

Canada's food & beverage processing magazin

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Mobile canning for craft brewers PG.32

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THE TOP



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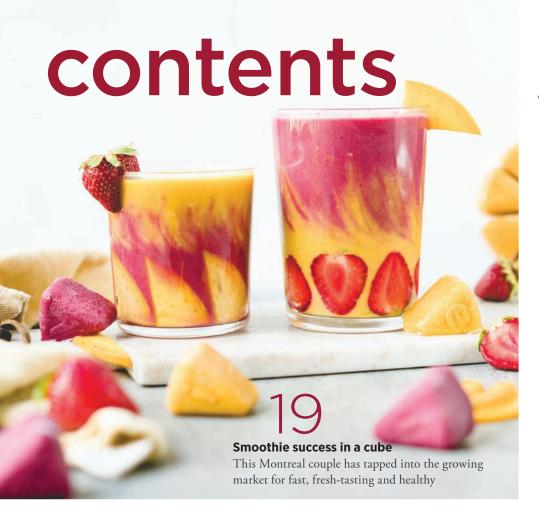


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Laura Rance-Unger

Caught in the middle

The full implications won't be known for a while, but as Food in Canada went to press this month, it appeared Canada was ready to capitulate on dairy supply management as part of its bid to save the North American Free Trade Agreement (NAFTA).

Press reports suggested Canada is prepared to compromise on what many have said is an outdated system to artificially protect farmers from open market forces.

At least that's the rhetoric. Much of the media attention and political mudslinging in this debate has been about farmers, portrayed as wealthy free riders on a protectionist premise and the consumers, portrayed as victims of exhaustingly high dairy prices.

What about the ones in the middle? Little has been said about the effect all this might have on Canada's dairyprocessing sector, which at 12.7 per cent is second only to meat processing as the largest producer of this country's manufactured food shipments.

The presumption, of course, is that cheaper access to milk products would bolster profitability for Canada's dairy processors, which according to Agriculture and Agri-Food Canada data produce \$14.3 billion in annual sales of dairy and milk products

It's not cool to be anti-trade in a country such as Canada. And who could be against cheaper ice cream? Well,

perhaps Canada's dairy processors — if that cheaper ice cream and cheese are coming from someplace in the U.S.

There are 478 dairy processors spread out across Canada employing 24,000 people. As well there are 43,000 people employed in the primary dairy production and 53,000 jobs in the distribution, retail and catering sector.

Looking across the border, there are nearly a million head of dairy cattle located within 250 km of the Canadian plants, which is the equivalent of the whole Canadian dairy herd.

Their presence would undoubtedly put competitive pressure on the prices paid to Canadian farmers if the border opens. However, there are also 200 milk processors located with 500 km of the Canadian border and 500 plants located within 1,000 km. Their proximity, scale of operation and cheaper labour costs would combine with lower raw ingredient costs to potentially displace up to 60 per cent of cheese manufacturing in Canada.

"The largest Canadian cheese dairies process up to one million litres of milk per day. In comparison, the largest U.S. cheese dairies process between four and six million litres of milk per day," a 2015 Boston Consulting Group (BSG) study commissioned by the dairy co-operative Agropur found. "Our calculations indicate that the five largest cheese plants in the United States process the equivalent of Canada's national milk production."



Butter manufacturing could be cut by 60 per cent as well, although fluid milk processing would potentially only lose five to 10 per cent of the market, according to this analysis.

The study noted that over time, the processing of industrial consumer goods in dairy would shift towards the U.S. Many of the jobs lost in Canada would be in rural regions, where they are hardest to replace.

Overall, it was estimated in 2015 that Canada would lose 40 per cent of its milk production and the Canadian economy would be out by \$2.1 to \$3.5 billion if the border opened.

Trade deals are all about give and take. Canadian food and beverage processors can only hope that in this case, the "give" is worth it in the end. It is, after all, about Food in Canada. 🎃

> Laura Rance-Unger **Editorial Director** Irance@farmmedia.com



No Buck-a-Beer for craft brewers

The president of the Ontario Craft Brewers Association says most of its members won't be participating in the Buck-a-Beer initiative announced by the newly elected Ford government in Ontario.

Scott Simmons said in a statement that while the association is pleased to see the government is looking for ways to reduce beer prices, most of its members can't afford to sell beer for a buck.

"We brew in small batches using premium ingredients, have higher labour costs, and compete with other premium beers at the higher end of the beer cost spectrum," Simmons said.

Ontario is home to 272 craft breweries that contribute more than \$1 billion to the provincial economy.



News> file

A voice for Canadian food processors

Canadian-based food processors have never been in greater need of a strong voice representing their interests. Food Processors of Canada (FPC) is the business association supporting executives who lead food-processing companies in Canada.

FPC was featured in a special section of the July-August *Food in Canada*.

The member-driven organization has worked on behalf of Canadian processors for more than three decades and is actively engaged in helping them increase their capacity to meet growing global demand for Canadian food products in a troubled trade environment.

The full article can be seen online at: www.foodincanada.com

Cambrian Solutions-CEAMSA partnership

Oakville, Ont.-based Cambrian Solutions has partnered with CEAMSA as their Canadian distributor for the food, nutraceutical, personal care, and pharmaceutical industries. CEAMSA, headquartered in Porriño, Spain, is a key player in the global hydrocolloids market and offers tailor-made solutions developed in the CEAMSA Innovations Center.



PACKAGING

New approach to packaging cuts food waste

Researchers at Virginia Tech have developed a novel way to squeeze the last drop of ketchup out of those fast food restaurant packets to reduce food waste and improve safety.

Food left behind in plastic packaging contributes to the millions of pounds of edible food that gets thrown out every year. These small, incremental amounts of sticky foods like condiments, dairy products, beverages, and some meat products that remain trapped in their packaging can add up to big numbers over time, even for a single household.

To reduce such waste, Virginia Tech researchers have created a super slippery industrial packaging. They've developed a method of using SLIPS, or slippery liquid-infused porous surfaces, for wicking chemically compatible vegetable oils into the surfaces of common extruded plastics to help sticky foods release from their packaging much more easily. And, for the first time, it can also be applied to inexpensive and readily available plastics such as polyethylene and polypropylene.

These hydrocarbon-based polymers make up 55 per cent of the total demand for plastics in the world today, meaning potential applications for the research stretch far beyond just ketchup packets.

