink is colorless, but when chilled, can appear as several different colors including blue, green, red and black. The ink can be customized to the temperature requirements of individual beverages, ranging between 43 and 46 deg F. Most recently utilized by Molson Canada on its 12- and 16-oz cans of Coors Light, the thermochromic ink technology transforms the Coor package's white snow-capped mountains to a deep shade of blue to indicate when the beer is "as cold as the Rockies."

Crown Holdings Inc., 215/698-5289. www.crowncork.com



Covert marker technology

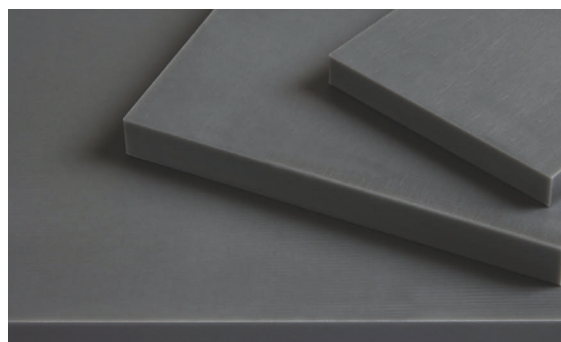
The Food and Drug Administration issued draft guidance on July 13, 2009, covering the use of inks, pigments, flavors and other physical-

chemical identifiers (PCIDs) by manufacturers to make drug products more difficult to duplicate by counterfeiters and to make it easier to identify the genuine version of the drug. The mark® On-Dose ID covert marker technology is a PCID that has been designed for application to solid oral-dose drug products. The draft guidance outlines regulatory filing requirements (NDA, ANDA and post-approval) for usage of the co.'s product markers for unit-level, on-dose authentication of solid oral-dose pharmaceuticals for the prevention of counterfeiting.

ARmark Authentication Technologies, 717/227-5920. www.rmark.org

Thermoplastic Tectaform AH ID is the first stock-shaped thermoplastic that can be easily and quickly detected if equipment failure causes pieces of material to mix with food products during production runs, the co. states. The thermoplastic contains an additive that enables it to be more readily detected in the event of an equipment failure. Can be detected using standard metal detection equipment during routine quality inspection procedures. The grey acetal is easily and quickly detected by metal detectors, enabling prompt quality assurance and minimizing potentially costly quarantines and recalls. The product also is FDA compliant.

Ensinger, 800/243-3221. www.ensinger-online.com



Covert markers IntelliMark is a product-identification system that provides brand authentication through microscopic markers embedded in products such as consumer merchandise, secure documents, food and apparel. The markers, about the width of a single hair, can be seen and identified using the co.'s IdentifyIRT and IlluminatiIRT instruments. The covert markers allow for several levels of hidden security and the ability to verify contents, monitor environmental conditions and identify origin in case of contamination or counterfeiting. The product has already been successfully deployed in the pharmaceutical industry for chemical verification of drug content in branded consumer drugs.

Smiths Detection, 973/830-2131. www.smithsdetection.com



Steam valve A new steam valve has a proprietary design that provides a hermetic seal when applied over a pre-cut hole in flexible packaging or film lidding. During the cooking process, the valve opens at a predetermined temperature and allows steam to escape by exposing the structure's slit or perforated baffle layer. The co. claims that the valve can be used in both microwave and conventional oven applications.

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www.averydennison.com

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Schreiner MediPharm, 845/848-9000. www.schreiner-medipharma.com



Cold-chain packaging

Instapak® TempGuard™ cold-chain packaging is a high-performance solution suitable for keeping temperature-sensitive products safe during shipment. Because the PU foam is proven to insulate better than EPS, products can be kept colder for longer. The co. reports that the packaging is an alternative to next-day shipping and other shipping services. Insulation performance can also mean using fewer gel packs or less dry ice, further reducing material and freight costs.

Sealed Air, 800/648-9093.

www.sealedairprotects.com

Anti-counterfeiting system

Track & Trace is a system that serializes pharmaceutical products with 2D bar codes, RFID technology or customized codes to prevent counterfeiting and ensure that every step of the packaging process can be verified at a later stage. With the system, a code is applied to a package via laser, ink-jet or RFID technology and includes a unique serial number and other encoded data such as the batch number and expiration date. The co.'s VisioTec camera verifies and scans the information and stores it in the co.'s tracking database. This allows production data such as sealing pressure, sealing temperature, type of forming material, forming material batch and inspection camera results to be integrated on each blister for an added measure of process reliability, the co. states.

Uhlmann Packaging Systems, 973/402-8855.

www.uhlmannpackaging.com



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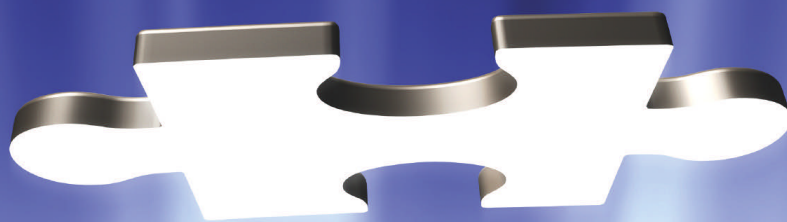
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sustainability

As systems thinking permeates the discourse on how to evaluate environmental benefits, we run into potential conflicts between optimizing subsystems versus the need to optimize the total system. This comes into play with packaging, as stakeholders can be focused on specific materials or parts of the supply chain, rather than addressing the limitations of our packaging and recovery systems as a whole.

As the Sustainable Packaging Coalition

the general public continues to ask where they can recycle a “cardboard box.” A consumer might understand “milk jug” but an engineer works with “HDPE,” and recyclers want “#2 bottles.” How can we ensure we are recovering as much packaging material as



Language across the supply/recovery chain

has worked with our member companies and other stakeholders, we have continually heard the feedback that communication needs to improve throughout the packaging supply chain if we are truly to develop more sustainable packaging systems. One of the barriers to this communication has been a language gap: Quite simply, a recycler speaks a different language than a consumer or a packaging engineer, and as a result, all understand less about the limitations and opportunities of each other's role. For example, while an engineer speaks about corrugated board, a recycler refers to OCC and

possible when our vocabularies are so different?

GreenBlue recently took on this issue by developing *A Guide to Packaging Material Flows and Terminology*, which provides a common framework for communication along the supply chain, including a glossary of major packaging materials. The guide also includes graphic representations of the flow of different packaging materials through production, use, collection, sorting and disposal/recovery. The graphics dramatically reveal how far we have to go to close the loop for effective recovery systems.

In the U.S., our recycling system has

new products materials

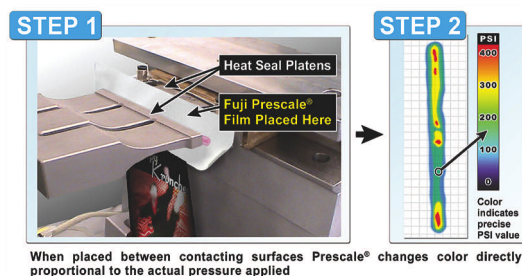
Temperature-activated labels Using temperature-activated inks, the co. is able to produce in-mold labels that change color when activated by hot, cold or touch through body heat. These labels are said to effectively withstand the high temperatures of the in-mold labeling process. Thermochromic ink, used in place of standard ink on-press, changes from white to a designated color once activated. Can be used for novelty/marketing purposes and practical/safety purposes. Several color change options and custom colors are available.

Inland Label & Marketing Services, 608/788-5800.
www.inlandlabel.com



Reuse program The AcuTemp REPAQ™ (Reusable Enviro-friendly Program Assuring Quality) is a reuse program for the line of AcuTemp insulated shipping boxes. The program helps foster environmental responsibility by reducing landfill waste and ensuring thermal integrity of passive shippers for multiple uses, the co. states. Qualified shippers are returned to the company's manufacturing and processing facility by end users via a prepaid shipping label. All shippers go through a visual inspection, and any obviously damaged components are replaced. After cleaning, the thermal components of the box, tracked by customer and serial number, are retested to original specifications to confirm the thermal performance before being returned to service.

AcuTemp Thermal Systems, 937/312-0114. www.acutemp.com



Sensor film Prescale® is a tactile pressure indicating sensor film that instantaneously reveals pressure magnitude and distribution between mating rollers of any material, including rubber, steel and composite. Because the film is thin and flexible, it's able to conform to the curved surfaces of rollers. The application of force causes the microcapsules in the film's coating to rupture and permanently change color, producing a high

resolution map of pressure variation. The variations of color are quantifiable and directly proportional to the actual pressure applied. The film is fast, accurate and cost-effective. No training or instrumentation is required.

Fujifilm, 800/446-5450. www.fujifilm.com

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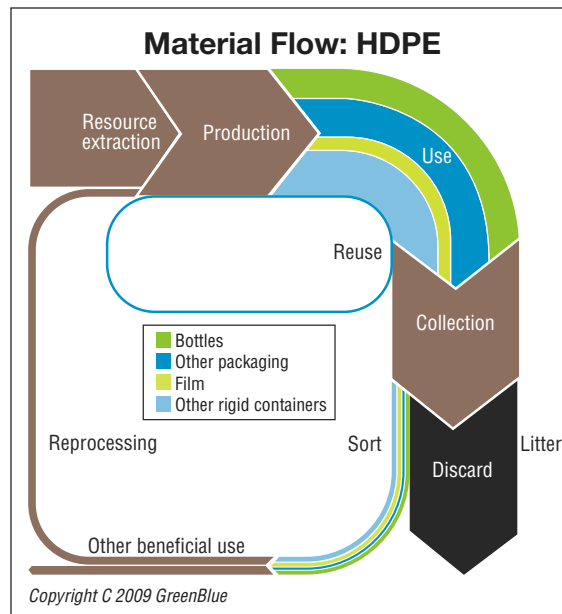
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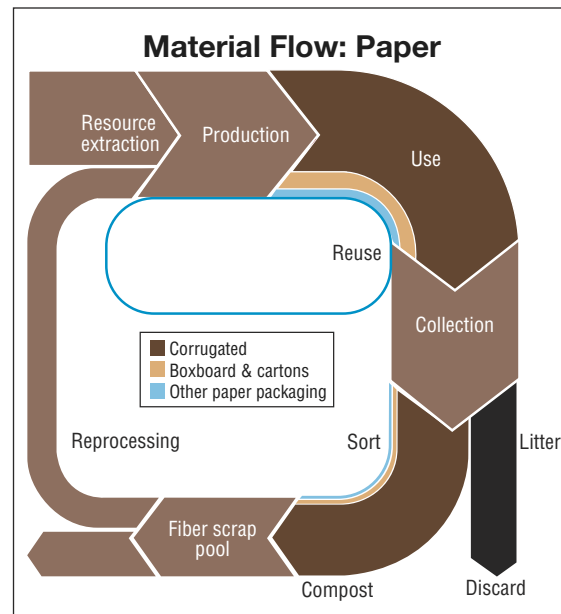
been built on the development of independent, material-based subsystems like the collection and recovery of aluminum or the collection and recovery of plastic or glass. Even within materials, we often find even more specific subsystems focused around certain shapes or applications, such as PET bottles, but not PET clamshells.

This fragmented recovery approach makes it difficult to adjust to collecting new shapes, colors or materials (including organic waste) at a meaningful scale. The inflexibility reinforces our default action of sending all materials that do not currently have well-established end markets to a landfill.

The fragmented recycling system is just one piece in a patchwork waste-management system, including composting, that's not well-coordinated or consistent from one locality to another.



Consensus seems to be growing that we need to improve material recovery rates in the U.S. There's recognition that our piecemeal approach to recycling isn't effective, and we need to look to more integrated and comprehensive systems of materials recovery, as exemplified by the impressive results of some of the extended producer responsibility systems seen in Europe. We see a shift away from waste management toward



resource management and more systemic thinking.

The recovery end of the packaging supply chain is every bit as complex as the production side of the value chain, and perhaps even more so, as it requires active public participation and a blend of the public and private entities working across a variety of materials. If we want to improve recovery, there needs to be better coordination between the various part of the value chain.

We hope the guide (available at www.greenblue.org/resources_documents.html) will be a first step in enabling better communication along the packaging and recovery value chains.

Anne Johnson is the director of the Sustainable Packaging Coalition, a project of GreenBlue (www.greenblue.org). For additional information, email info@sustainablepackaging.org.



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In fact, NatureFlex™ is one of the few packaging materials that meets the three components of sustainability cradle to grave: **sustainable source, carbon-zero and biodegradable/compostable disposal**. What's more, the products provide long-shelf life, easy opening, superior oxygen barrier & the lowest moisture transmission rate of any cellulose-based product on the market.

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Green is ingrained in packaging

Results of the 2009 **SUSTAINABILITY IN PACKAGING** study affirm the growing awareness of sustainability and the influential role this issue plays in packaging decisions.

John Kalkowski, Editorial Director

Sustainability has been a primary consideration in the packaging industry the last several years, and its influence continues to grow, according to the third annual Sustainability in Packaging study sponsored by *Packaging Digest* and the Sustainable Packaging Coalition (SPC).

Not surprisingly, data show that sustainability awareness among packagers has reached new highs in 2009, with 41 percent of the survey's 1,012 respondents saying they are very familiar with the issues of sustainability versus 21 percent in the original 2007 survey.

The emphasis on sustainable packaging has increased in the last year, according to 68 percent of respondents, while only 4 percent say they've seen a decrease in emphasis. The fact that the number of survey participants topped 1,000 for the third consecutive time is another indicator of the high interest in sustainability among those working in packaging-related jobs.

Nearly nine out of 10 survey participants say that sustainable design has become a consideration in packaging-design decisions, although just 21 percent say it is a very important factor.

However, customers clearly drive companies' sustainable activities, as nearly

were asked to identify corporate leaders on environmental issues. Although participants identified more than 100 companies with environmental leadership qualities, Procter & Gamble was the only company beside Walmart to garner more than 100 mentions.

Companies do expect a return on their investments in sustainable activities, according to 57 percent of respondents, up slightly from 53 percent in 2008. However, those who expect that payback in less than one year jumped to 13 percent of those in the study, up from 5 percent the previous year.

Few setting out policies

In 2009, only 21 percent of respondents say their companies have formal, written policies on sustainability, while another 22 percent say the companies have informal, unwritten guidelines and 28 percent have none at all. The most common guidelines included in these policies are recycled content specifications, bans or limits on specific material usage and new design guidelines. Still, 53 percent said their business has no measurement tool in place to evaluate performance or track the progress of company sustainability activities.

When asked what developments are most needed to achieve their company goals, 51 percent of participants cited better, new

materials and improved education and training. Better collection and recovery methods, which received the most mentions in 2008, slipped to 41 percent of the vote from 49 percent. The use of recycled or recyclable materials were listed as high priorities among respondents' companies. In addition, 59

percent say that the use of recycled materials is the primary criterium their companies use to evaluate sustainable packaging.

The following pages chart key survey results, and a sample of responses to two sustainability questions facing packagers. For further explanation of the Sustainability in Packaging study, watch for registration information on www.packagingdigest.com for a webcast to be held in December.

Continued on page 24

Perceived corporate leaders in sustainable practices

(Based on mentions by survey participants)

| Retailers | Votes | Consumer products | Votes | Machinery/materials suppliers | Votes |
|-------------|-------|-------------------|-------|-------------------------------|-------|
| Walmart | 441 | Procter & Gamble | 105 | NatureWorks | 20 |
| Whole Foods | 47 | Johnson & Johnson | 30 | General Electric | 11 |
| Target | 36 | S.C. Johnson | 25 | Dow Chemical/DuPont | 10 |

two-thirds of respondents say their customer's voice—be it retailers or actual consumers—is what has the most impact on how they pursue sustainability. However, nearly half of those answering the survey claim that fewer than 10 percent of their customers are actually requiring packaging that has sustainable characteristics.