"Previous SLIPS have been made using silicon- or fluorine-based poly-

mers, which are very expensive," said Ranit Mukherjee, a doctoral student in the Department of Biomedical Engineering and Mechanics within the College of Engineering and the study's lead author. "But we can make our SLIPS out of these hydrocarbon-based polymers, which are widely applicable to everyday packaged products."

While the method has obvious implications for industrial food and product packaging, it could also find widespread use in the pharmaceutical industry. The oil-infused plastic surfaces are naturally anti-fouling, meaning they resist bacterial adhesion and growth.

Widespread support for plastic packaging tax, new research reveals

More than half of consumers in the U.K. and a third in the U.S. are in favour of a tax on all plastic packaging on food products, new research has shown. The survey of 1,000 consumers, commissioned by specialist PR consultancy Ingredient Communications, also finds that many people are more likely to shop in supermarkets that offer fruit and vegetables without plastic packaging.

In excess of a third of the food sold in the EU is packaged in plastic, and U.K. supermarkets create more than 800,000 tonnes of plastic packaging waste every year. A charge for plastic bags has reduced their use in the U.K. by over 80 per cent since its introduction in 2015.



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research specialists Surveygoo, indicates significant support for economic incentives to reduce the use of plastic food packaging. Over half of 500 consumers in the U.K. (52 per cent) said they were in favour of a tax on all plastic packaging of food products. In the U.S., support was lower but still significant, with 33 per cent of American consumers favouring such a tax.

Canada's food system leaders invited to convene on public trust

Don't forget to attend the third annual Canadian Centre for Food Integrity (CCFI) Public Trust Summit in Gatineau, Quebec on November 13-14, 2018.

Canada's agri-food sector has identified earning public trust in food and farming as a key priority and foundation for future success, growth, and innovation. Thought leaders from all aspects of the food system from the farm through to retail will gather to learn, engage and plan how to earn trust in food better together.

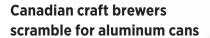
"Our forum for dialogue is unlike any other — with the whole food system from coast-to-coast coming together to engage and discuss ideas on how to move the bar on public trust together," states CFFI chair Kim McConnell. "Attendees will get energized to take what they learn and discuss and put it to work when they get home."

Registration information is available at www.foodintegrity.ca.

FOOD TRENDS

Vegetarian and vegan consumers unhappy with lack of product options

Almost half of vegans and a quarter of vegetarians are dissatisfied with the choice of food products available to them, new research has revealed.



Canadian microbreweries are facing a shortage of cans and higher costs, forcing some to cut beer production after the country imposed retaliatory import duties on U.S. aluminum imports in the busy summer season, according to a report from Reuters.

Although Canada is the world's third-biggest aluminum producer and cans are made in the country, beer makers also rely on the import of more than two billion cans annually, largely from the United States.

So when Canada struck back at the United States' tariffs on aluminum imports on July 1, and included cans, some craft brewers received notices of higher prices due to the duties while others have been unable to secure their usual supply of aluminum cans.

Crown Holdings and Ball Corp. are among the major suppliers of cans to Canada, and in particular to microbreweries. Many small breweries in Canada have been unable to secure cans from Crown, leading some to suspend production for weeks at a time.

More than 60 per cent of Canadian packaged beer sales are now canned, said Luke Harford, president of trade association Beer Canada. He estimates the 10 per cent tariff on aluminum beer cans will cost the domestic brewing industry \$10.5 million in 2018 if it stays in place.

"There has been a disruption and most brewers are now working hand to mouth. It's like the perfect storm," he said.

Specialist PR agency Ingredient Communications commissioned market research experts Surveygoo to conduct an online survey of 1,000 consumers — 500 each in the U.K. and U.S.

"Our research indicates the scale and pace of the shift towards vegetable-based diets," Ingredient Communications founder and managing director Richard Clarke said in a release. "Whatever the reason for their choices — ethical, environmental or healthrelated to many consumers expect the food industry to do more to keep up with them. For manufacturers of both finished products and ingredients, it's clear that there are rewards for putting greater focus on the needs of vegans and vegetarians.

Almost half the vegans surveyed (46 per cent) said they were dissatisfied with the choice of suitable food and beverage products available to them. Although vegetarians were more likely to be happy, 23 per cent said they were dissatisfied with product choices.

In the U.S., 50 per cent of vegans said they were not happy with the options available to them, versus 36 per cent in the U.K. Similarly, American vegetarians were more likely to be dissatisfied with the range of suitable product.

"The merger of two related tracks are likely to be contributing to these trends," said Kaiviti Consulting principal Mark J.S. Miller. Consumers are demanding convenient and access to personalized food choices. "Neither trend is likely to abate and so this level of dissatisfaction amongst American vegans and vegetarians is likely to continue until the market is nimble enough to adjust to the demands."

When asked which factors had influenced their decision, 69 per cent of vegans and 64 per cent of vegetarians cited animal welfare. The next most common factor was "concerns about my health," which was chosen by 48 per cent of vegans and 54 per cent of vegetarians.

Another key finding from the survey was the popularity of new categories, such as pescatarianism. "In the past, there was more a less a binary choice between eating meat or not," said Surveygoo managing director Neil Cary. "Our research suggests high numbers of people are adopting a more nuanced, flexible approach to their diets and lifestyles."

NUTRITION

Cracking the wheat code expected to aid global food security

The International Wheat Genome Sequencing Consortium (IWGSC) has published a detailed description of bread wheat's genome in the international journal *Science*.

The development paves the way for the production of wheat varieties betteradapted to climate challenges, with higher yields, enhanced nutritional quality and improved sustainability.

A key crop for food security, wheat is the staple food of more than one-third of the global human population and accounts for almost 20 per cent of the total calories and protein consumed by humans worldwide — more than any other single food source, while also serving as an important source of vitamins and minerals.

To meet future demands of a projected world population of 9.6 billion by 2050, wheat productivity needs to increase by 1.6 per cent each year. In order to preserve biodiversity, water, and nutrient resources, the majority of this

increase has to be achieved via crop and trait improvement on land currently cultivated rather than committing new land to cultivation.

Sequencing the bread wheat genome was long considered an impossible task,

due to its enormous size—five times larger than the human genome—and complexity, as bread wheat has three sub-genomes with more than 85 per cent of the genome composed of repeated elements.



PEOPLE ON THE MOVE



> David Dickson recently joined Niagara College's Canadian Food and Wine Institute as head distiller of its new Artisan Distilling Graduate Certificate program, the first of its kind in Canada.