As the chart above indicates, Walmart, with 441 mentions, has had the most impact on sustainability when respondents

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The 1000 Line now offers (3) models: the Videojet 1610 for high speed applications, the Videojet 1510 designed to meet most printing requirements and the Videojet 1210 for basic coding needs.



Participant Profile

(1,012 respondents)

Company's primary activity

| | 2007 | 2008 | 2009 |
|-------------------------|------|------|------|
| Consumer packaged goods | 21% | 25% | 28% |
| Material manufacturer | 17% | 15% | 15% |
| Converter | 13% | 12% | 14% |
| Machinery manufacturer | 7% | 9% | 6% |
| Packaging services | 5% | 6% | 9% |
| Retailer | 4% | 3% | 5% |

Type of products packaged

| | |
|-----------------------------|-----|
| Food | 46% |
| Beverages | 29% |
| Household products | 28% |
| Personal care/cosmetics | 27% |
| Pharmaceutical/OTC | 26% |
| Medical devices/supplies | 18% |
| Petfood/petcare | 15% |
| Electronics | 14% |
| Large retail | 12% |
| Office products/supplies | 11% |
| Media (music, movies, etc.) | 7% |
| Other | 22% |

Location of company HQ

| | |
|------------------|-----|
| North America | 80% |
| Europe | 10% |
| Asia | 3% |
| Canada or Mexico | 3% |
| Latin America | 1% |
| Other | 3% |

Number of employees

| | |
|---------------|-----|
| 1,000 or more | 43% |
| 500 – 999 | 8% |
| 250 – 499 | 9% |
| 100 – 249 | 11% |
| 20 – 99 | 15% |
| Under 20 | 13% |

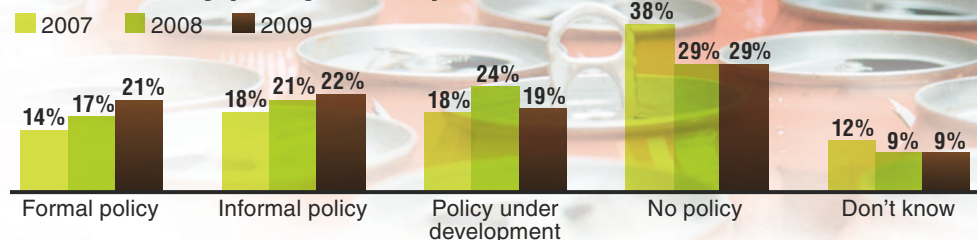
Respondent's role within company

| | |
|------------------------|-----|
| Corporate | 23% |
| Engineering | 18% |
| Marketing/sales | 18% |
| Research & development | 13% |
| Packaging design | 11% |
| Purchasing | 9% |
| Sustainability | 2% |
| Other | 7% |

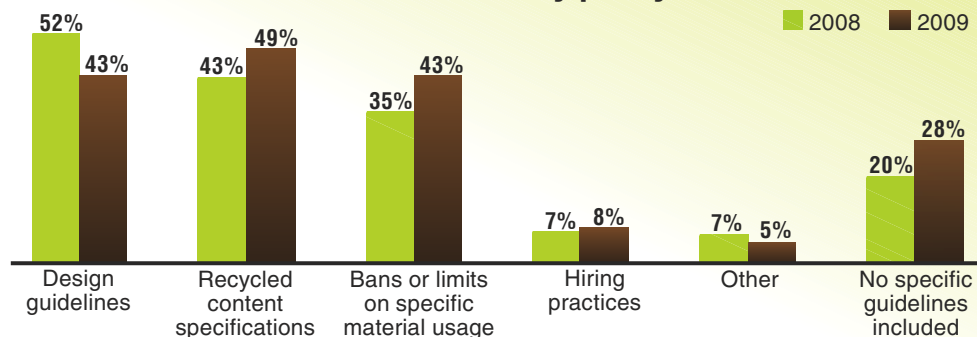
Years of experience

| | |
|---------------|-----|
| 20 years + | 42% |
| 11 – 20 years | 25% |
| 6 – 10 years | 15% |
| 3 – 5 years | 12% |
| 1 – 2 years | 6% |

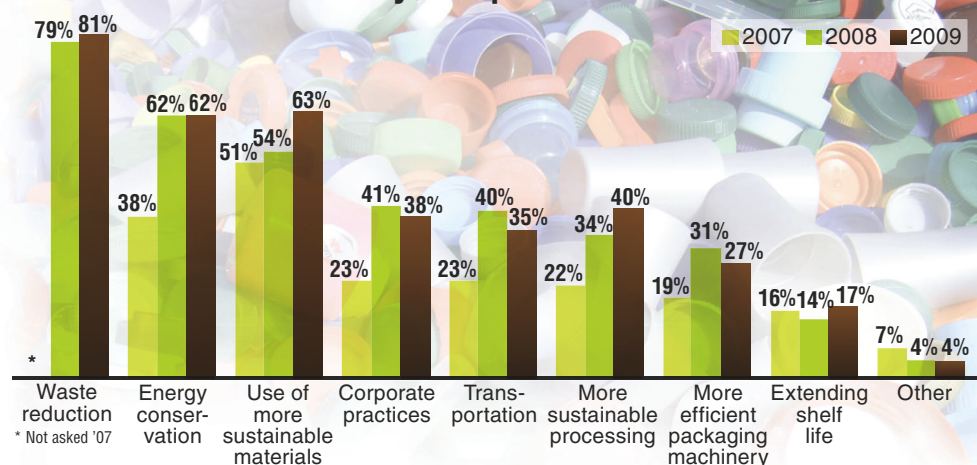
Sustainability policy development



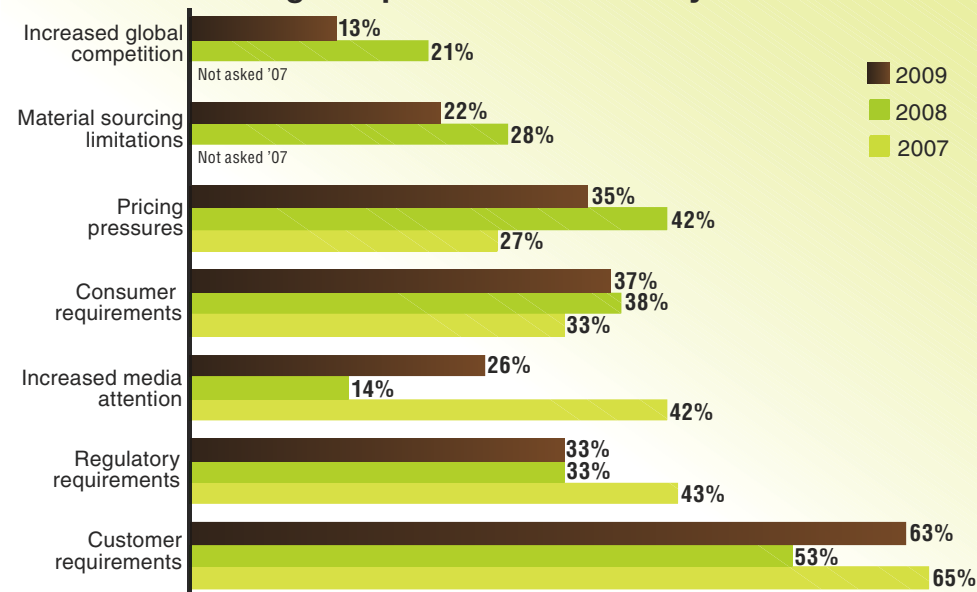
Guidelines included in sustainability policy



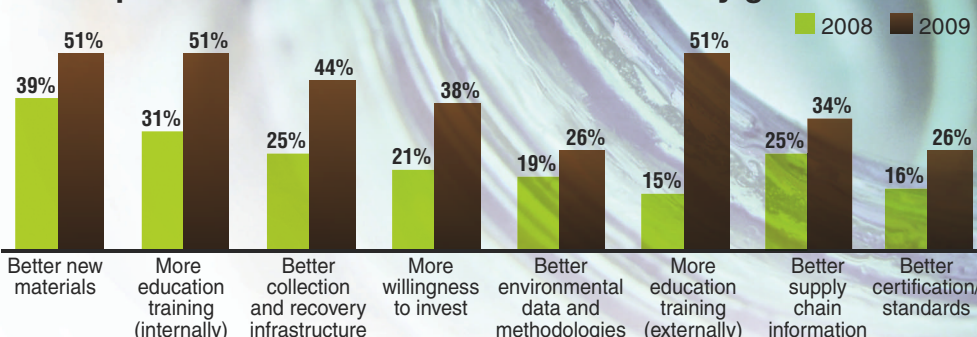
Areas where sustainability is implemented



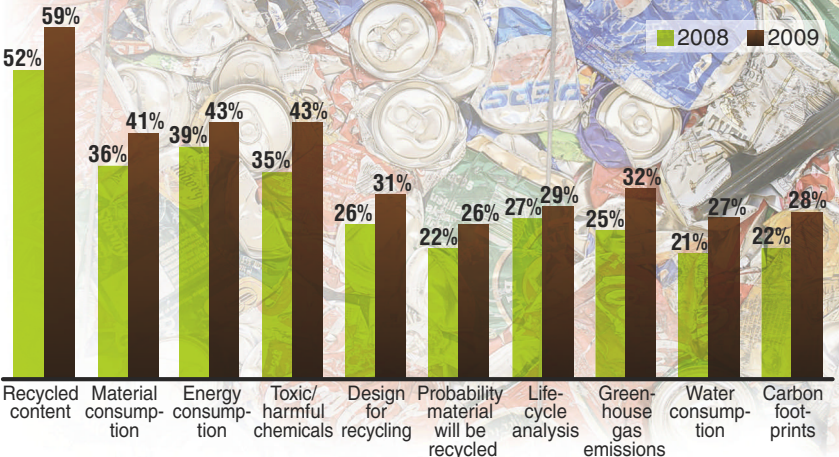
Factors influencing companies' sustainability activities



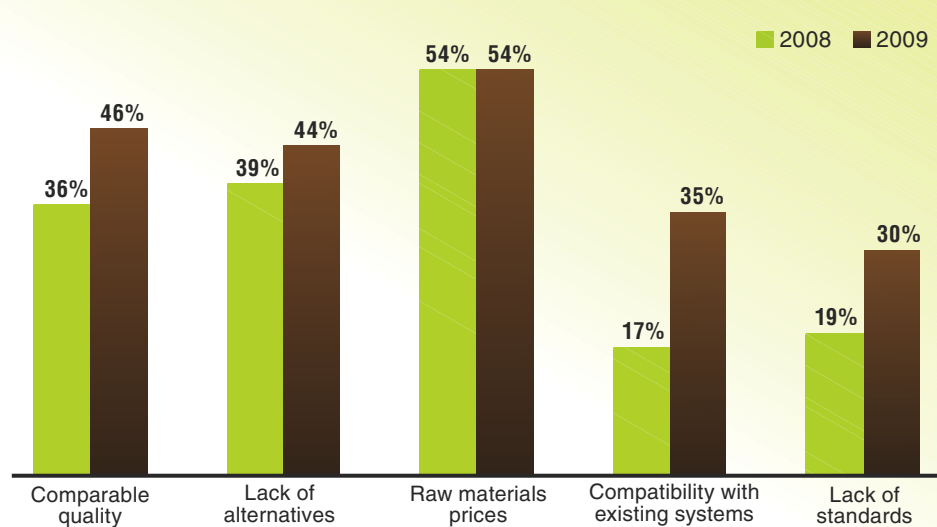
Developments needed to achieve sustainability goals



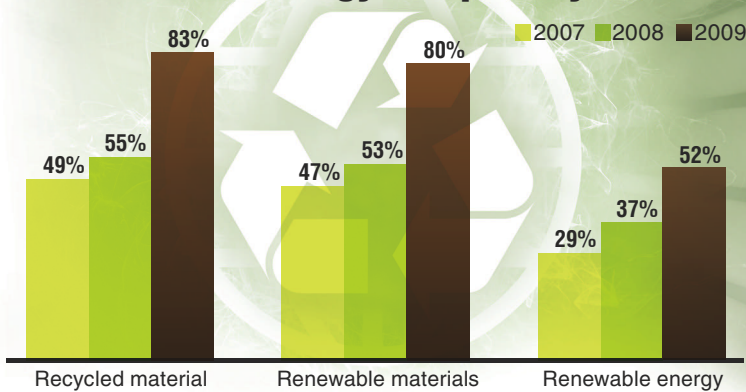
Criteria used to evaluate sustainable packaging



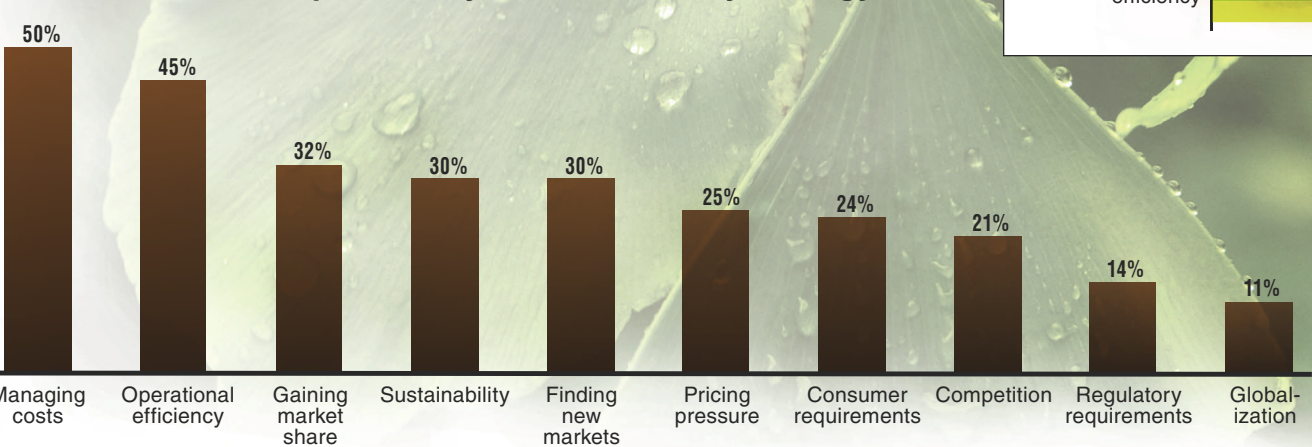
Top 5 challenges to making processes sustainable



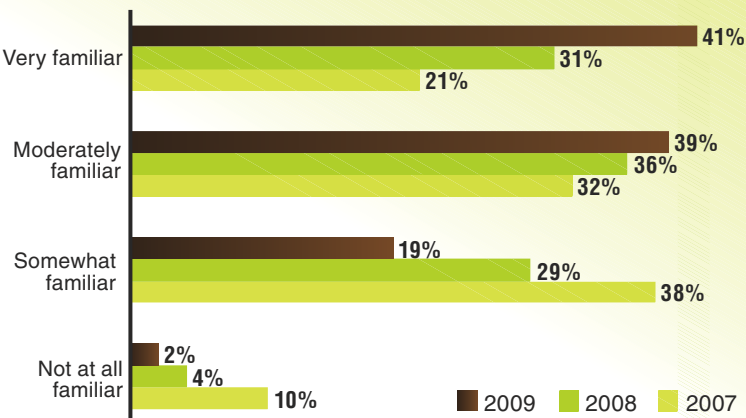
Percent saying sustainable usage of materials and energy is a priority



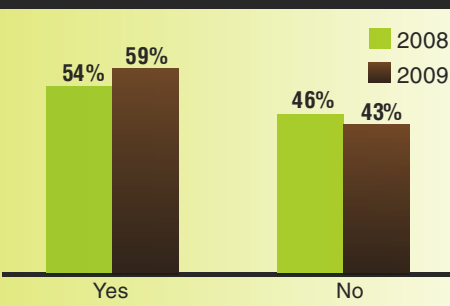
Business factors' impact on 5-year sustainability strategy



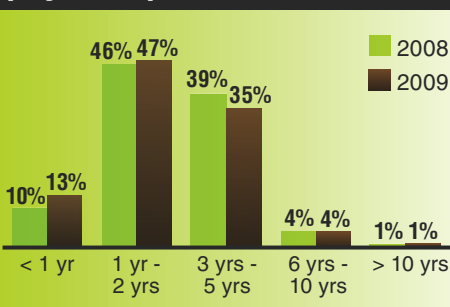
Familiarity with sustainability issues



Company expectations for return on investment



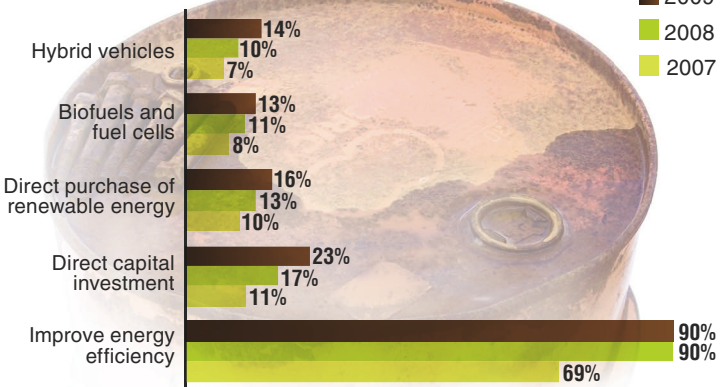
Expected ROI payback period



320 persons or 29 percent of respondents to the survey represent consumer packaged goods companies.

Nine out of 10 respondents say a company's environmental position affects their personal purchases.

Methods companies use to reduce usage of fossil fuels



Greenwashing is the deceptive use of marketing by companies to spin their products and policies as environmentally friendly.

You responded: Has 'greenwashing' affected consumers' views of your company's sustainability efforts?

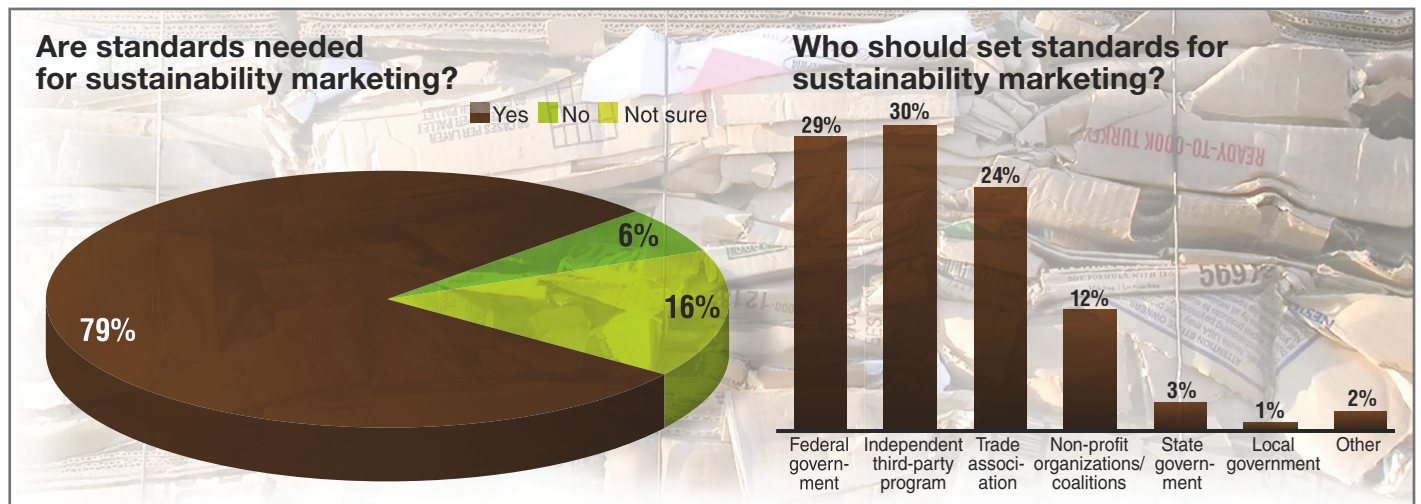
"You need to **provide proof of sustainability** to the consumer to counteract the doubts consumers have developed due to greenwashing."

"Any 'green' claims our company makes are accurate. Most of our customers **don't know what greenwashing is.**"

"The fine line between recycled and recyclable frustrates my customers. No one has really challenged our own efforts, but we are careful, **keeping in mind FTC guidelines.**"

"Companies that use greenwashing **steal the focus** from more sustainable practices."

"Just saying a product has some components of sustainability **dilutes the message** for those people who truly have strived for improvement."



"Competitors **greatly exaggerate**, and we look like we are behind the curve because we are relying on facts."

"Baby steps toward **'green'** are positive. However, they need to be **tempered by reality.**"

"I am not familiar with this particular term. I do believe that producers of retail goods are **misusing 'green' to lure buyers**, just like "organic" and "natural".

"There are **no clear metrics**, so people are unsure of what to believe."

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You responded:

Should packaging be legislated to minimize environmental impact or can industry effectively regulate itself?

"If we can't get the message ourselves that the **planet is being destroyed**, no form of government will be able to regulate it."

I don't trust self regulation; someone will usually look to **sneak around it.**"

"Absolutely no legislation. If you want to really screw something up, just let the **government** get involved!"

"Direction from **non-involved parties** is what causes the issues in the first place."

"Industry self-regulate in favor of anything except the bottom line? **Yeah right!** Legislation is probably a better idea."

"Self-regulation is always hard, especially given the economic environment today. But an imposed legislation will probably **handicap many companies.**"

"Government legislation is absolutely necessary to have **an effect on everyone in the industry.**"

"As we've seen with dozens of industries, **self-regulation does not work.** Therefore, legislation is, unfortunately, necessary."

"An association of some type needs to **outline the standards** by which companies should measure themselves, allowing us to gain credibility."

"General parameters and incentives can be legislated; details should be left to each sector's advisory group."

"I think some government involvement is needed, **especially on the recovery side.** We need a lot more recycling, composting, energy recovery going on in this country."

"No legislation without **level playing fields** with Chinese imports."

"Consumers and retailers will drive the shift to sustainable packaging."

"Industry should set some targets and a timeline to achieve them. **If we can't do it ourselves,** then government regulation is warranted."



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Sustainable standout

Kraft lightens up the packaging for its Crystal Light drink mixes and gains **SHELF APPEAL AND ECO-BENEFITS.**

Linda Casey, Associate Editor

Kraft Foods recently trimmed its Crystal Light packaging to create a more modern, sleek package that also is more environmentally friendly. Visual changes to the packaging include a new Crystal Light logo and a transparent window that allows consumers to view product inside.

The brand's modern look is carried through to the stick-packs inside, which replace the previous foil-covered tub format. The packaging updates from canisters to stick-packs combine to offer significant material savings for the brand to the tune of 250 tons less packaging each year.

The updated packaging is available nationwide now with a suggested retail price of \$3.29 for the 8-qt size and \$4.59 for the 10- or 12-qt size.

PD caught up with Nicole Tom, a packaging engineer in the research and development department that supports Kraft's powdered beverage brands such as Kool-Aid, Country Time, Tang and, of course, Crystal Light. She shared insights into her role at Kraft, the company's sustainability philosophy, Kraft's research and development practices, and details about the Crystal Light redesign project.

Packaging Digest: What is your role at Kraft Foods?

A big part of my job is to start with consumer insights and then apply packaging industry

technologies to develop new packages or improve on existing designs to meet the needs of our consumers. This, of course, also helps us meet our business goals.

As a packaging engineer, I also develop specifications and test packages to be sure our product is contained and protected during distribution. Additionally, I take the lead in qualifying and commercializing new packages in our manufacturing plants. And, of course, at Kraft



The new canister's footprint allows for a 33 percent more efficient pallet, which we expect will result in greater outbound transportation efficiency.

Nicole Tom, packaging engineer, R&D at Kraft Foods

we're always working with our cross-functional colleagues (for example, those who work in marketing, sales, operations) to be sure a quality product—and one that meets our consumers' needs—is the result.

How did Kraft approach the packaging-development process for Crystal Light?

We first reached out to our consumers to get a better sense of their needs. And, just as important,

we thought about our customers' requirements and how Crystal Light can be better for the environment.

Here's a breakdown of our goals and the results:

- The new package had to be better for the consumer. It is. The new packets are easier to open and pour than the current packaging; the new look is tremendously appealing on shelf; and, the canister shape is eye-catching, slender and feminine as well as unusual.

- It's also better for the customer. The new footprint reduces clutter on-shelf and it improves shopability—there's less potential for the face panel to turn so the consumer isn't able to find her favorite flavor.

- And, of course, it's better for the environment.

Why did Kraft redesign the packaging for Crystal Light?

We wanted to make Crystal Light stand out on

supermarket shelves—to call out to our consumers. And, we definitely think the new package does that. When you see a display of several flavors side-by-side, there's this great wave of color. And it doesn't just look more contemporary—it's more functional, which appeals to an even broader group of consumers. Of course, the redesign also was driven by sustainability opportunities to reduce packaging material and increase transportation efficiencies.

Does Kraft have an established, formal sustainability policy?

As a food and beverage company, we depend on the earth's ability to produce raw materials to

than previously. And, the new canister's footprint allows for a 33-percent more efficient pallet, which we expect will result in greater outbound transportation efficiency.

Does Kraft view sustainability as an environmental or an economic issue?

We see sustainability as an environmental, economic and a social issue. Reducing the use of water and energy as well as the packaging we produce plays a critical role in the long-term success of our business. Our retail customers want to partner with businesses that support sustainability and our consumers want to know they're buying



Comparing finished cases, the new packaging uses 250 tons less material than the previous packaging.

make our products. Our approach is to meet the needs of the present while being mindful of the future. We are committed to reducing the environmental impact of our activities and promoting the sustainability of the natural resources we depend on, while delivering quality products to our consumers.

Our vision is to make sustainability part of every business decision at Kraft. And by doing so, we can build a better community, a better lifestyle and a better world for the future.

How did you measure sustainability improvements for the Crystal Light redesign?

We measured the improvements in pounds of packaging material reduction and in terms of shipping efficiencies. Comparing finished cases, the new packaging uses 250 tons less material

from a company that cares about the environment.

How long did the Crystal Light redesign project take? And what were some of the challenges?

The redesign was done in stages over a few years.

As I mentioned previously, a major design principle was to reflect and relate to our core consumer with a feminine, modern and slender appeal. The challenge was to elevate the current Crystal Light canister to meet these needs, as well as making it more environmentally friendly.

The coupling of a unique shape and the design clarity of the canister presented some technical challenges during the molding process. There were a lot of variables to choose from when designing the outer shrink sleeve. But we also kept in mind protection of the package.

Continued on page 30

Window of opportunity

While the Crystal Light redesign project was ambitious in many technical aspects such as material selection to eliminate smiles or frowns on the new oval container to the precision engraving needed to gravure-print the vibrant graphics and text on the clean whites and the transparent film, the project's most difficult challenge, according to Printpack sales and marketing manager Paul Pritchett, was the timeline.

"Kraft had some pretty intense pressure to get this out in the market, and it required a lot of work on our part to be able to hit each of their deadlines with all the different steps that we had to get through," remarks Pritchett, whose company supplies the shrink sleeves for the new Crystal Light canisters. "Kraft had certain retail commitments to be in the market by certain dates. There were machine qualifications to go through, and they had to get efficient on their applicator line."

To add to this pressure, Printpack had only learned about the project in May 2008 at the International Sleeve Label Conference in Chicago. Taking advantage of the event's networking opportunities, Printpack met with two Kraft packaging engineers who were seeking to further their knowledge of shrink-sleeve labels for the project.

"We offered to share our knowledge about shrink materials and also to make some recommendations on the

sleeve applicator equipment based on their needs," recalls Pritchett. That offer of assistance eventually led to a meeting with one of the packaging engineers who would see the project to completion—Nicole Tom (see main article to learn more about Tom's role in the project).

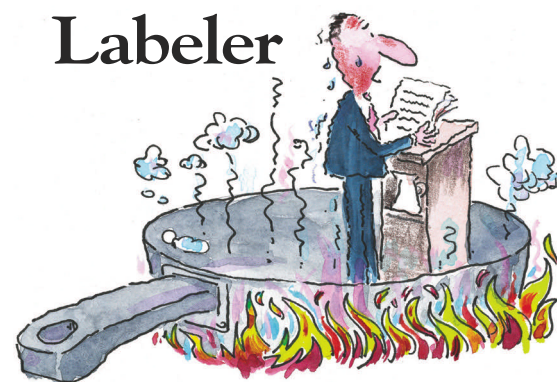
Also, the scope of the project was large. "There are 26 different labels representing 19 different flavors," Pritchett recalls. "All of them are printed in eight to 10 colors."

Additionally, Printpack needed to keep in mind that Kraft has a focus on sustainability on a worldwide level and that perceptions of sustainable materials differ across the globe. Pritchett explains, "There are some people who have negative environmental opinions of PVC, particularly in Asia and in Europe."

To help Kraft address the materials issue, Printpack suggested its Ultra Affinia™ PETG shrink sleeve. The sleeve material is designed to lay smooth, even on the indented oval canisters used for Crystal Light. "This particular film is special in that it grows 1 to 2 mil in the machine direction after you shrink it on. This eliminates smiles or frowns, and it gives a nice look on the shelf."

The converter had several prepress meetings with Kraft to ensure that the images wouldn't become distorted upon application. Printpack also provided several full graphic Continued on page 31

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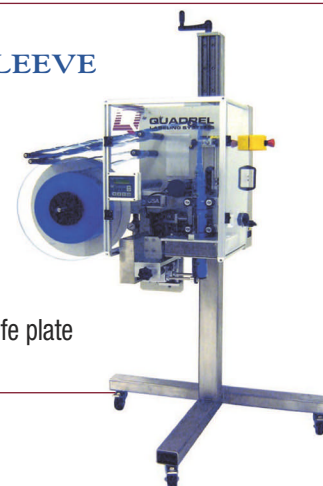
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The shrink sleeve we chose incorporates a tamper-evident band and the graphics. This new look also allows for shoppers to find their favorite flavor and to give a clean but colorful and arresting look on shelf.

Some of our customers put the finished tray on the shelf.

Designing the right count in the tray to meet the shelf dimensions and to meet an optimal pallet pattern

proposed some challenges. I'm happy to say that we were able to find the right tray configuration to not only meet the customers' needs, but also to gain pallet efficiency.

Is Kraft conducting the majority of its own packaging research and development, or are you optimizing resources from vendors to provide innovations?

In R&D, we make the best use of all the Kraft resources—here in our business unit, in our other research centers, even those outside of the U.S.—as well as the expertise of our suppliers and, when appropriate, we'll even reach out to other external experts. Part of my



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responsibility is to bring everyone together to see what works the best and results in the best possible product for our consumer.

How did Kraft determine who would be the internal and external team members for this project?

The combination of Kraft Foods' internal packaging expertise that is dedicated to the business unit, together with a group of valued external technical experts, allowed us to collaborate to deliver a quality product. Each project we undertake is supported with the right resources to ensure success.

We can't under-estimate the value of using packaging and graphics better for pallet displays.

Looking back at the Crystal Light redesign project, what do you consider the most significant take-away about designing sustainable packaging?

As much as you look to improve the sustainability impression of a package, you always have to begin with the needs of your consumer

Window

(cont. from p. 29)

mockups to Kraft. "To help Kraft's sales team sell the concept at retail, we did a lot of the mockups on very short notice—sometimes with a one- or two-day turnaround," Pritchett remarks.