Dickson will oversee the operations and process of all distilled products and

will teach practical distilling and other courses. Dickson brings his expertise and leadership to the program from Dillon's Small Batch Distillers in Beamsville, where he is head distiller. He holds an Honours Specialization in Biology and a Master of Environmental Sustainability, both from Western University. He also holds a certificate in Absinthe Distillation from Moonshine University, an artisan distillery and education centre in Louisville, KY. He was also instrumental in the creation of Ontario's first legal absinthe. A Niagara native, Dickson has also led the creation of a variety of unique, local fruit-infused spirits that have added a distinctly Niagaran flair to his craft something he hopes to bring to the College's distilling program.

Dickson, along with other experts at Dillion's, have been close partners with the College, providing significant guidance and expertise in the formation of the Artisan Distilling program.



> Danielle Barran has been appointed as country president, McCain Foods (Canada), a division of McCain Foods Limited. Barran has full responsibility for the Canadian commercial business, and will lead McCain Foods Canada's next stage of strategic development.

Barran joins McCain with more than 20 years leadership experience in the consumer-packaged goods industry, including a record of accomplishment for delivering exceptional results that focuses on sustainable top and bottom line growth driving market segment share, sales and profitability. She joins McCain Foods Canada from The J.M. Smucker Company, where she was most recently the vice president of commercial strategy

An active member of Women Corporate Directors and an ambassador for the Network of Executive Women, she holds an MBA and HBA from the Ivey Business School.

PROCESSING

New device proven to reduce risk of foodborne pathogens

A user-friendly foodborne pathogen detection device developed by a multidisciplinary team of University of Alberta researchers has been shown to be the fastest and most sensitive, according to new research.

The device, called the GelCycler Mark II, was shown to be capable of detecting and reporting E. coli contamination in 41 minutes. It sets a new standard for rapid and accurate testing for bacteria in a wide range of consumables and is ready for commercialization. The researchers say with the device, someone without any expertise in microbiology could perform the test with a single push of a button, and produce results within one shift, for example, at a meat processing plant.

In addition to detecting E. coli, the device is capable of identifying Salmonella enterica, Campylobacter jejuni and Listeria monocytogenes.

"The reality is that currently, meat processors are often holding product to wait for results. The GelCycler Mark II can help get it out the door quicker and reduce the food safety risks for consumers," said Lynn McMullen, a food microbiologist and co-author of the study.

Maple Leaf Foods advances worldleading animal care practices

Mississauga, Ont. — Maple Leaf Foods recently announced it is investing approximately \$28 million to transition its Edmonton poultry processing facility to world-class controlled atmosphere stunning (CAS) technology, reflecting its commitment to building on its leadership in animal care, the poultry sector and value-added branded fresh chicken.

Maple Leaf will convert its transportation, lairage and receiving area and handling systems to optimize rest-time and create a climatecontrolled environment as it implements this technology. The new lairage system will enhance lighting, air quality and temperature control, allowing chickens to rest comfortably and significantly reducing stress. The CAS technology selected is a very humane system that will ensure birds are fully insensible prior to processing.

All-in-one solution to acrylamide, oxidation reduction

Frutarom Food Protection Solutions offers an all-natural, high-antioxidant solution for reducing acrylamides in heat-processed foods, decreasing oxidation and extending shelf life.

High-heat cooking can impart potentially carcinogenic acrylamides at levels that can exceed 1,000 ppb. As of April 11, 2018 new European Union legislation set new "benchmark" levels for the amount of acrylamide in foods for various products.

Frutarom conducted tests on fried potatoes and other snacks applying its all-natural INOLENS 4 and SyneROX HT formulations. The level of acrylamide was decreased by 60 per cent in the snacks, and more than 90 per cent in the fried potatoes.

The two formulations also significantly improved oxidative stability of snacks and fried potatoes, as indicated by hexanal levels. Moreover, these formulations extended frying oil shelf life.

SyneROX and INOLENS are customized blends of rosemary oil and/or watersoluble extracts in powder and liquid forms, designed to enhance food quality.

Canadian food processors can find Frutarom Food Protection solutions at BSA (www.bsa.ca), now part of Frutarom group.

Converting "fatbergs" from waste problem to useable energy

Cooking oil and similar waste can clog pipes, harm fish and even grow into solid deposits like the "fatbergs" that recently blocked the sewage system in London, England.

University of British Columbia (UBC) researchers may have found a way to treat these fats, oils and grease — collectively called FOG — and turn them into energy.



Researchers used hydrogen peroxide to reduce FOG levels.

Researchers found the volume of solids in FOG could be reduced by 80 per cent after heating FOG samples between 90 and 110 C and adding hydrogen peroxide to kickstart the breakdown of organic matter. This treatment also released fatty acids from the mixture that can be broken down by bacteria in the next stage of treatment. Although simple chemical methods do exist to break down FOG, lead researcher Victor Lo, emeritus professor of civil engineering at UBC, says "to the best of our knowledge, this type of pre-treatment for FOG has not been studied before."

"FOG is a terrific source of organic material that microorganisms can feed on to produce methane gas, which is a valuable, renewable energy source. But if it's too rich in organics, bacteria can't handle it and the process breaks down. By preheating it to the right temperature, we ensure that the FOG is ready for the final treatment and can make the maximum amount of methane," says research associate Asha Srinivasan.

Ultimately, the technology can be used in municipal FOG management programs, says Lo. "The principle would be the same: you pretreat the FOG so it doesn't clog the pipes and add it to sewage sludge to produce methane from the mix."





Market commentary: Pig concern in China has global impact

Larry Martin

his is China's first ever outbreak of the highly contagious African Swine Fever (ASF). At least four cases have been found in a triangular area of over a thousand kilometers. This raises the risk that it could infect many pigs rapidly — it's a developing country and has less than ideal growing, transportation and slaughter facilities. Death and reduced growth are consequences.

While ASF is not harmful to humans, there are several implications to North

America if it spreads and significant culling occurs. First, China put a significant tariff on U.S. pork imports. A drop in Chinese domestic production and a switch of demand to imported products could lead to a reduction in the tariffs and increased demand for imported pork — and higher prices in North America.

Conversely, Chinese demand for feed grains and soy oil have supported North and South American grain and oilseed

markets. If there is a significant decline in feed demand, this will not be good for the feedgrain/oilseed markets in North America. The next few weeks will be interesting to monitor this significant development.

Market Trends is prepared by Dr. Larry Martin, who offers a course on managing risk with futures and options in Guelph, Ont. in January through agrifoodtraining.com. Contact him at DLM@xplornet.com or (519) 841-1698.

MARKET HIGHLIGHTS

Grain, oilseed and sugar markets are swooning while energy and the Canadian dollar are continuing sideways looking for direction.

Grains: Trump's tariffs, China's responses and a projected large U.S. crop continue to dominate the grain markets. USDA's August report put corn and soybean yields at record levels, and higher than private pre-report estimates.

Corn: The rally that took December futures to the high \$3.80s dissipated quickly with the USDA report, followed by several crop tour reports of even higher yields and the swine fever issue. Currently at \$3.57, December has lost \$.30 and is heading back toward the contract low of \$3.50.

The question now is whether that \$3.50 support will hold. If strong support occurs, it is a good place to do some pricing. We would hold any existing futures positions until at least one close lower than \$3.50. Stocks/use numbers are a little weak for the 2018-19 crop, so there will be opportunities for price gains after harvest.

Wheat: December Chicago wheat rallied another \$.40 to the \$6.10 area before dropping quickly to the current \$5.23. Improved U.S. crop yields, long liquidation by speculators, and efforts by Russians to export as much as possible in case their government limits exports all contributed to the slide.

Support remains strong at \$4.95 and there is no doubt drought has reduced the crop in Europe. If Russia does limit exports and there's any issue with Argentina's winter crop, anywhere between \$5.23 and \$4.95 should be good for pricing. We continue to suggest pricing near support and holding on to any Calls.

Soy oil: Soy oil finally stopped its slide and moved sideways in the \$.28 area after losing a third of its value. Soy prices have tracked palm oil and rising supplies aided by India's tariffs, and the expected large soybean crop in the U.S. Major support remains at \$.28 and there is technical evidence of a bottom. We continue to suggest protection above \$.30 or locking in around \$.28, currently at \$.2833.

Sugar: The sugar market continues to be burdened with excess supply, though European beet production has been hampered by drought. October bottomed out at \$.0991, almost a 50 per cent drop from a year ago. It's

now at \$.103. We would consider pricing now or protecting against \$.12 where there is technical resistance.

Natural gas: October NG prices continue relatively flat, currently at \$2.83. We continue to suggest protecting above \$3.00 or on a dip back toward \$2.56.

Crude Oil: October Brent also continues in a sideways channel between \$79.55 of \$70.50

As we have said before, \$80.50 remains close to the 62 per cent retracement of the drop in oil prices from 2014 to 2016, so the \$80 area is extremely significant resistance. A breakthrough could signal much higher energy prices. We suggest that oil buyers cover above \$80 and buy hand to mouth any you didn't cover during the trend up from \$60.

Canadian dollar: The loon has been in a sideways channel between \$.821 and \$.738 since March of 2017. Most recently, it rallied on concerns about interest hikes because of inflation numbers. the potential for a NAFTA breakthrough and continued high oil prices, with December at \$.7757.





Cannabis innovation, stuck in the regulatory weeds

Jon-Paul Powers and William Biornsson

t is old news that recreational cannabis is scheduled for legalization in Canada on Oct. 17, 2018 and that Health Canada has intentions to make edible recreational cannabis products (edibles) legal at a later date (perhaps within a year of the October legalization).

We can only presume that edibles will be subject to strict sale and possession limits, similar to recreational cannabis, which may be appropriate for products containing phytocannabinioids such as tetrahydrocannabidiol (THC), the psychoactive component of the cannabis plant.

The recent Cannabis Act paints the cannabis plant with a wide brush and restricts the possession and sale of cannabis leaves, branches and stalks, thus restricting their potential for other uses. These plant components have some THC content and they may find use in the preparation of extracts for recreational and medical use. Following extraction, licensed producers will be left with biomass that excludes any of the components deemed to be psychoactive and/or prescription drugs in Canada. This biomass would be a high-fibre, nutrientdense product presumably without the risks or the medical effects normally associated with cannabis. Repurposing this biomass presents an opportunity for the food industry, as well as many others. Unfortunately, existing and proposed regulatory frameworks hinder the use of cannabis biomass.

Definitions of cannabis within Canadian law focus on, with few exemptions, the entire cannabis plant rather than only specific constituents that have medicinal

or recreational effects. Therefore, even after the removal of these constituents, the remaining biomass will be controlled in the same strict fashion as cannabis sold for recreational or medicinal purposes. Adding to these restrictions, it is the position of Health Canada's Food Directorate that, if the starting plant material is cannabis, it will always be regulated under the Cannabis Act, regardless of its constituents and removal thereof. If addressed from a regulatory perspective, there is the potential to create a significant valued-added product, which could directly benefit food producers.

Currently, certain derivatives of cannabis seeds are permitted in food products in Canada. For example, the Industrial Hemp Regulations which allows for, among other things, the cultivation, propagation, and harvest of low THC industrial hemp by licensees, permits generally the retail sale and possession of a derivative of seed, viable grain or nonviable cannabis seed, or a product made from that derivative, as long as the derivative or product does not contain more than 10 µg/g THC. Thus, products such as hemp seed oil and hemp seed protein are legally permissible as food and food ingredients in Canada. Other cannabis parts such as leaves, stems and flowering heads from cannabis, even industrial hemp, remain controlled substances and therefore restricted as food ingredients.

As of October 17, the Cannabis Act, including new Cannabis Regulations and Industrial Hemp Regulations will come into effect. Under the new regime, certain products made from hemp grain

will continue to be permitted for use in foods; however, at least in the short term, the flowering heads and leaves of the cannabis plant will continue to be subject to strict controls, even if the phytocannabinoids have been removed. The Cannabis Act will restrict the sale of these cannabis parts to authorized persons, and only allow for the licensed/controlled sale of dried and fresh cannabis, cannabis oil, cannabis plants and cannabis plant seeds. Thus, foods containing cannabis and cannabis derivatives, with few exceptions, will remain illegal for sale in Canada even where they do not contain psychoactive components.

With the potential of processed cannabis biomass to be used as a valueadded product, combined with the increasing focus on sustainability and environmentally conscious practices, there is a strong argument to reconsider the restrictions placed on the use of this biomass. If cannabis derived materials can be demonstrated free of THC and other restricted compounds, it makes good business and environmental sense to permit their use in other industries and future revisions to the Cannabis Act and the Industrial Hemp Regulations can help make this a possibility.

Dr. Jon-Paul Powers is a partner and scientific advisor in the Ottawa office of Gowling WLG, working primarily in the firm's food and drug regulatory practice. William Bjornsson is a lawyer in the food and drug regulatory practice of the Ottawa office of Gowling WLG. Contact them at Jon-Paul.Powers@gowlingwlg.com and William.Bjornsson@gowlingwlg.com.