In addition to the vibrantly colored fruit designs, the sleeve incorporates a mostly transparent area that serves as a window. Pritchett says that the window is an increasingly popular shrink-sleeve design element. "That's absolutely something that we've seen more of over the past several months, and I think it's something that we can expect to see more of in the future," says Pritchett. "There are a number of advantages to this: Consumers not only have an opportunity to see exactly what's inside before they buy the product but it also allows them, in this case, to see just how many sticks they have left once they get the package at home and in use. So when they're down to a couple sticks, they have a visual demand signal that lets them know they need to get out and buy another canister."

Printpack's Farmingdale, NY, converting facility printed fine-line text, which doesn't interfere with the consumer's ability to peer through the window, onto the mostly transparent area occupying the sleeve's lower quarter. The vibrant fruit-themed graphics and beverage "wave" is imaged immediately above the window. The newly designed logo is printed at the top front of the canister, but the sleeve continues over the top of the canister and the rim of its resealable closure.

To eliminate the need for a separate tamper-evident band, the shrink sleeve is perforated around the top of the canister and at a tear area to the upper right. "The ability to combine a full body label with a tamper-evident feature allows Kraft to take an entire packaging component [the tamper-evident band] out of play all together, which was a nice productivity and sustainability play on Kraft's part," Pritchett comments.

In addition to manufacturing an easily applied shrink sleeve, Printpack served as a consultant throughout the project—educating the project team at Kraft's Dover, DE, packaging plant and helping them avoid common pitfalls.

Essentially, the project provided two deliverables: A beautiful shrink sleeve for Kraft's Crystal Light brand; and a renewed customer training program, which helps educate operators and customers on shrink-sleeve essentials, for the converter.

More information is available:

**Printpack Inc., 404/460-7000.
www.printpack.com**

and what your customer requires. Our most significant takeaway is finding just the right balance, which we think we've accomplished with Crystal Light.

When looking at the beverage packaging market as a whole, what trends can you share with PD readers?

We're aware of a number of

trends. One, of course, is the need to be better for the environment, with a significant focus on reducing packaging weight.

There's also a lot of attention going to enhanced graphics, like the use of material finishes for consumer messaging or to give a more natural or organic look.

And, while there's a definite trend toward cleaner and simpler

looks, there's also a growing use of texture and attention-grabbing treatment in graphics.

And, we can't underestimate the value of using packaging and graphics better for pallet displays. I recently was shopping in a clubstore and noticed how the packaging that's integrated into trays or shippers makes the entire display pop out from the rest.



The increased pace and cost pressure on the building market heavily impacts the logistics requirements of all stakeholders along the supply chain. Cement and other building material producers are looking for new ways to streamline their logistics processes. **MONDI** has identified this need and compiled a service package to fit customer needs with regards to packaging.

Optimised logistics solutions adapted to changing market requirements



Mondi Advanced Logistics Services (MALS) offer state-of-the art AutoID technology including Radio Frequency Identification (RFID) supply chain tracking and Vendor Managed Inventory (VMI) solutions with complete data integration using a data exchange standard for optimised compatibility. "These logistics services enable our customers to easily and accurately plan their production," says Christian Anselmi, Head of RFID Solutions at Mond. "They benefit from the high delivery reliability and therefore can keep stock levels low and at the same time react quickly to changes in demand. Plants who have installed RFID or other AutoID devices can therefore better serve their own customers and at the same time save cost. Now, that's a real competitive advantage!"

But how does it work? RFID tags are affixed to a pallet of for example cement bags designated for a specific customer. The data concerning this pallet is registered into a tracking system and is automatically updated when the pallet is taken through an RFID gate at the customer's site. The customer has a precise and real-time overview of how many bags he has in his own stock and how many are still in stock at Mond. With VMI the customer does not need to think of re-ordering new bags when stock is low – Mond is fully responsible for maintaining the inventory levels at his site and will take care of replenishment orders according to a set forecasting program.

In 2005, Lafarge in Austria was the first customer to implement Mond's RFID pallet tracking at their plant in Mannersdorf. The successful pilot led to the installation of further systems in the Czech Republic, Slovakia and most recently at the Lafarge plant in Retznei, Austria, in July 2009. Heinrich Minarovits, Logistics Manager at Lafarge Austria, explains,

"With Mond's sophisticated logistics solution we can easily coordinate the consumption of cement bags and optimise our stock management. Mond's RFID Gate has proven itself as the best AutoID technology in this challenging industrial environment. Furthermore, Mond provides detailed sales reports and enables a hassle-free VMI process."



For more information, please visit www.mondigroup.com



Birds Eye wraps up carton source reduction

The food company's UK group **SLIMS CARTONS FOR FROZEN FOODS** by 54 tons/yr by using of an improved, coated board with enhanced stiffness, shipping durability and packaging-line machinability.



Lauren R. Hartman, Senior Editor

Back in the 1930s, Clarence Birdseye discovered how frozen food could taste as good as fresh. The secret, he discovered, was fast freezing. Today, Mr. Birdseye would probably be equally interested in keeping the packaging for his products environmentally friendly.

That's just what Birds Eye Foods' UK business, Birds Eye Ltd., London, is doing with a recent project that significantly saves on packaging weight of the cartons it uses to pack its frozen food products. Birds Eye top-loads and heat-seals the primary cartons of burgers, chicken sticks, chicken

"crisps and dippers," waffles, fish fillets and more in-house at its facilities in Lowestoft, England.

The company initiated a partnership with **WRAP (Waste & Resources Action Programme)** and **M-Real Consumer Packaging**, a Finnish fiber paperboard producer and supplier for consumer packaging, communications and advertising. WRAP was established in 2001 in response to the UK government's waste strategy to help businesses, individuals and local authorities promote sustainable waste management. Birds Eye is a WRAP Courtauld signatory and says it's committed to packaging and waste efficiencies.

WRAP acts as a not-for-profit company,

limited by guarantee by the UK's Department for Environment, Food and Rural Affairs (DEFRA), the Dept. of Trade and Industry (DTI), and the administrations of Scotland, Wales and Northern Ireland.

Serving brand owners, carton printers, converters, printing houses, merchants and office suppliers among others, M-Real met for preliminary discussions with Birds Eye several years ago about the frozen food-carton project.

Thin but strong

A key aspect of Birds Eye's project was to cut the weight of its paperboard frozen food cartons



An operator surveys a finishing system at the M-Real plant. Improved paperboard stiffness was key to the Birds Eye carton trial and to commercializing the results.

without a loss of stiffness or strength, which are both vital for maintaining efficiency on its packing lines, and avoiding carton damage in-transit.

Says Robert Geldard, head of European Packaging R&D for the Birds Eye iglo Group of companies that operate in several European jurisdictions and of which Birds Eye Ltd. is a part. "There's no inner packaging to these cartons," Geldard says. "This was the most straightforward approach we could take. We work closely with our carton and board suppliers to maintain continuous improvements in packaging design."

Birds Eye's total carton material usage in the UK of 3,500 ton per year has dropped by 54 tons (or 1.5 percent) as a result of the trials with WRAP and M-Real.

There was also a savings in carbon dioxide creation, from 135 to 210 tons as calculated by WRAP, which was basically achieved by the reduction in carton weight that the use of the M-Real's revitalized Simcote paperboard allowed. M-Real contributed to this source-reduction project following the rebuilding of its paper-production facilities in its Simpele Mill in Finland, which have improved the bulk and stiffness of its upgraded Simcote board, which allows customers like Birds Eye to realize improved packaging yields.

Explains Matthew Terry, technical services manager at M-Real UK, "The aim of WRAP is twofold. It promotes recycling wherever sensible, but it's actual target is to reduce the weight of household waste. Birds Eye had already optimized its raw materials before the trial, so dramatic savings in tonnage were not expected. But it did recognize the need to specify board by stiffness as a key indicator of a carton board's runnability on its packing line, and through the rest of the supply chain."



We're pleased that we are able to maintain progress on packaging-efficiency targets.

"Given that Birds Eye was previously using one of the stiffest boards on the market, (our Simcote grade prior to our [paper] mill's machine rebuild), a savings of

1.5 percent is excellent."

WRAP's report on the testing with Birds Eye's packaging concluded that the type and grade of carton Continued on page 34



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board used and its weight is a balance between the material and the operational efficiency of the actual cartoning line. This is particularly relevant when considering weight selection and paperboard stiffness.

The WRAP trial revealed that the board weight and stiffness have a direct effect on carton compression strength.

Birds Eye chose M-Real's new

Simcote primary fiber folding carton board grade GC2 in several different thicknesses depending on the product. The carton material is offset-printed in Kempton, Germany, by **VG Nicolaus GmbH** and in Belgium by VG Turnhout. In Lowestoft, the food products were cartoned at rates from 80 to 100/min on forming and closing machines from suppliers including **Kliklok-Woodman**.



Above, the paper mill in Finland was enhanced with 70 million Euros in new paper-machine equipment.

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The stiffness of the new carton board was maintained with new calendar technology.

Tighter tolerances

"There was no detrimental effect on the runnability of the carton itself," Terry tells *PD*. "The limiting factor in this case was the compression strength of the carton during transportation. In this case, we were competing against the earlier Simcote, one of the stiffest boards available. In general, both improving the stiffness and extremely tight industry tolerances have had significant benefits for our customers."

To create an improved Simcote material, as well as other materials, M-Real invested 70 million Euros, (\$102 million U.S.), to modernize its Simpele mill, including a new sheeting plant to improve its service, and installed new energy-saving equipment—a ValZone metal belt calender and a Power Dry Plus noncontact air dryer—both from **Metso Paper**. M-Real's Simpele mill manager Juha Kovanen reports that not only has the calendering equipment simplified the whole boardmaking process, but it has also increased production from 170,000 to 215,000 tons of board/year by removing process speed limits and bottlenecks.

New roll-feeding and winding equipment was also added, which Terry says helps preserve the coated carton board's surface properties and bulk.

"The increased stiffness of the Simcote grade was achieved with the use of new technology at the mill, perhaps most importantly the new Valzone calendar," he says.

"The calendar system enables us to increase the bulk and stiffness as well as tighten our tolerances. Although the upgrades and rebuild at the mill enabled us to improve



Upgrading the Simcote board in a lighter weight version involved trying to achieve the same type of durability and stiffness.

the Simcote yield by between five to nine percent, the weight savings made by Birds Eye were about 1.5 percent, due to limiting factors further down the supply chain, specifically carton compression strength,” explains Terry.

The upgrades simplified M-Real’s entire boardmaking process, he says, increasing production capacity and at the same time, enhancing surface properties of the board, which improves printability and increased control over the manufacturing process.

As a result of the trial, Birds Eye began having its commercial frozen food cartons made of the GC2 Simcote board and soon began marketing them. The cartons had to be sturdy, adds Geldard. “In Europe, we don’t use shipping cases to transport these cartons. We shrink film them in bundles. So stiffness and strength were important to maintain sufficient protection of the package contents. Quality control is crucial and is checked regularly in order to overcome variances that arise from differing raw-material tolerances.”

Adds Terry, “Other projects, outside of the WRAP project have also confirmed that the new Simcote grade of paperboard can achieve greater savings compared to competing materials, and even more when substituted for SBS or coated recycled board.

“Helping our customers realize potential cost savings, the changes

meant environmental benefits at all stages of the value chain and in a reduced amount of packaging to be disposed of at the end of its life,” Terry adds. Sums up Geldard, “We are pleased we are able to maintain progress on our packaging efficiency targets and have rolled out [the cartons] in our key factories. We are trialing other packaging to become more sustainable to continuously improve sustainable package design.”

More information is available:

M-Real USA Corp., 203/229-7482.
www.m-real.com
Kliklok-Woodman, 770/981-5200.
www.kliklok.com
Metso Paper USA, 256/764-4951.
www.metso.com
VG Nicolaus GmbH, 49 (0)831 7850.
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Pouches are fed into the rotary chiller by a belt conveyor, after which an internal auger moves them through the unit. The pouches are carefully turned over and massaged as they advance in the cylinder and are totally submersed in 33-deg F water, producing a consistent mix of the contents throughout the pouch. Heat transfer is uniform, eliminating pouch hot spots.

Cooling pouches through the "Danger Zone"

Pepe's Mexican Restaurants maintains critical **COOK-AND-CHILL TEMPERATURE LEVELS** at its central food production facility, utilizing state-of-the-art, continuous, rotary pouch-cooling technology.

Jack Mans, Plant Operations Editor

A unique system of automated, continuous pouch-chilling at Pepe's Inc., Chicago, enables the company to keep product moving through its facility at high volume and maintain zero-percent pouch damage while adhering to the strictest standards of USDA and FDA requirements.

With 60 full-service and quick-serve franchised Pepe's Mexican Restaurants and national distributors that supply universities, hospitals,

schools, corporate dining facilities and the U.S. military, Pepe's Inc. prepares, cooks, chills and freezes 3,000 to 4,000 lb of Mexican food products/hr to keep up with its customers' demands. Maintaining food-safety and quality-control standards throughout the entire processing cycle in this fast-moving facility is absolutely critical.

Established in 1967, this family-owned and

menudo, pollo en mol'e and guisados frijoles a la charra.

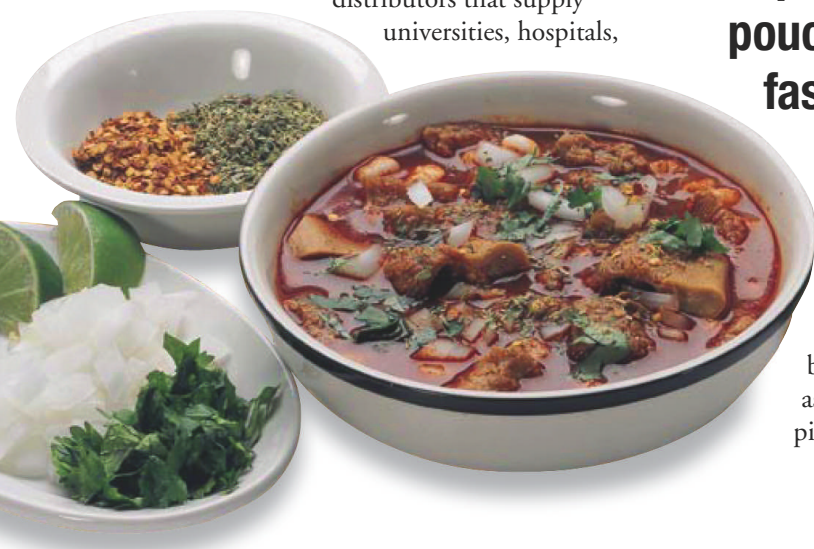
Aside from its many restaurants and far-flung institutional businesses, which extend nationwide, Pepe's also provides private-label food manufacturing. Every aspect of the company's business has been influenced by its family values for quality products and service to its customers.

Pepe's pouch cooler reduces the temperature of its five-lb pouches to below 40 deg F in 60 to 90 min, making it the fastest pouch-cooling system commercially available.

operated business has grown to become a famous chain of Mexican restaurants located throughout the Chicago area and northern Indiana. Pepe's Mexican Restaurants offers a broad selection of traditional favorites, such as tacos, burritos, tostadas and enchiladas, as well as authentic Mexican-style dishes, such as picadillos, pollo en salsa ranchera, carnitas,

Pouch production line

Pepe's says its production facility has specific guidelines and procedures to ensure product safety and integrity. These include the rapid chilling of product that has been cooked and hot-filled into pouches, an area of food production that is particularly beset with challenging temperature parameters, which if violated, can open the door to product contamination. Pepe's uses a pouch-chilling



system, called Chill-Flow™, that was developed by **Lyco Mfg.** (www.lycomfg.com).