Trading wars & labelling

Part 1

Gary Gnirss

rade protectionism is once again a featured political currency, and nations are spending like there is no tomorrow. While this seems to resonate amongst some voters, evidence generally suggests for the most part that this is working against domestic jobs, which it is meant to protect. Evidence-based decisionmaking is a currency not usually found in the wallets of politicians these days. However, Canada appears to be invested quite a bit in this approach. It's not a bad approach in theory but it is one that is more easily trumped by the nationalistic emotions of protectionism.

The focus of trade these days is on tariffs, hinged on the idea of what is and is not fair. There is a sub-context however that might have even a more profound negative effect on trade in the long term. This is a movement among citizens that look to buy domestically produced goods or avoids purchasing products from specific countries.

To satisfy this demand, consumers are asking more questions about the origins of the products they purchase. This in turn puts the spotlight on deficiencies in labelling practices in proving such clear information. New country-of-origin rules adopted by Australia in 2016 came into full effect July 1, 2018.

The rules are complex.

They place a greater emphasis on providing specific label clarity



Under Australia's country-of-origin label that came into effect July 1 of this year, priority foods need to carry the kangaroo logo.



"Consumers are asking more questions about the origins of the products they purchase. This in turn puts the spotlight on deficiencies in labelling practices."

on domestically produced foods with Australian content. Different requirements exist for foods labelled as "Product of," "Made in" and "Packaged in". Priority foods are required to bear a marking system that includes a cute kangaroo logo, (excepted when presented as "Packed in"), a bar chart representing Australian content and a percentage statement of Australian content. In contrast, Canada currently lacks in providing a clear and uniform country-of-origin marking system for food. Guidelines on making "Product of Canada," "Made in Canada" and related statements were developed by the Competition Bureau, (Innovation,

Science and Economic Development portfolio — Canada), and adopted by CFIA, (Canada Food Inspection Agency).

These are guidelines, not formalized regulations. The Canadian guidelines do not provide as much clarity as the standards in Australia. Even in Australia, some are calling for greater clarity concerning the content of foods.

On January 15, 2019, the Safe food for Canadians Act and Regulations will come into force.

While this will not immediately address country-of-origin labelling, it does give CFIA an anchor point to modernize its country-of-origin labelling rules. Key questions to consider are whether Canada should focus such labelling modernization on imported foods alone, or to incorporate labelling of domestic content.

In the tempest of current trade issues, Canadians might end up demanding more of this kind of labelling. Perhaps instead of a kangaroo, Canada would have a beaver or Canada goose logo. Wouldn't that look cool? Eh!

Gary's look at Trading Wars & Labelling will continue in the October issue of Food in Canada magazine.

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IoT applications in the food industry: Five "low hanging fruits" ripe for the picking

Bv Mike Edgett

s digitalization sweeps across industries worldwide, keeping pace with change is becoming more difficult. CIOs and IT directors are bombarded with information about new ways of managing data, processing orders, and communicating with customers and colleagues.

The Internet of Things (IoT) is a highly touted technology — yet one of the least understood.

A closer look at IoT uses

IoT technologies can be applied to multiple food industry processes, from assisting farmers to manage herd health to helping food manufacturers maintain equipment, monitor quality and improve supply chain connectivity.

Monetizing data by embedding sensors on packages or shipping crates is becoming more viable as the cost of this technology decreases.

But, to achieve the highest return on investment (ROI), profit-driven companies should focus on the most practical, proven applications, which will contribute to extra earnings or bottom-line savings. On the other hand, a company focusing on the customer experience as a differentiator may want to pursue "soft" goals such as improving customer satisfaction, though keep in mind that such hard-to-define goals can be much more challenging and difficult to justify based on cost.

Focusing on concrete deliverables and ones that are attainable — is more likely to bring a positive outcome. As the saying goes, "low hanging fruit" is often the place to start, as easy wins can build

confidence, engage the workforce and help to fund future projects.

Choose goals that can be broken down into phases with milestones that can be reached in months, not years. Such steps allow organizations to prove the technology and tweak processes without starting over.

1) Asset maintenance: Sensors can be embedded in plant machinery to measure physical attributes such as vibration or temperature. Data points are captured and sent to the Cloud where it is aggregated and stored. The system looks for anomalies, such as a temperature exceeding set boundaries, which are flagged for review or set to trigger an automatic response, such as scheduling a technician to investigate.

The goal is to detect early warning signs that indicate when equipment is due for maintenance. By spotting symptoms early, action can be taken during non-peak times, when the impact is minimal.

- 2) Food safety: Sensors and IoT technology can be used to monitor that food is being stored and handled according to strict safety requirements. Monitoring the temperature and humidity of storage containers is one tactic. Alarms or an automated response, such as increasing fan speed, can be triggered when temperatures fall out of prescribed range. Data collected can be used for reporting and verification of compliance. The system can be used to predict possible issues so that proactive intervention can take place, thereby preventing waste.
- 3) Warehouse inventory: Sensors installed on pallets, skids or other packag-

ing containers can use GPS technology to monitor location through the warehouse and shipping dock. Sensors can also be used to track location of material handling equipment such as forklifts, as it moves throughout the warehouse and shipping area. Monitoring performance data can help ensure operators are following safety protocols, such as controlling speed and limiting load weight. Trends in infractions can be monitored, too, helping to identify when additional operator training is needed.

- 4) Quality control: Sensors can be used to monitor a wide variety of quality criteria, such as: colour, weight, density and moisture content. For example, pieces of fruit that do not fall within a desired colour range can be redirected to uses such as juice or concentrate.
- 5) Supply chain visibility: Connectivity throughout the global supply chain can be achieved through the use of sensors and IoT technology. Locations of cargo ships and individual shipping containers can be tracked so that supply chain managers have real-time status updates of locations, estimated arrival times and pending issues such as weather conditions.

Choosing one of these five IoT applications will provide clear, measurable results. The organization can reap benefits that will be seen on the bottom line plus instill confidence and enthusiasm for additional IoT initiates.

Mike Edgett is the industry & solution strategy director for process manufacturing at Infor. Contact him at https://www.infor.com/contact/.

Progress made in reducing sugar content in dairy products

Reduced-sugar ice cream, and yogurts are hard to achieve, especially if chocolate is involved

by Kristy Nudds

airy foods are popular among consumers, and sales gross more than \$125 billion per year according to the International Dairy Foods Association. With dairy product popularity comes new demands from consumers for healthier, low-calorie products that taste the same as their higher calorie counterparts.