From the very beginning, Pepe's has made all of the food for its restaurants in one location to keep a better grip on production costs, quality control and uniformity. Even in the restaurant's early days, the company utilized pouch technology for storing and transporting its products. The use of pouches is popular now, but 40 years ago they were not in mainstream use.

Pepe's would cook its products and pack them into pouches that were then chilled using cold, running water and ice. This process

Coming out of the chiller at a significantly reduced temperature that enables Pepe's to meet USDA guidelines, they are conveyed to a drying station and then put into boxes and palletized.

The boxes are stacked so there is approximately a 1-in. space on all sides to allow for cold air circulation. The boxes are then put into a blast freezer at 0 deg F where

the product is frozen. The pouches are kept in cold storage between 0 and 10 deg F until needed.

"Bacteria like to grow in the 'Danger Zone,' a temperature between 40 and 140 deg F," says Nalini Kamireddy, Pepe's quality assurance manager. During a commercial cooking process, like that at Pepe's, the raw ingredients pass from a chilled refrigerator,

which is at 40 deg F or lower, to a cooker, and are then heated past 140 deg F as quickly as possible to the final cooking temperature, thus minimizing the time that food products are kept in the Danger Zone. The same is true on the other end of the product line. The temperature is reduced as quickly as possible to below 40 deg F.

Continued on page 38

If the pouch is not manipulated in the cooling cycle, so that the hot product in the center of the pouch comes to the outside surface for exposure to the cooling medium, the inside product will remain hot.

took considerable time and was very labor-intensive. Pepe's would then freeze the pouches and ship them out to its restaurants, where they would be reheated and assembled into meals. Pepe's was cooking and freezing soups, stews, beans, rice and various sauces in this manner.

As volume increased, this system became impractical, and Pepe's researched more efficient means of chilling. Pepe's still follows a very similar production format today, but with much more sophisticated technology.

Critical temperature control

In its 65,000-sq-ft USDA-inspected facility, Pepe's cooks its products in 100 to 500-gal stainless-steel kettles at temperatures ranging from 190 to 220 deg F.

After cooking is completed, the products go to a filling station where they are packed into 5-lb plastic pouches. The pouches are mechanically sealed and are conveyed to a continuous chiller.

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Pouch agitation required

In pouch processing, however, there is more of a chance of bacteria multiplying at the cooling stage than at the heating stage, according to Kamireddy. If the pouch is taken out of the cooler at this point and put directly into a subzero freezer, the pouch will develop a layer of ice that not only retains the heat, but provides a perfect environment for bacteria to propagate.

"We have conducted and outsourced a significant body of research regarding pouch heating and cooling parameters in an effort to optimize our procedures," says Kamireddy.

In one of these tests on 5-lb pouches of Pepe's food products, the product was heated and a temperature probe was placed in each pouch. The pouches were then put in a wind-tunnel test chamber, where 100-mph winds brought the temperature down to -20 deg F.

After two hours, the outer half-inch of the pouches was frozen solid, but the inside of the pouches remained at more than 100 deg F for more than 12 hr. The outside half-inch of ice

that encapsulated the hot product acted as an insulator that kept the heat in.

Pepe's concluded that if the pouch is not manipulated in the cooling cycle, so that the hot product in the center of the pouch comes to the outside surface for exposure to the cooling medium, the inside product will remain hot. The company began to search for a system that would take its 5-lb pouches of hot product (32,000

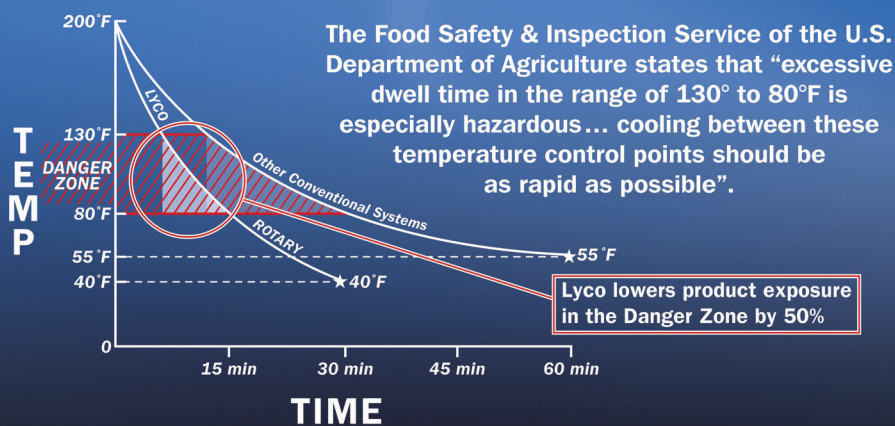
lb/day) and cool them from 200 deg F to below 40 deg F in a time-frame compliant with USDA and FDA standards. The USDA requires products to be cooled to less than 40 deg F within 6.5 hr.

Rotary chiller

"We began a search for a chiller that could handle our needs," Kamireddy explains. "Some systems utilized mechanized buckets. The pouches were placed into them and moved through a series of cold water showers that chilled them. We tested these, but because there was no agitation of the pouches, they were cold on the surface, but the inside remained warm. We also tested chilling systems utilizing -20 deg F propylene glycol. But without agitation, they did not cool the inside of these very dense pouches."

Pepe's finally selected the pouch-cooling solution developed by Lyco Mfg., a pioneer in the development of equipment for the heating, pasteurization and cooling of flexible pouches. Its pouch cooler continually and gently agitates each

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Pouches leaving the chiller are conveyed to a drying station, and then put into boxes and palletized. The boxes are stacked so there is approximately a 1-in. space on all sides to allow for cold-air circulation. They are then put into a blast freezer at 0 deg F where the product is frozen. The pouches are kept in cold storage between 0 and 10 deg F until needed.

pouch throughout the cooling process, producing a consistent mix of the contents throughout the pouch. Heat transfer is uniform, eliminating pouch hot spots.

The pouches are fed into the Chill-Flow machine by a belt

From the very beginning, Pepe's has made all of the food for its restaurants in one location to keep a better grip on production costs, quality control and uniformity.

conveyor. The machine utilizes a completely enclosed rotary-drum design, 6 ft in dia and 28 ft long, that functions like an auger. The drum has a perforated skin sheet wrapped around it that is fixed to the auger flights, eliminating pinch points. These flights gently move the pouches through the system.

The pouches are carefully turned over and massaged as they advance in the cylinder, while being totally submerged in 33 deg F water. Once through the machine, in a first-in/first-out sequence, the pouches are gently deposited on a belt conveyor for packaging and storage in the freezer.

Fastest cooling system

"Pepe's Chill-Flow pouch cooler reduces the temperature of its 5-lb pouches to below 40 deg F in 60

to 90 min, making it the fastest pouch-cooling system commercially available," says Kamireddy. It is 30-percent faster and 15-percent cooler than conventional belt systems, which can only cool to 55 deg F.

Pepe's pouch chiller provides consistent process parameters for temperatures and recipes, gentle product handling and automatic control of the pouch cooling. Product

damage is zero percent, which is significantly lower than what is typical with other chilling methods. Pepe's has run hundreds of thousands of pouches through the chiller with no bag failures caused by the system.

More information is available:

Lyco Mfg. Inc. 920/623-4152.

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All major U.S. sports leagues use holographic security, typically on a tag attached to the merchandise. The esthetics of the holograms themselves are increasingly important in these measures.

Holograms score for sports

Technology enjoys widespread **LABEL/TAGGING APPLICATIONS** in protecting licensed sports merchandise.

With licensed sports merchandise continuing to grow as a major revenue source for trademark owners, it has become an all-too-tempting target for counterfeiters. As unscrupulous vendors grow bolder and more sophisticated in their methods, security countermeasures must also keep pace in the ongoing war to protect intellectual property.

For this reason, sports merchandising licensors increasingly rely on hologram-based security tags. This technology can provide robust security at a relatively reasonable cost, for a wide range of applications. But the technology can also present significant pitfalls for the unwary.

The world's largest sporting events are the summer and winter Olympics and the Fédération Internationale de Football Association (FIFA) Football World Cup. Virtually every Olympics event since the Atlanta Games in 1996 has had its licensed product merchandise—from caps, T-shirts and tracksuits to books, programs, badges, bags, scarves and toys—protected and tracked with holographic technology.

Most recently among these was the Beijing Olympic Games, where visitors were advised that the best way to avoid counterfeits was to buy Olympic merchandise only at licensed stores. There, they were able to find inside the packaging of all of the licensed products an anti-counterfeiting label featuring a small security hologram attached to an official Olympic Games' emblem.

And this tradition, established in Atlanta more than 13 years ago, is to be carried forward at least until 2012 because the organizing committee of the London Olympics has indicated that all the merchandise on sale will be subject to anti-counterfeit tagging, which historically has been in the form of holograms affixed to labels or tags.

For the 2010 Winter Games in Vancouver, the

merchandise has recently gone on sale, complete with holographic security measures.

The official merchandise for that other great sporting occasion, the FIFA World Cup, will also continue to benefit from holographic technology. This was first used for the World Cup in 1998 in France, followed by the 2002 World Cup in Tokyo and Seoul and then in 2006 in Germany. The supplier to the latter, **De La Rue Holographics**, has recently been re-selected to provide protection for the merchandise for the 2010 World Cup, which is being held in South Africa.

Holographic security provides a strong deterrent for preventing not only counterfeiting but also grey market diversion. . .

Benefits for all

The solutions offered by holographic companies are similar in concept. They comprise not only the production of uniquely numbered security labels and hangtags complete with holograms, but increasingly a range of other security features as well. They also include important fulfillment and tracking services.

These labels and data on the quantities provided to each, including the unique number of each label, are provided to the licensors who then bill the licensees (the contracts generally involve an initial license fee and then a royalty per item of merchandise sold).

This system offers benefits to both parties. It enables the licensor to protect the brand, which is

not only an important marketing tool for raising awareness and generating loyalty, but is also a major revenue earner. It enables them to collect the royalty payments from their licensees based on the number of labels purchased and hence the number of merchandise intended for sale.

Holographic security provides a strong deterrent for preventing not only counterfeiting but also grey-market diversion, as under reporting becomes highly visible and out of territory sales are easily traceable. And, through the use of enforcement teams, the authenticity of official merchandise can be checked and verified in the field.

But a cautionary word. Although all of this offers great opportunities for a security provider, the financial success of any contract can be as uncertain as the event itself. The provider is usually granted a nonexclusive license to provide labels and hang-tags, but all other licensees will be referred to the supplier for these security features.

The downside of this arrangement is that the quantity of labels and tags cannot be guaranteed—a situation exacerbated by the right of the licensor to exempt certain licensees at the last moment. This can be particularly true of printed materials such as event programs, which may, or may not be required to have a secure label applied.

There may also be geopolitical forces that influence the success of the effort for the security supplier. For example, Women's World Cup Soccer in 2003 was to have been held in Beijing but the event was devastated by the outbreak of SARS in China. The switch of venue to the U.S. had a serious impact on all licensees, many of which had already produced shirts, caps, pins, etc., with the Beijing logo. Overall, it is unlikely that anyone profited from the licensing arrangements at this event. The ever-present threat of boycotts also adds to the risk factor.

Matters can also be further complicated at events where teams are knocked out of the competition. At some point, demand will change very rapidly according to the victory or defeat of the participating teams. The Football World Cup, Rugby World Cup and Cricket World Cup are prime examples of this, as opposed to ongoing programs and events such as those held by European and U.S. leagues.

The sheer complexity of supplying a myriad of different licensees with a number of different manufacturing locations poses significant challenges not normally encountered in conventional supply contracts. As an example, the 2006 FIFA World Cup involved 170 licensees and the delivery of labels and hang-tags to 400 different locations worldwide.

The 2004 Olympics, meanwhile, involved 19 licensees and two international sponsors, between them producing 35 categories of products with 4,000 different item references. Each of these was protected by one of eight different types of authentication label or tag and sold through 12,000 different retail outlets.

The only way for suppliers to deal with such uncertainties and complexities is to ensure their manufacturing and delivery systems are nimble. Ideally, the label and tags should be produced on-demand so that inventory levels are kept to a minimum. Other licensees are doing the same thing and might be manufacturing anywhere in the world. They expect delivery of the labeling within 24 to 48 hours maximum so that freight costs can run extremely high unless there are local stockpiles.

A further frustrating aspect impacting directly on production costs is run length. The dream of every manufacturer is long runs of few SKUs. Unfortunately, the wide variety of merchandise dictates the need for labels of various sizes plus a tag.

Clever licensees will often request the smallest size label on the grounds that it must be cheaper, while major

sponsors such as Nike, Adidas and Reebok might request a tag customized to their own design. Pity the supplier who attempts to argue with a licensee who is also contributing several million dollars in sponsorship to the event under consideration.

The successful supplier may also be required by the licensor to service licensees in their own languages and currencies. Both of these can be unwieldy constraints, particularly as label and tag supply can begin two

years before an event requiring some position to be taken on exchange rates.

Successful applications

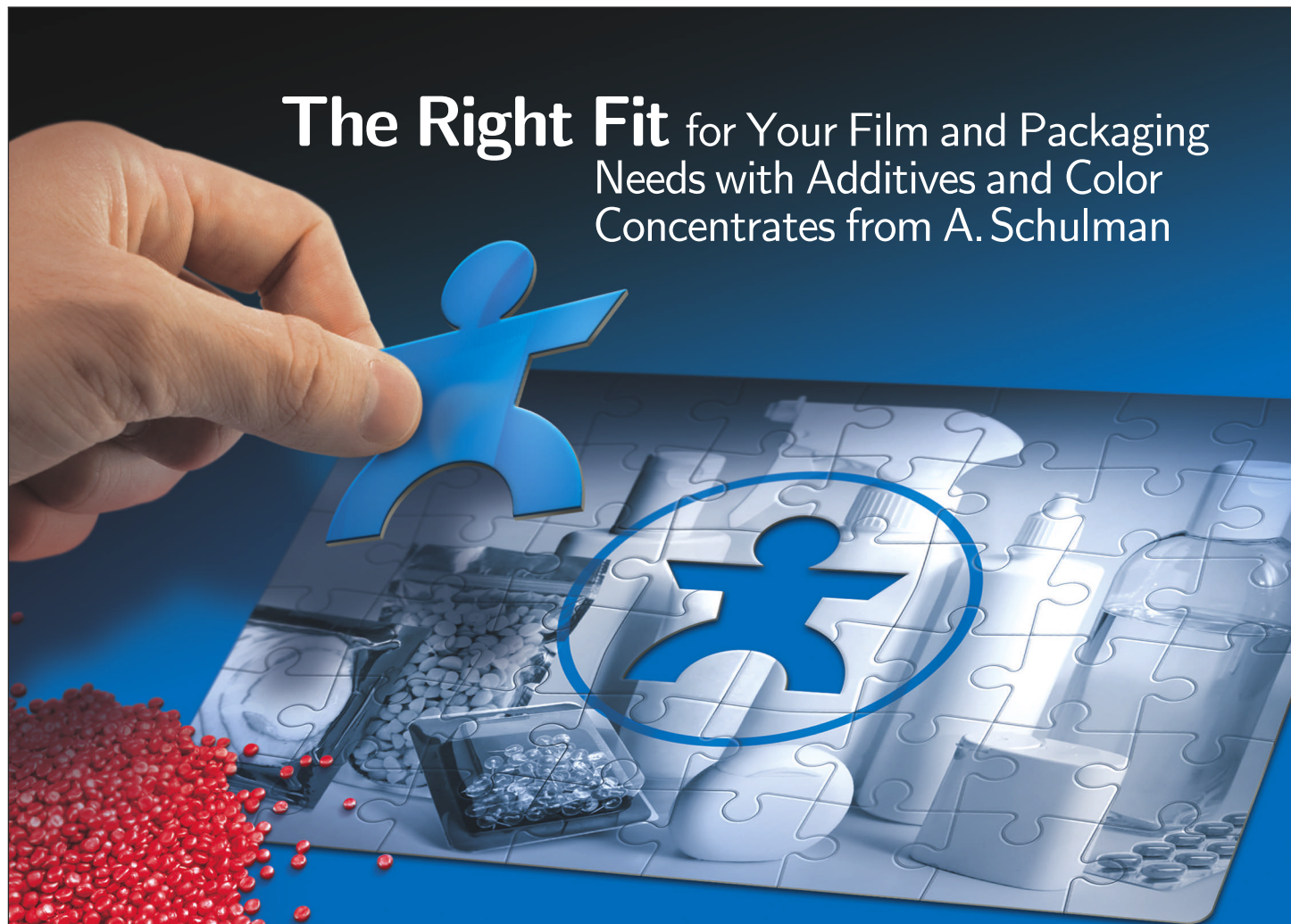
Although these many nuances of holographic label implementation can be significant, overall they don't detract from the fundamental impact the technology has had on thwarting counterfeiters. In addition to the Olympics and FIFA World Cup, on both sides of the Atlantic and around the world, there have been some great

examples of hologram innovation to ensure that bona fide sports merchandise stands out from the fakes.