A report published in the Journal of Dairy Science reviews the options available to the dairy industry to reduce sugar in products such as ice cream, yogurt, and flavoured milk without sacrificing flavour.

"Dairy foods represent a large market," said lead investigator MaryAnne Drake, who is with the Department of Food, Bioprocessing, and Nutrition Sciences at North Carolina State University, in a release.

Dairy products such as ice cream, yogurt, and flavoured milk are potentially high in unwanted added sugar. Some of the standard processes for developing healthier food products, such as fat, sugar, and salt reduction, result in an unacceptable flavour.

Sweet taste perception can also be affected by texture of the food matrix and the presence of fat. Other sugar-reduction techniques include hydrolysis of lactose, ultrafiltration, and direct reduction.

Researchers reviewed recent studies to assess the role of sugar, alternative sweeteners, and sugar reduction in ice cream, yogurt, and flavoured milk.

For example, ice cream usually contains 10 to 14 per cent sugar. Calorie-reduced ice creams sweetened with sorbitol and sucralose had the highest acceptance compared with other "light" vanilla ice creams or ice cream with a minimum reduction of 25 per cent of the total energy, sugar, or lipid.

Chocolate-flavoured ice creams tend to taste bitter and less "chocolately" when sugar is reduced. In one study, researchers proposed a solution by marketing sugarreduced chocolate ice cream to dark chocolate lovers, who already desire and tolerate substantially higher levels of bitterness.

Frozen yogurt is often viewed as a healthy alternative to ice cream because of its lower fat content and the presence of lactic acid bacteria, even when frozen, but the sugar content is typically the same as regular ice cream. A study of frozen yogurt determined that substituting inulin and isomalt for sugar and fat led to a similar sweetness and a reduction in fat with no added sugar.

Although yogurt is generally recognized as a healthy food, it is usually sweetened with sugar to increase palatability. Several studies found that blends of non-nutritive sweeteners have been very successful in reducing sugar content of yogurt.

One study reported that it was possible to produce a probiotic yogurt successfully using sweeteners without affecting the viability of the probiotic microorganisms. The addition of non-nutritive sweeteners did not negatively affect the yogurt-making process because the sweeteners did not break down over time.

"The dilemma of how to reduce sugar



content without sacrificing flavour and negatively affecting product sales is challenging, as sugar plays an important role in dairy foods, not only in flavour, but also in texture, colour, and viscosity. Replacing sugar can have negative effects, making substitution inherently difficult," the report said.

Overall, the most successful techniques for sugar reduction in dairy foods involve replacing sugar with non-nutritive sweeteners, whether natural or artificial, because these provide the sweet taste desired by consumers without added calories. Direct reduction of sugar and lactose hydrolysis methods also show promise.

"Understanding current sugar-reduction techniques, research, and consumer response to sugar reduction in dairy products is important for dairy manufacturers in order to design and produce sugarreduced products," said Drake.

A look at the qualities of bearings and lubricants that keep the food and beverage industry moving smoothly

- By Andrew Joseph -

t's no secret that Canada's food and beverage processing sector is a big economic driver, contributing two per cent of the country's GDP. But the role of bearings and lubricants in keeping that economic engine running smoothly is often overlooked.

The food- and beverage-processing sector spends an estimated \$2 billion annually on capital investments, with 80 per cent of that going to machinery and ancillary supplies.

Successful food and beverage processors and their facility maintenance engineers know it takes more than having the right machinery. The proper equipment bearings and lubricants factor largely in profit or loss.

Maintaining proper lubrication for rolling bearings and rotating machinery to reduce friction and heat generation is a necessity for maintenance engineers, who must also follow strict health, safety and environmental protocols.

Rather than just the price when making a capital investment, plant engineers must also consider the cost of making the wrong decision.

GREASE IS THE WORD

Grease lubrication and bearings ensure processing and packaging equipment reliability. Bearing manufacturers in particular are faced with meeting market demands with core technologies such as materials engineering, lubrication technologies, and precision technologies that result in improved performance by food processing machinery.

No one wants a recall that could erode consumer trust of a brand or result in production-line downtime.

Within the field of beverage filling and capping — the largest sub-segment of the food industry — lubricants are typically applied to lifting rods and guides, open and enclosed gears, can seamers, transport and drive chains, compressors, pneumatics, hydraulics, seals, conveyors systems and different types of bearing — a wide range of component parts, to be sure.

Machine bearings must be resistant to continual washdowns, be rustproof, and be able to retain lubrication to avoid equipment malfunction and contamination in other parts of the machine and facility.

According to Klüber Lubrication NA LP, a leading global manufacturer of specialty lubricants, using NSF International H1-registered lubricants is one way to go.

"H1 lubricants can eliminate sources of potential contamination with haz-



ardous substances while maintaining the same or even achieving better equipment performance," said Klüber food market manager Marius Czech.

"They comply with food regulations because they are physiologically inert, tasteless and odourless, and are suitable for incidental, technically unavoidable contact with a food product up to 10 ppm."

Czech said that H2 lubricants may also be used in food-processing facilities, but only where there is no possibility of food contact, such as on machine parts in closed systems.

AST Bearings offers its USDA H1 and H2 lubricants — approved by the U.S. National Sanitation Foundation, for use in food processing areas.

Czech said: "H3 lubricants have been developed for direct contact with the product, and are typically used as a release agent or cleaner of equipment that has direct contact with food.

"As well, halal and kosher concerns are also important criteria for lubricants used at food manufacturing plants," he said.

NSK, a global leader within the bearings manufacturing market, says it has developed the first 100 per cent food-derived grease lubricant — H3G — certified by the National Safety Foundation in category H3. It offers low torque, excellent water resistance and minimal leakage and can be used to temperatures of 90 C.

For higher heat applications up to 230 C, NSK recommends its KPM grease, which lasts five times longer than commercially available fluorine greases.

Engineers could also consider an NSK-patented Molded-Oil bearing lubricated with a porous synthetic resin.

Molded-Oil grease is suitable for corrosive and dust-contaminated environments, and offers a consistent supply of lubricant within the rolling element surface without requiring re-greasing, also preventing leakage from the bearings — perfect for facilities requiring high levels of hygiene and sanitation.

NSK says that engineers should look for suppliers that manufacture bearing units that are sealed-for-life with lubrication to ensure no further reapplication of grease is needed.

SKF's food line Y-bearing technology uses the SRF multiple seal design to keep cleaning materials out, while keeping lubricant in.