One of the biggest and most glamorous sports on the planet, Formula One motor racing, uses holography to protect its treasured brand identity, with many of the top racing teams now featuring security holograms to guard official merchandise from counterfeiting.

Ferrari is one the more notable Continued on page 42

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examples among Formula One teams. The famous Italian marque has produced a fountain pen and metal case giftset featuring a hologram and an official logo as a mark of authenticity.

In the UK, De La Rue Holographics, working for Copyright Promotions Sport (CPS), provides a highly secure brand authentication solution for The Football Association, enabling it to track and manage the England Three Lions brand once it has been licensed, protecting it against the threats of counterfeiting, grey-market diversion and piracy.

There's little surprise to learn that it was in the U.S. major sporting leagues where the sports merchandising industry we see today really took off at the beginning of the 1990s.

Today, all the major U.S. leagues have embraced holography to varying degrees to protect reputation, brand image and, importantly, revenue streams. The big four: the National Football League; Major League Baseball; the National Basketball Association and the National Hockey League all have successful licensed product-protection programs to monitor royalty income while a number of the smaller leagues, such as soccer, have followed suit.

The annual turnover in licensed merchandise sales runs to several billion dollars within the American major leagues. Furthermore, Sports Business Simulation (SBS) reports that the size of the sports business industry overall reaches an estimated value of \$213 billion—that's twice the size of the U.S. auto industry and seven times the size of the movie industry. In that context, it only stands to reason that trademark protection should be a high priority.

The NFL leads revenue values with an annual income in excess of \$2.5 billion. The Super Bowl is one of the biggest annual sporting events in North America, with a global audience that generates hundreds of millions of dollars in spinoff sales and promotions. So it's no wonder that the game's administrators have moved to thwart ever more sophisticated counterfeiters keen to capitalize on this market with the introduction of licensed merchandise featuring serialized holograms as the key authentication device in track-and-trace programs.

In terms of revenue, the NFL is followed by MLB, with revenues of \$2.3 billion. NASCAR, the NBA, the NHL and other leagues, teams and sports together generate \$5.6 billion. All have lucrative official merchandising programs protected by hologram-based security tagging systems.

Even college sports generate enough merchandise sales to justify dedicated protection programs. The National Collegiate Athletic Association (NCAA) is the largest collegiate athletic organization in the world that organizes the athletic programs of many colleges and universities in the U.S. and Canada.

Successful applications

Although merchandising programs follow a similar pattern, there are variations in the form and technology deployed that the labels and hang-tags take. In the U.S., for example, holograms are supplied mainly as self-adhesive labels or as printed labels with pressure-sensitive stripes or patches.

In the early days, the application of these measures was relatively crude, with little thought paid to the overall esthetics of the finished product. But this is now changing and the integration of the hologram with the printed label is becoming more apparent. A good example is the new holographic label produced for MLB merchandise. This features a raised stitch-like feature printed to-register over the hologram, which simulates stitching on regulation baseballs.

This integration has also been the case in Europe, where the hologram has traditionally been applied as hot-stamping foil. This in itself is generally considered to be highly secure, as well as enabling great visual assimilation with the rest of the label.

In virtually all cases, the visual security of the hologram is complemented by a range of additional security features, both overt and covert. This provides several layers or levels of security for consumers, retailers, licensors, and law enforcers to authenticate.

The most extreme case of this was the hang-tags for the Beijing Olympics. The event's holographic security, in the form of a windowed thread, was integrated with a number of other measures. These



additional protections included measures more commonly used to protect currency.

This level of sophistication was perhaps not surprising; China is a major source of counterfeit products and the tags were produced by state-owned China Banknote Printing and Minting Corp. But it remains to be seen whether this sets a trend for future security labels for sporting merchandise. Security labeling and tagging that uses holography is firmly established as an iconic symbol of authenticity and has proven its worth for many years in safeguarding several billion dollars worth of merchandise and brand reputation.

Issued on behalf of the IHMA by Mitchell Halton Watson Ltd. For further details contact Andy Bruce on 44 (0) 191 233 1300 or email andy@mhwr.co.uk

More information is available:

International Hologram Mfs. Association Ltd.,
44 (0) 1932 785680. www.ihma.org
China Banknote Printing and Minting Corp.,
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Product security is more critical than ever. Brand owners place a premium on authenticity and tamper-evidence. Labels like this one, left, promote both.

A p-s film label can convey the desired authenticity while **PROTECTING PRODUCTS LONG-TERM**, enhancing profitability.

Building a sound strategy for product security

Today's rapidly changing economy, sophisticated counterfeiters and intensified worldwide competition make product packaging security more critical than ever. Brand owners, manufacturers and retailers place a premium on ensuring product authenticity and providing tamper-evidence.

If a security program fails, the results can be lost sales and profits, inventory shrinkage, reduced brand equity, increased warranty repair costs, as well as consumer safety and liability issues.

The development of a valuable and effective packaging solution depends on discussing the four basic questions below with your security provider and end-use customer. The answers will help ensure effective protection of consumers, brand owners, and manufacturers for virtually every at-risk item on the market, from CDs to over-the-counter drugs to airplane parts.

1. What must be protected?

Identify the problem. Are products being diverted from the intended branch of the supply

chain? Is the security device or label unreliable because of how it's applied? Are environmental conditions disabling the product's security measures? Do consumers send counterfeit products back for warranty repair? Fully understanding the threat will help determine the type of security devices required as well as the expected performance in use.

2. From whom must it be protected?

The selection of an effective security device depends heavily on the sophistication of those trying to defeat it. The complexity required to replicate or circumvent the device should be targeted at a level beyond the capabilities of the criminals in question. Consumers, street criminals, organized crime and emerging-nation manufacturers possess very different capabilities. Understanding who the perpetrators are will determine the level of security required and the number and type of devices and methods.

3. Who will police the system?

Even an optimal-security device can completely lose its value if no one verifies the system. Often, companies expect the consumer to police their

sophisticated than the criminals, inspectors and their inspection tools must also be at least as sophisticated as the security packaging.

4. What is the cost of failure?

Understanding the cost of security-system failure helps focus the development of the packaging on appropriate options.

Counterfeits resulting in lost profits and reduced brand equity carry a very different weight than those that result in personal injury or loss of life, as is possible with the counterfeiting of pharmaceuticals.

Sometimes a lack of a solid security program resulting in counterfeit goods on the market bears hidden costs as well. Consumers may file lawsuits against legitimate manufacturers for lack of appropriate counterfeit protection, resulting in added expense to the manufacturer. Understanding the overall cost and considerations of system failure can help ensure the development of an effective security system.

These questions must be discussed with the appropriate representatives of each company involved in the packaging development. If a

security program lacks top-level support from the brand owner, it is crippled from the start. Designing a successful security program requires an understanding of the answers to the four

questions above and a commitment of the entire supply chain to make it happen.

A security solution is a continuous program and not a onetime event.

P-s film for security, authenticity protection

Security, as it pertains to electronics and certain other products, generally centers on the protection of company profits and ensuring
Continued on page 44

Companies expect the consumer to police their security packaging. This fails when counterfeiters produce a reasonable facsimile good enough to fool the average consumer.

security packaging. This approach fails when counterfeiters can produce a reasonable facsimile of the packaging that's good enough to fool the average consumer. Policing should take place at varying levels throughout the development, supply, distribution and retail chains. It can even take place when products are returned for warranty repair. Just as packaging must be more

Just as packaging must be more savvy than the criminals, inspectors and their tools must be equally sophisticated.

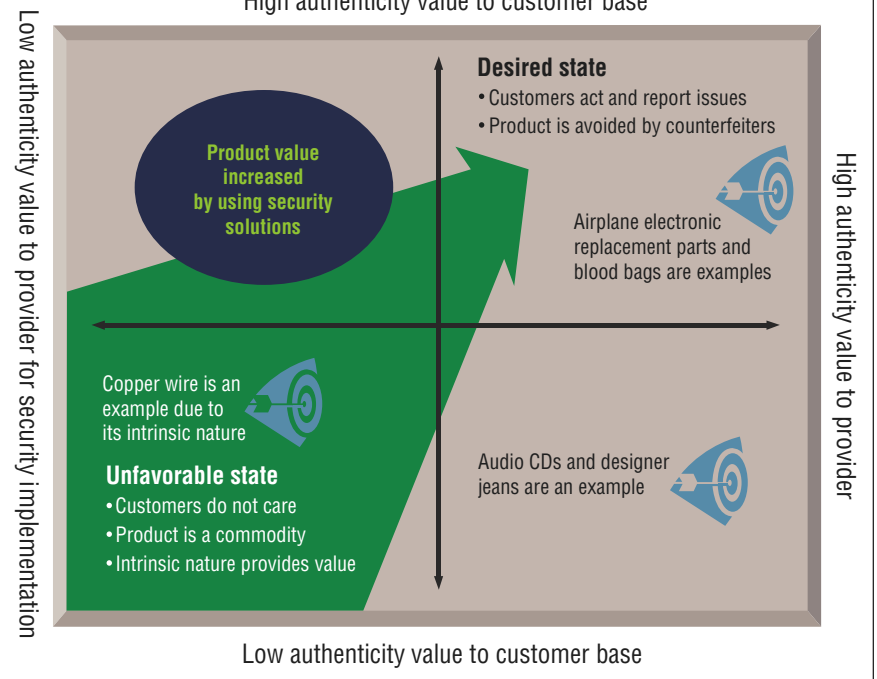


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Designing a security program requires choosing the right type of security for the product.

customer safety. Security requirements can be classified as overt, covert and forensic (traceability). A packaging security strategy in the overt sense might take the form of a label that is holographic in nature. For instance, the popular "Intel Inside" label found on some computers is a very visible confirmation of the product's authenticity, and it's designed so the consumer can clearly see it. If this security label is expected but isn't there, both the manufacturer and consumer lose.

Covert security

An example of a covert packaging security strategy can include the ability to have a label turn a certain color or otherwise change its appearance when it encounters a set of conditions that would knowingly cause the change. The actual label change can be undetectable to the human eye, but under the appropriate detection equipment, it becomes clear that the product is a counterfeit or has been damaged. This, then, gives the warranty provider and manufacturer legal grounds to void the warranty and reduce product life-cycle costs.

Traceability

The third example of product security is product traceability, which is part of the product manufacturer's forensic strategy. For example, an authenticated, unique label identifying each contract manufacturer can help a forensic analysis team in the event of a compromise in security. This allows the product manager or the owner to understand what happened and then evaluate or otherwise limit liability.

How can this data be stored on

the product? An example of a mark that can be used is a 2D matrix code designed to pack a lot of information into a very small space. Some data-matrix symbols can store between one and 500 characters.

That means a data-matrix symbol has a maximum theoretical density of 500 million characters/in. Actual density will, of course, be limited by the resolution of the printing and reading technology used. With that much information available, the product traceability data can be stored on the label affixed to the product.

Choosing the right security method

In choosing the appropriate product packaging security method, manufacturers must factor in both the attributes of that method and the value of the product being protected.

The authenticity value of audio CDs and designer jeans may not be a big issue with consumers, but it's critical to the brand integrity of the provider.

On the other hand, electronic airplane parts are of crucial value to both the consumer and to the manufacturer. Choosing or developing the right p-s film label support and conveying the desired authenticity state is key to the early design and long-term security and profitability of a product.

Brand owners, retailers and manufacturers can increase their success by collaborating with a p-s film supplier and a label converter with substantial security application expertise.

Ken Koldan is the new business development manager for FLEXcon's product-identification business. Reach him at 508/885-8300 or at kkoldan@flexcon.com.



Betting on the future

PACK EXPO showgoers turn out in Las Vegas to explore innovations in packaging technology, materials and processes.

With signs of an economic recovery developing, packaging professionals seeking equipment and material innovations turned out in near-record numbers for last month's PACK EXPO Las Vegas.

The show, held Oct. 5 to 7 at the Las Vegas Convention Center, attracted 22,721 attendees and 11,246 exhibitor personnel, making it the second-largest PACK EXPO Las Vegas since the Packaging Machinery Mfrs.' Institute (PMMI) launched the show in 1995.

"Given the economy this year, we are extremely pleased with the turnout," says Charles D. Yuska, president and CEO of PMMI. "Tradeshows mirror the industries they serve, and the strong attendance may indicate an economic recovery."

Showgoer Tom Bert, plant manager of Seneca Foods, says this PACK EXPO was one of the best his company has attended. "Our goal every show is to find innovative packaging machinery to help us improve our operations—and that is definitely what we are finding."

Wesley Carpenter, marketing manager, Loveslaw, says his company's booth had more traffic than it expected. "We were able to close the deal on two pieces of machinery," he adds. "What really pleased us was the quality of the leads. We saw qualified buyers ready to do business."

Sales do happen at PACK EXPO on a regular basis, agrees Matt Croson, PMMI vp of member services, particularly for smaller end users who know what they need and have simpler procurement processes. Buyers for larger companies tend to move their discussions into proposal stages, and connect with suppliers to work out details following the show, he explains.

Sales a good measure for show

"The success of any tradeshow—especially one centered on capital investments such as packaging and processing machinery—is typically measured in the months following the event, when leads convert to sales," Croson says.

Enhancing the value of this year's PACK EXPO was an important factor in its success, Yuska notes, and to create that additional value, PMMI worked with several leading associations and consumer packaged goods companies (CPGs). The results included co-located events, special show features

and the Innovation Discovery program, all of which gave attendees more networking, business and educational opportunities.

Croson points out that a number of internationally recognized brand owners brought large contingents to the show, with as many as 110 attendees. "They wouldn't send large teams to the show if they didn't have a plan to get something done," he says.

"Partnering with these organizations gave attendees a fuller experience that included a broad array of packaging and processing solutions, as well as educational and networking activities focused specifically on their areas of interest," adds Yuska.

In addition, the Food Processing Suppliers Association's (FPSA) PROCESS EXPO and the Converting and Package Printing Expo (CPP EXPO) were co-located with PACK EXPO Las Vegas. Together, the three shows featured 1,523 exhibitors and 656,692 net sq ft of space.

Exhibits reflect industry direction

Attendees were able to see developments that illustrate many of the trends being seen in the market, such as increased use of robotics, demand for flexibility in packaging machines, faster changeovers, more use of servos, reclosable packaging, retail-ready secondary packaging and continued development of sustainable materials.

Flexibility and faster changeovers are always among the top five required attributes when PMMI researches end-user demand, Croson says, but sustainability-related developments are leading to new materials being used for the first time, and that requires more flexible equipment.

Many companies at the show placed an emphasis on their service capabilities. "Enhancing the value of your primary product is a significant driver right now," Croson says. "End users need full-service solutions before and after the sale."