NTN Americas offers its Sentinel Series of stainless steel bearings and bearings units with food-grade solid lube covers, providing maintenance-free, washdown-resistant product lines.

The line products are manufactured with 100 per cent stainless steel inserts and ball bearings filled with H1 food-grade solid lube that helps prevent lubricant washout. The lube is maintained within a porous solid material similar to a sponge, releasing the grease to lubricate components as it rotates.

NTN also offers an Ultra-Class Sentinel line for food-grade equipment options that do not require washdown.

Cortec Corporation recently released a new biobased general-purpose lubricant — EcoLine ELP (extreme lubricant penetrant). The product is a highperformance biodegradeable soy-based lubricant and penetrant manufactured from natural seed oils and select additives that provide excellent performance with low environmental impact.

Equally important for anyone purchasing equipment is determining where it will be used: preparation area; used within a heat or cold application zone, or within post-processing and packaging.

Within any preparation area, for example, excessive moisture and contamination can be troublesome, and along with caustic cleaning agents et al, bearing seals can crack and cause corrosion issues.

Food engineers look for bearings that can withstand hot and cold temperatures, water and chemicals without corroding or allowing contamination to take place. They also want bearings that require relatively zero maintenance.



Boca Bearing Company — a one-stop shop supplier of bearings, lubricants and more from prototyping to production — told *Food in Canada* magazine that ceramic bearings are a good option as there is no corrosion or leaching of materials.

As well, the ceramic bearings are considered by some to be a better choice than stainless steel options in hot and cold applications, as they do not expand or contract with temperature changes.

NSK offers its Aqua-Bearings, a self-lubricating fluororesin that provides five times the corrosion resistance of conventional resin bearings in strong acid environments.

A very recent discovery from engineers at the U.S.-based Sandia National Laboratories revolves around the re-examination of the platinum-gold alloy, made up of 90 per cent platinum, which has about 100 times more wear-resistance than high-strength steel.

While the alloy isn't a new creation, scientists had ignored it in the past, figuring these two "weaker" elements would lack combined durability. However, when combined as an alloy and allowed to react under heat, it resists damage from friction for a long time, putting it in the same class as diamonds. Plus, the alloy seems to come with its own built-in lubrication.

While not being used within the bearings industry just yet, possibilities do exist — if the cost of materials isn't a debilitating factor.

Discussing your company's unique processing and packaging needs with an engineer is the best way to find the solutions that fit. Depend-

ing upon the needs of the food and beverage processor, asking the right questions and presenting all of the available data to a machine manufacturer before purchase, can help prevent expensive headaches later on.

Most bearing manufacturers are more than willing to visit your facility to measure and monitor equipment efficiency and discuss options.

Smoothie success IN A CUBE

This Montreal couple has tapped into the growing market for fast, fresh-tasting and healthy

- By Mark Cardwell -

ll Claudia Poulin was trying to do was find a quick and quiet way to make healthy breakfast smoothies for herself, boyfriend Dominic Dubé and their two fellow student flatmates at the Université de Sherbrooke.

But just three years after she and Dubé started messing around with original smoothie recipes and concepts in their kitchen, the young couple is now running a fast-growing Quebec food company with a hot frozen food product.

"It's been crazy," says Poulin, co-founder and owner with Dubé of Evive Smoothie, a Montreal-based maker of novel and nutritive frozen smoothie cubes that are sold both online and in more than 700 food stores across Canada. "Things have been happening so fast it feels like we've been living on a treadmill."

According to Poulin, the company went from zero sales in early 2015 to an estimated \$3.5 million in sales this calendar year.

And she hopes and believes those figures will continue to climb in 2019, when the company plans to enter the lucrative American market.

"Our goal is to make healthy food accessible to as many people as possible," Poulin told *Food in Canada* in August. "We see every one of our cubes as a stone or a building block that help people lead healthier lives."

That was hardly the goal in the winter of 2015 when Poulin, a student in psychoéducation, got tired of looking through food stores for quality smoothies, both fresh and frozen.

"The ones you can buy on the shelves in bottles are made using mashed, pasteurized fruits," she said. "They are not really fresh and raw or interesting and they have a short shelf life."

Although frozen smoothies last longer and feature better ingredients, Poulin said the choices are limited to mostly fruit-only products.

"That means you have to buy, add and mix the protein and other ingredients you want," she said. "That's not easy to do and it costs more in time and money. And if you want one for breakfast you have to use a blender, which is loud in the morning when everyone else is still sleeping."

So Poulin started making small batches of original recipes of what she calls "fairly complex" smoothies for breakfast.



FOOD **TRENDS** ~ Smoothies







"We see every one of our cubes as a stone or a building block that helps people lead healthier lives."

"I used fruits, vegetables, textured vegetable proteins and superfoods like chia," she said. "They're fun to make and they are so good for you because it's easy to integrate nutritionally good and interesting foods like algae and pumpkin seeds and baobab."

Tasty cubes

Poulin also came up with the brilliant idea to freeze her homemade concoctions in small cubes that fit easily into glasses. The cubes melt within minutes of being mixed and stirred with water, juice, almond milk (her favourite) or any other liquid and — voilà! — instant smoothies without the use of a blender.

According to Poulin, it took four (now three) cubes or doses to make a regular smoothie drink and eight (now six) for a veritable breakfast smoothie.

Anxious to share their health-enhancing discovery with the world, Poulin and Dubé started a Facebook page and offered friends and family a chance to sample their handmade cubes.

"Right away a lot of people were interested," Poulin said about the cubes, which she and Dubé made in small batches and froze in brown paper bags. "So we decided to ramp things up a bit and sell them in local food baskets, which also worked well. Then we started doing cold calls to food stores."

She said store owners and managers loved the novelty of the product, which was unique in the frozen food section. Before long, Poulin and Dubé were supplying 20, 40 then 100 stores and more.

"That's when we realized we had a business," said Poulin.



What's in a name

They named the new company Evive, an original word that Poulin says was distilled from a brainstorming session with her partner. "It evokes the spirit of revivre (the French word for spiritual or physical renewal) and is spelled the same forward and back, kind of like the circle of life."

Initially, production was done by hands that belonged to the entrepreneurial couple and a half-dozen friends and family members, often in the spacious kitchen of Poulin's parents' home.

But in 2016 they moved their production into a small commercial kitchen they rented on nights and weekends.

They also innovated by making puck-shaped smoothies that were cut into eight cubes.

Demand for the product continued to grow through early 2018, when Evive opened an online sales platform with a monthly subscription program across Canada.