Show finds the zone with branding

In addition to 160 containers and materials suppliers, the 59,592-sq-ft Brand Zone housed the Showcase of Packaging Innovation, sponsored by Dow Chemical Co. and PACK EXPO Selects.

"With the Brand Zone, PACK EXPO gave brand managers a place to go to find the latest solutions

for meeting customer demands for convenience, portability, recyclability and portion control and access to all of the technologies necessary to make those ideas a reality," Yuska says.

"PACK EXPO is a great place to find the latest advancements in packaging materials, containers, machinery—everything we need to enhance the packaging for our private label brand," says Chet Rutledge, director packaging procurement private brands, Walmart Stores Inc. "This year has proved



Companies at PACK EXPO Las Vegas show off the latest in packaging technology. At top, T.H.E.M. staffers (left to right) Eric Hawley, Neil Kozarsky, Stephen Belko and Melyssa Sampieri display advances in stick-packs, while Digital Design Inc.'s Stephen Firmender, Mark Bryce, Angel Cartagena, Dave Jeffers, Ed Tipperetter, Bryan Wilson and Ed Gerri unveil the company's marking and coding equipment.

especially beneficial as we got to hear from our industry peers, helping us understand how the retail landscape is growing and how packaging can help continue that trend." PMMI is planning PACK EXPO International 2010 for Oct. 31 to Nov. 3 in Chicago's McCormick Place. "PACK EXPO International 2010 will be the largest packaging and processing event in the world next year," says Yuska.



The new jars use less plastic, have an easy-access shape and short-skirt closures that also reduce plastic usage. A spot label on the caps points out the earth-friendly benefits.

Sustainable jars soar for Peter Pan

ConAgra's new jar for peanut butter uses **12 PERCENT LESS PLASTIC** across the product line.

Lauren R. Hartman, Senior Editor

At the forefront of sustainability initiatives, giant packaged food supplier ConAgra Foods, Omaha, NE, has moved to a more sustainable plastic jar for Peter Pan® peanut butter products.

The company says the new Peter Pan jars use about 12 percent less plastic across core jar sizes, which equates to eliminating enough plastic to fill more than 24 garbage trucks each year with solid waste. Says Karl Sears, vp and general manager of ConAgra Foods, "We know that consumers of Peter Pan peanut butter are environmentally-conscious and are actively looking for brands that fit their budget and promote sustainability. The new 16.3-oz jar reduces plastic while still offering consumers an attractive entry price point for the category. It's a tremendous 'win' for retailers and consumers."

Peter Pan began communicating the "green" message on the jars in August, with fresh, new labeling. ConAgra's brands include Healthy Choice, Chef Boyardee, Banquet, La Choy, Hunt's, Wesson, Van Camp's, Hebrew National, PAM, Egg Beaters and Orville Redenbacher's, so the company produces a huge amount of packaging. These brands are in 97 percent of America's households.

One of many examples

ConAgra began developing new environmental programs last year from compliance-driven to proactive sustainability initiatives. Gail Tavill, vp of sustainable development at ConAgra Foods, talked with *PD* (see *PD*, Nov. '08 p. 22) about some of those environmental programs. At that time, she says the company was improving various frozen meal and entrée packages to make them

more environmentally friendly and moved from a multilayer barrier bottle for Hunt's ketchup to a monolayer version that uses an oxygen-scavenging technology. Tavill mentioned that ConAgra has had a sustainability development program in place since the early '90s.

The company also won a DuPont award this year for its new PCRPET-containing trays for frozen foods that include 40 percent post-consumer-recycled PET, which reduces the need for virgin PET and supports the frozen food-tray market for PCR material (see *PD*, July, '09, p. 30).

"As a company, ConAgra Foods is committed to improving the sustainability of our product

We're here to protect the safety of the products we sell and do great things at the same time.



packaging while exceeding the needs and expectations of our customers and consumers," says Tavill. "The new peanut butter jars help us reduce our reliance on fossil fuel resources, save energy and reduce greenhouse gas emissions."

The two main Peter Pan packages include a 28-oz jar that now uses 12 percent less plastic than the previous 28-oz jar. This equates to nearly 65 tons of plastic per year. "On the 28-oz jar, there was a 12.7-percent reduction in weight but the

product content remains the same," says Tavill.

ConAgra also switched from an 18-oz jar configuration to a 16.3-oz jar size for its smaller product size offering. Like the 28-oz size, the new 16.3-oz jar uses significantly less plastic, but was lightweighted more than the product content was downsized, Tavill points out. The new 16.3-oz jar weight was reduced by 9 percent on a "per-ounce" basis, meaning that the plastic savings didn't result solely from the smaller jar size. The new 16.3-oz jar has a suggested retail price that's 10 cents less than the earlier 18-oz jar, although prices vary by retailer. "We only optimized the packaging on the other sizes," says Tavill. "We downsized a 40-oz jar though not as significantly. It went from 58.5 g to 56 g of product, which equates to about a 4.3-percent reduction."

Centrally managed at the corporate level and executed at the local level by cross-functional managers at each plant, the sustainability initiatives are driven with help from Tavill, who considers the many strategies of brands under the ConAgra umbrella and looks at where sustainability can play a role within those brands.

For the Peter Pan peanut butter line, ConAgra has chosen a clean, custom PET jar design blow-molded by **Constar Intl.** At this point, the jar material incorporates no recycled content, Tavill says, though that could change in the future.

"Right now, RPET isn't available at a cost-effective price," she notes. "Food-grade RPET is available, but for this application, we have not been able to find anyone who has developed a cost-effective version yet for jars and bottles. We have been highly successful at finding cost-effective RPET, particularly for our frozen food tray applications,

and we have talked to several converters about PET bottles. It may be different for beverage bottles, but for jars and bottles for food, so far, we haven't seen a cost-effective solution."

Shape is changing

The bright yellow PP jar closures were also modified, which meant some changes were made to ConAgra's packaging equipment. "We had to modify it from a deep skirt to a short skirt closure, so we also saved some packaging resin in the closures as well, which required updates to the capping equipment and the handling of the closures," Tavill tells *PD*. **Berry Plastics** provides the 70-mm Kerr continuous-threaded closures for the 16-oz jar (the caps also incorporate an induction seal liner). The new closure is a third shorter, so it uses less gram weight of PP, Tavill explains.

"By making the closure shorter, the finish on the jar had to be made shorter and a lot of resin in a blow-molded container goes to the finish. So making the smaller finish, we can redistribute some of the material, and that's one reason we could lightweight the jar itself," she says.

A pressure-sensitive spot label placed on the top of jar reads, "New earth-friendly jar, now 9% less plastic per oz." The company also added a graphic to the main jar label that communicates the same earth-friendly details. "We use this to bring

attention to the new jars but it will be a temporary addition," Tavill points out.

Constar created the jar for ConAgra to have what it says is "knifeability," explains Tavill. "If you look at the old package versus the new one, the former jar had a signature curved shoulder at the top that became the signature shape for Peter Pan," she says. "The curve had some issues because it made it a bit tricky to get at the peanut butter in that spot. But it was a distinctly shaped jar and had a deep-skirt closure." To her knowledge, Tavill says, the packaging change had little impact on jar-filling equipment, but if changeparts were needed, they were few, and the changes were probably minor. There were no major capital equipment investments required.

Big-picture goals

ConAgra's move to a new peanut butter package is further evidence of its various ongoing advances in sustainability. More of these projects are being planned.

"I can't discuss any changes to our packaging sustainability goals at this time, but we have some other things—bigger issues—that we'll be prepared to talk about around our energy footprint, water and waste and some other things soon," adds Tavill. "We have to wrap up some of these things internally before we're ready for prime time."

Efforts cover the new and familiar

"Our sustainability efforts apply to optimizing both existing products and packaging and to new product and packaging introductions," Tavill continues. "We have been doing this kind of thing for a while, so we look at sustainability and sustainable development related to packaging specifically as where we can implement material changes in terms of downsizing, lightweighting optimization—things our packaging engineers have done forever. One of my challenges is to capture the stories related to all of those things our packaging professionals and engineers have done."

Tavill says that her team also helps tell the company's story as far as achieving its sustainability goals are concerned. "We're trying to help create an offensive playbook for packaging, particularly with sustainability issues. We're here to protect the safety of the products we sell and do great things at the same time. My team tells the stories about the things the company is already doing to improve the environment, and Peter Pan is a great example of that."

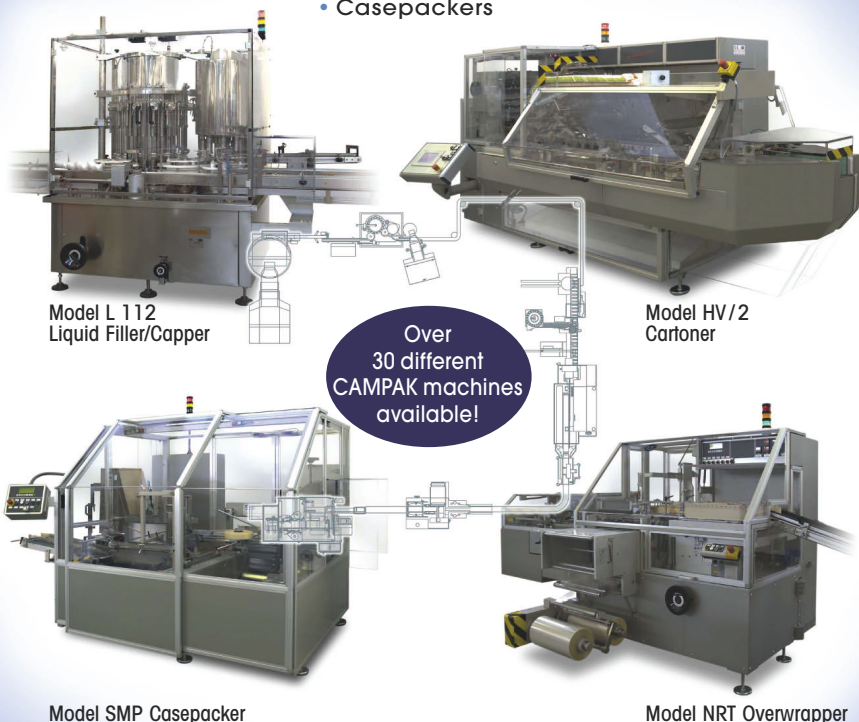
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A small Hawaiian honey company finds **AFFORDABLE, PROTECTIVE PACKAGING** to match its quality and eco-friendly standards.

'Green' pack sweetens deal

Bettina Chang, Contributing Editor

Being green isn't easy, and no one knows it better than Volcano Island Honey Co. (VIHC), a small family-owned Hawaiian company that has been shipping rare organic white honey in glass jars to different parts of the nation for 25 years. While the jars are made with recycled-content, the Honokaa, HI-based company has always lamented its use of foam and protective bubble cushioning to protect the jars in shipment—until now. After testing endless packaging prototypes, **Salazar Packaging** created an affordable, eco-friendly, smash-test-approved shipping package for VIHC's products.

"We have looked for years to be environmentally appropriate and yet not have broken glass in our honey, but it's



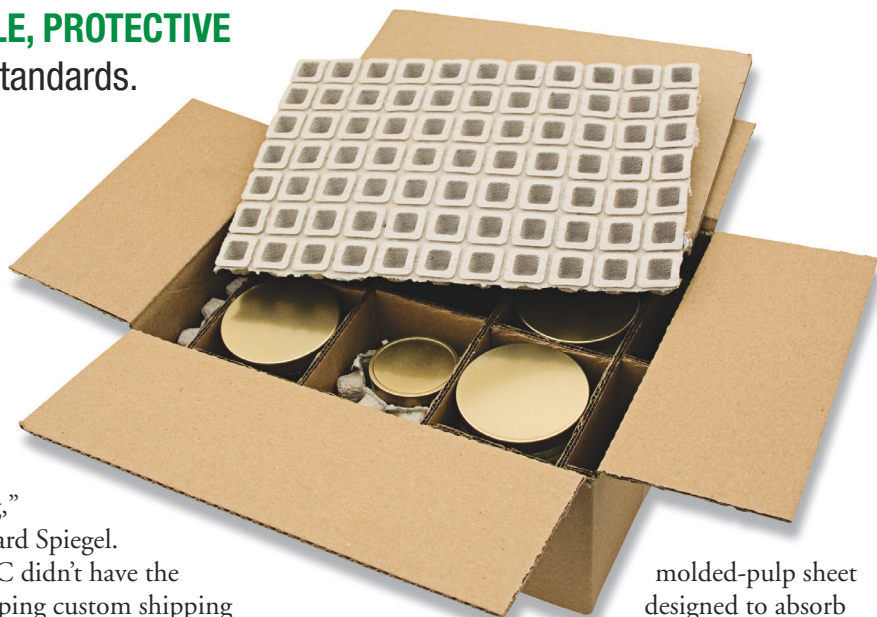
been enormously difficult to find the right packaging," admits VIHC owner Richard Spiegel.

A small company, VIHC didn't have the money to spend on developing custom shipping containers or importing bulk loose fill from the mainland to the Big Island. However, with high-end clients such as Neiman Marcus, VIHC couldn't afford using *sub par* packaging.

The company chose to use different types of cushioning materials in its shipping cases to ensure the jars of high-density honey didn't shatter in-transit. VIHC also included a letter with the shipments, urging customers to recycle the inner packing whenever possible. It developed packaging solutions for the smaller shipments of honey using only paperboard, but faced a bigger challenge with cases of mixed shipments of 8- and 20-oz jars.

"With a combination of different-size products, there's a likelihood that they will shift around in the package and get damaged or damage the box," says Dennis Salazar, president of Salazar Packaging. "You can imagine what happens to a case of honey when one jar breaks."

After more than a year and a half of back-and-forth between the two companies, Salazar designed an effective box at minimal cost for VIHC. The package consists of a heavy-duty carton with partitions to separate the jars into cells. Ecoflex, a



molded-pulp sheet designed to absorb shock, lines the top

and bottom of the case. It also surrounds the jars that don't fit snugly in the cells. The final package is standardized so as to avoid costs from custom tooling charges.

Simple and attractive

The inner packing is simple and esthetically pleasing, which is important to VIHC because of the high-end stores at which it sells the rare honey. The packaging will cost about 15 percent more than the former cushioning VIHC used, but Spiegel insists that it's worth it. "It's a long time and a lot of money for a little company to spend on research," he says. "But we're trying to live up to what people are talking about: Green." Spiegel was excited about the eco-friendly cushioning, but was adamant to perfect the products while staying true to an environmentally conscious philosophy.

More information is available:

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system integration

Several packagers who included advice to integrators in their responses to the Packaging in Automation survey (www.packagingdigest.com/automationresearch) seemed to doubt that the integrators they'd worked with had adequately understood their needs. Some of those anonymous packagers suggested that integrators "start to understand our needs and be prepared to understand our standards," "listen to what we want," and "really get to know my business and the

Integrators: Do you know what your clients want?

objectives of our project."

Others thought integrators need to better understand a production environment. "They want to present the 'pie in the sky' approach, because their data is based on a lab environment. Their scenarios do not include an operator at 2 a.m.," was one comment.

To be fair, it should be noted that many accomplished packaging integrators are well aware of the client's needs and the value of ongoing communications. Laurens Van Patee, director

of branch operations at JMP Eng. the 2009 Packaging Integrator of the Year, cites "Establish a communication plan" among his top 10 tips for successful integration projects.

Sometimes, the lack of understanding that plagues an integration project stems from the client's own uncertainty about what he wants. "Define your project" is also one of Van Patee's top 10 tips. "Clear definition of all aspects of the project will ensure its success. Make sure you define your ROI, business impact, target dates and technical specifications."

What do packagers want out of automation systems? Or what do they want out of the products that comprise those systems? In our Packaging in Automation survey, *Packaging Digest* and *Control Engineering* readers gave us their five most important attributes of an automation project. (Note the following percentages indicate the relative frequency of each answer among the multiple answers provided by respondents.)

- Reliability—70 percent
- Quality/durability—62 percent
- Price—60 percent
- Easy to use, install and maintain—56 percent
- Price-to-performance—51 percent

So, are integrators aware that this is what their clients want? For the most part, yes. When asked the same question, integrators gave four of the same five answers, though with considerably less of a consensus:

- Reliability—55 percent
- Price-to-performance value—45 percent
- Quality/durability—39 percent
- Easy to use, install and maintain—31 percent
- Compatibility with existing systems—27 percent

Not surprisingly, only 18 percent of the integrators cited price as a most-important product attribute. After all, integrators tend to downplay the price issue generally. To them, quality is what counts. See "Qualifications should come first," in *Control Engineering's* June 2009 issue.

Consulting Editor Vance J. VanDoren, Ph.D., P.E., contributes articles on process control, advanced control and systems integration and edits *Control Engineering's* annual Automation Integrator Guide.



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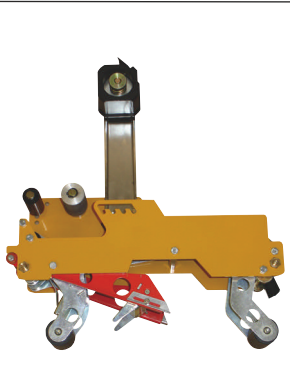


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847-439-8570

www.clearlam.com, info@earthclearpkg.com



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More information at: <http://www.tharo.com/h400.php>.

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Hitachi America/Charlotte, NC

www.hitachi-america.us/airtec



info showcase

xPress Capping Chucks

Fogg Filler is proud to introduce their xPress capping chucks. These chucks were designed and built robust, to exceed the life and wear problems associated with other quick change capping chucks on the market. The xPress capping chuck applies pressure evenly over and over again avoiding over tightening. Because of the even pressure provided, there are very low operating costs associated with them. The xPress capping chucks can be quickly installed for changeover. Only one hand needed.

Fogg Filler

616-786-3644, www.foggfiller.com

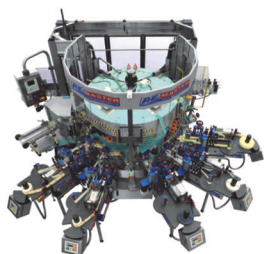


Packstar 200 Line Screen Flexo Printing

Packstar recently printed a new primary shrink sleeve label for LAND O LAKES™ Seasoning. The brilliant new seasoning label design was printed 200 line screen on a Packstar Flexographic press with Kodak NX plates. Packstar implemented the new Kodak plate making technology this year in their Amherst, NY manufacturing facility. Packstar now offers gravure quality printed shrink labels at lower Flexo plate costs with turnkey in house Kodak NX plate making capabilities.

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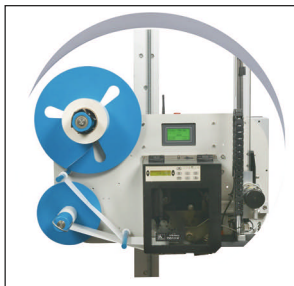
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5E3940 Columbia Full Case Palletizer Rated to 20 cpm
5E1165 Circle Liquid/Paste Filler 60 cycles per minute
5E3900 Doboy Auto Flow Thru Horiz Shrink Wrapper
6K0101 Douglas Auto Wrap Around Case Packer 21cpm
5E1371 Econocorp Semi Automatic Cartoner 25 cpm
6R0083 Elliot Auto Top Case Sealer Capable of 20 cpm
5E3751 Filler Capabilities Auto s/s 10hd Filler 30gal/min
5E3130 FMC Horiz Flow Thru Shrink Wrapper 160ppm
5E2728 Focke & Co Case Erector/Packer/Sealer 15 cpm
5D9943 Hartness Automatic Drop Case Packer 30 cpm
5E0598 Hayssen Auto Horiz Inverted Wrapper 100 ppm
5E2382 Imar Multi-lane Vertical form / fill / seal 180ppm
5E1040 Kaps All Automatic 4 spindle Capper 80 cpm
R23241 Kiss Pkg Semi Auto (6) spindle capper 150cpm
5E0950 Kisters In-Line shrink bundler w/tunnel 120cpm
6M1980 Lock s/s 1.5" H x 24"W Aperture Metal Detector
6R0088 New England Secondary Bottle Orientator 300 bpm
6M1993 Quadro S/S Particle Size Reduction Mill 800 lbs/hr
5E0220 Posimat 14 Pocket Bulk Bottle Unscrambler 200bpm
5D9121 Prototype 28 Head Pic N Place Case Packer 600ppm
5E0528 Ramsey S/S Dual Lane Checkweigher 165 feet / min
5D9147 Randles Tuck Tray Former 25"L x 16"W x 4"H 65cpm
5E1770 Raque Complete Tray Filling/Sealing Line 110 tpm
6M1122 Rasch Semi Auto Fold/Bunch Foil Wrapper 70 wpm
5E3620 Renneco Semi Auto Hori L Bar Below Sealer 30 bpm
5E1630 Ross Vertical Double Planetary Paste Mixer 200 gal
5E0876 Rovema Continuous Motion Form/Fill/Seal 160 bpm
5D9085 Safeline Metal Detector 25"Aperture 2 3/8"Clearance
5E0122 Saga Auto Double Fill Plastic Tube Filler 120 tpm
5D9991 Scandia Semi Auto Horiz Hot Melt Cartoner 100cpm
5E3501 Seitz 16 Head Rotary Counter Pressure Filler 75bpm
R23312 Sergeant Semi Auto L Bar Sealer & Shrink Tunnel
5D9591 Shanklin Flow Thru lap seal shrink wrapper 100ppm
5E3810 Shorewood Auto Inline S/S P/S Front / Back Labeler

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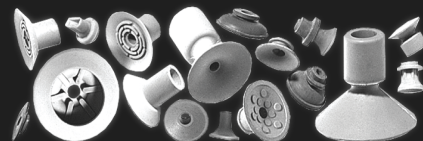
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newsmakers

MOVERS & SHAKERS

Dymax Corp. appoints Peter Zazzaro its global director of quality and



Peter Zazzaro
Dymax Corp

regulatory affairs. **Lithotype Co. Inc.** names Athos Ikonomou president. **ODVA Inc.** chooses Schneider Electric's Cyril Perducet,

senior vp of system consistency and innovation, as president of its board of directors.

Bunting Magnetics Co. names



Rod Henricks
Bunting@ Magnetics Co.

Rod Henricks product manager—metal detection. **CPM Century Extrusion** appoints Charlie Spearing the new general manager of



Jim Lyons
Kliklok-Woodman



Mario Pino
Kliklok-Woodman

Ruiya Extrusion in Nanjing, China. **Kliklok-Woodman** hires Jim Lyons and Mario Pino as field salesmen.

A. Schulman Inc. names Todd Nichols sales manager—engineered plastics, North America and expands its San Luis Potosi, Mexico plant. **CaseStack** names Tucker Taylor to its board of

directors. **Catalent Pharma Solutions Inc.** appoints Will Downie to the dual role of group president, sterile technologies, and senior vp of global sales & marketing. It also creates a new business unit dedicated to helping customers bring new pharmaceutical

and biologic products to market and appoints Scott Houlton as group president for the new segment.

Balluff names Dave Bird medical



Rick Hamilton
Renold Americas

business-development manager.

Renold Americas names Rick Hamilton as president.

LPS Industries LLC hires Craig E. Livingston as director of business development.

Willoughby Design names Megan Semrick vp, brand innovation; Zack Shubkagel vp, brand experience; and



Daryl D. Dulaney
Siemens Industry Inc.

Katy Briggs vp, brand strategy. **Siemens** appoints Daryl D. Dulaney president/CEO of its newly-formed Siemens Industry Inc., the U.S. affiliate

of Siemens' global-industry-sector business.

Rexam appoints Eric Soubeiran as director, marketing and innovation, Personal Care Div., Plastic Packaging.

GROWING & GOING

Ball Corp. expands its metal-beverage packaging pilot-manufacturing capabilities at its innovation center.

HCP Packaging USA Inc. opens a new 60,000-sq-ft factory in Reynosa, Tamaulipas, Mexico.

BUYING & ALLYING

Berry Plastics Corp. to acquire Pliant Corp. **Airworks@** partners with Inflatable Packaging Inc.

Fujifilm Graphic Systems U.S.A. Inc. and EFI announce a new development partnership.

Universal Robotics, Inc. partners with Motoman to market Universal's Spatial Vision system.

Ciena purchases Nortel's optical networking and carrier ethernet assets for \$390 million.

TAPPI and The Hydraulic Institute form a partnership.

Statement of Ownership, Management and Circulation

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16. Publication of Statement of Ownership Publication required. Will be printed in the November 2009 issue of this publication.

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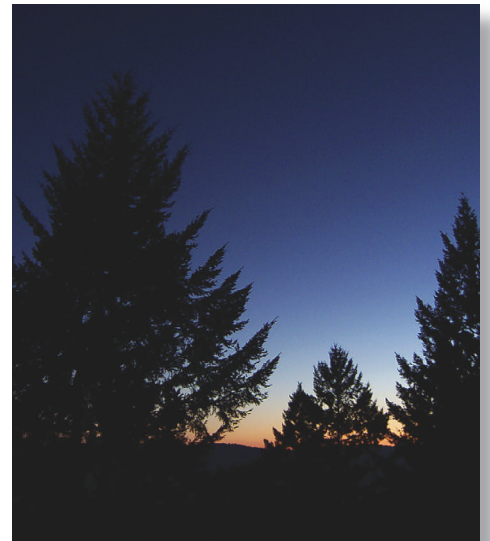


'Green' paper mill closes

Freshwater Tissue, California's last pulp mill and the only chlorine-free/dioxin-free mill in the U.S. plans to permanently close. The current owners of the Samoa, CA, pulp mill were unable to obtain federal stimulus funds to convert it into an integrated tissue plant... www.packagingdigest.com/greenmill

Banana wrap?

Can plastic wrap boost banana sales? 7-Eleven thinks so. With the decline of cigarette sales the company has looked to fresh food. But wrapping produce is criticized by environmentalists... www.packagingdigest.com/bananawrap



Berry Plastics Corp. to Acquire Pliant Corp. The Evansville, IN, manufacturer of both flexible and rigid packaging plans to buy 99.99 percent of Pliant after Pliant emerges from bankruptcy ... www.packagingdigest.com/berrypliant

PACK EXPO Las Vegas exceeds expectations

Companies expressed confidence in the future of the economy by turning out for PACK EXPO Las Vegas in near-record levels, searching for packaging and processing innovations ... www.packagingdigest.com/vegaso9

Factory, converter or distributor—what's best? Common Sense and Sustainability blog

End users have many options for packaging suppliers. Each has its own advantages and disadvantages, depending on the specific situation. *Packaging Digest* blogger Dennis Salazar offers suggestions on how to decide which type of packaging supplier is best for your needs. www.packagingdigest.com/whatsbest

Preshafruit—true innovation Excellence in Packaging blog

Presha fruit juices are made by Australian Donny Boy Fresh Food Co., utilizing High Pressure Processing (HPP). The company is the first to use HPP, not heat pasteurization, to create fruit juices ... www.packagingdigest.com/preshafruit

Talk back!

Here's what readers of [packagingdigest.com](http://www.packagingdigest.com) are saying:

This is a good move. We throw away too many bananas because they have gotten black before we could eat them...

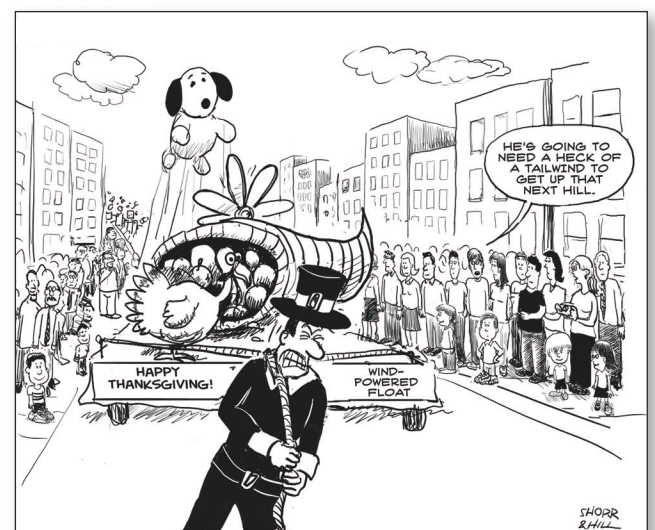
Remember the slamming that individually wrapped sliced cheese had when introduced. Eventually all realized it reduced significant waste and now is accepted without issue...

Bob Esse In response to "7-Eleven tests packaged bananas."

[Ikea's] self-congratulatory, arrogant approach has lost them a very valuable customer. *GJWG, In response to "Ikea's 'No More Plastic Bag' movement."*

Great idea and I am all for reducing packaging...However, children want to 'rip' through the packaging because they are excited, not just by the product that is within, but with the anticipation of what is in within. Gift wrap provides mystery, packaging gives them a glimpse and finally the real thing gives them satisfaction...*Melissa, in response to blog post, "When green packaging fails."*

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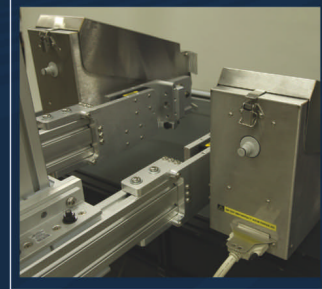
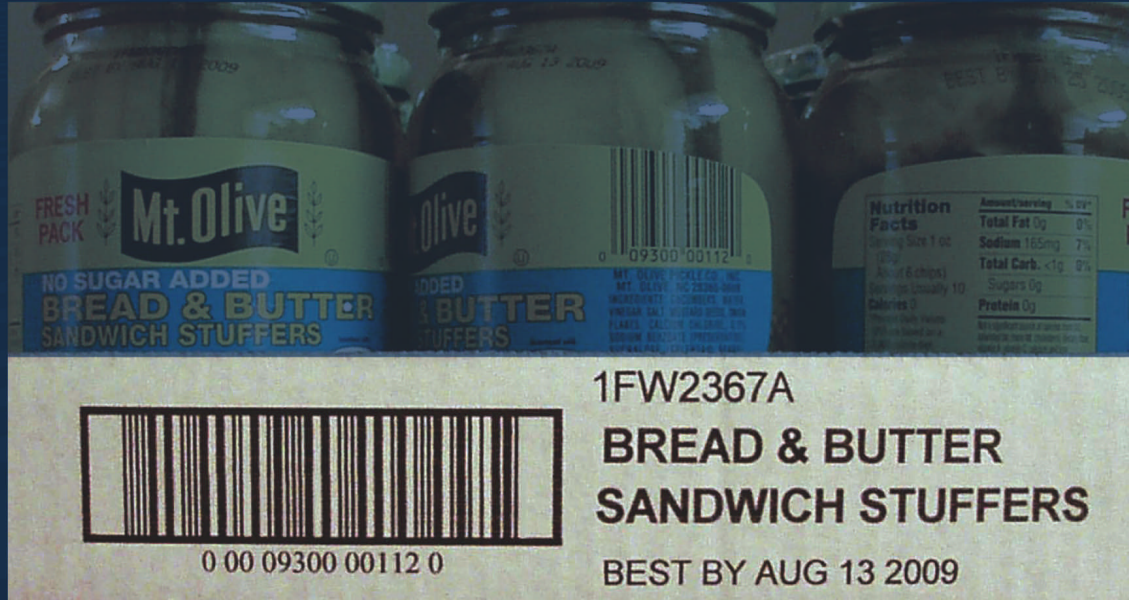
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