The \$45 subscription fee includes the free shipment of a box of 12 frozen smoothies. There are currently six recipes to choose from, including one that is exclusive to online sales.

"We ship a little bit everywhere, but mostly to Ontario, Quebec and British Columbia," said Poulin, adding that the program now has about 3,500 subscribers.

Evive's products are also now sold in more than 700 stores across Canada, including some 300 in Quebec. Store packages contain three smoothies the equivalent of three breakfasts or six snacks that are gluten- and GMOfree and certified organic — for \$9.99.

To keep up with demand, Poulin and Dubé recently moved their production facilities into Saint-Hyacinthe Research and Development Centre, a federally run agri-food business incubator a half-hour's drive from Montreal.

Eleven employees on two daily shifts now mix, mould and freeze the ready-to-ship Evive products using a semi-automated system that will become more automated when the owners deploy some newly purchased equipment.

"Making and shipping frozen products is a challenge," Poulin said over the phone from Evive's offices in Montreal. "But we're constantly learning and getting better at it."

Into the Dragon's Den

Poulin said business has spiked since early June 2018 (when she and Dubé appeared on the Radio-Canada version of Dragon's Den). The couple went into the show looking for a \$100,000 investment in exchange for a 10 per cent stake in their company.

They told the five Quebec entrepreneurial stars of the popular TV show that Evive made \$550,000 in sales in 2017 at more than 500 stores. And, this year, when they began shipping to the Canadian market, the couple estimated sales to be \$1.5 million.

The owners said they were seeking both funding and networking to expand their web presence, increase the number of sales points to more than 1,000 stores and increase marketing activities like in-store tastings.

"We want to become Canadian leaders in the field," Dubé said on the show. Two groups of two dragons each made competing offers that reflected what they believed was an over-evaluation of the company's worth.

But the young couple stuck to their guns, saying they had invested \$200,000 of their own money in the company and were convinced of

its future success based on its fast-growing sales numbers.

They finally accepted a 15 per cent stake in their company for \$100,000 from Quebec actress and jewelry entrepreneur Caroline Néron and AmpMe mobile phone app creator Martin-Luc Archambeault.

"We were happy with how it turned out," Poulin said about their presence on the show. "It was a fantastic experience and had a very beneficial effect on the business."

One huge impact, she added, has been a whopping 800 per cent increase in sales since the episode aired. "We've had to readjust our expected annual sales for 2018 to \$3.5 million." said Poulin.

She added that the sole focus right now of her and Dubé, who both just turned 27, is to help Evive grow into nothing less than an internationally renowned and successful food company.

"We want to keep developing more organic food recipes that offer the same quality and nutritional value to people everywhere," said Poulin. "Right now, Evive is our baby."



oday's consumers are more informed than ever. While they may want a meal that is easy to prepare and consume, they equally want healthy choices with nutritious ingredients. These buying patterns are part of what informs the world of packaging design and current trends.

You probably know about the global push toward cutting back or eliminating plastic such as disposable drinking straws. Consumers have been switching to sturdy re-usable alternatives and pushing fast food chains and restaurants to eliminate this extra plastic in their menu options.

The same can be said for packaging in general and food industry trends. Ingredient lists are becoming more detailed as consumers strive to eat better and learn more about what they are eating. Some of the biggest trends are e-commerce transactions, simpler graphics and easier-to-read packaging. Sustainability and personalization are also hot. Think of the "share a Coke" campaign as one example.

The packaging trend is toward less packaging when possible. When that isn't possible, solid recyclable alternatives are chosen. Consumers are concerned with food waste. They would rather buy individual portions of a product. This gives the food a longer shelf life. Larger amounts of food that must be eaten quickly often get thrown out upon expiry.

As part of their annual packaging trends predictions and forecasts Mintel, one of the leading marketing intelligence agencies in the world listed five main trends for the year:

• Re-design of online brands;

- Clear and easy to read packaging options (to address consumer preference for minimalism);
- Environmentally friendly packaging choices;
- Packaging and branding which embraces products at the "centre of the store" in grocers.

The centre of the store is traditionally where frozen, canned, boxed and processed foods are kept. Consumers are shopping from the outside edges of the store where you usually find staples such as fresh meat, dairy, deli, and bakery goods. "The use of transparent materials, contemporary design, recyclability, or unique shapes can help draw in younger consumers to the store centre, making it as appealing as the burgeoning perimeter to younger consumers," the Mintel report says.

Some products do not lend themselves easily toward clear packaging. Light-sensitive foods are best kept in whatever packaging allows for freshness and storage. It is also about basic appearance. Food items that can sit on shelves for longer periods of time, such as oatmeal, may show dust if kept in clear bags.

Why do consumers seem to be drawn to unique shapes and designs? The novelty and sense of buying and trying something on the edge are two reasons. Another reason may be the increasing online shopping market available to consumers. When they can order virtually any product from almost anywhere in the world, the local fare will need to be eye-catching. That is also

why the re-design of online brands is important in keeping up with current trends. Consumers want durable items that can withstand shipping well.

Being able to trace an item online
— from its original source through the shipping process to home is important to consumers. They are very label conscious and willing to take the extra time to find foods and ingredients that are healthy choices for both their nutritional value and ability to be recycled or composted back into the environment.

A study of consumers in the United Kingdom, Germany, and China revealed that their priorities may mirror North American consumers. These consumers expect more from what they buy. Specifically — biodegradable and recyclable packaging, edible packaging, dissolving packaging (laundry pods), stores where you bring your own packaging, functional packaging which can double as storage of the food, and friendly colours for biological food products. They also desire less thin plastic and aluminum can packaging and reduced materials in double or triple packaging which is sometimes used to protect food during shipping.

This seems to be at the heart of the latest packaging and design trends for the food industry on a global scale. Consumers want food choices which are easy to eat, and healthy for them as well as their environment.



What's brewing? A closer look at what makes iced tea a popular choice

Daniel Scholes

or many of us, iced tea conjures up images of front porch swings, hot summer scorchers, and mason jars.

But iced tea is gaining greater yearround status, thanks in part to category growth through "real brewed" concepts and new iced tea flavour mash-ups such as peach, blueberry, or vanilla mint. Another driving force of growth is an increase of premium iced-tea-based offerings in coffee shops — a sure fire way of expanding sales by attracting a new "noncoffee" user base.

So, as the dog days of summer come to an end in Canada, it's the perfect time to take a closer look at the sensory performance of some packaged refrigerated iced teas.

The earliest accounts of iced versions of tea are found in Russia around 1842. Recipes started appearing in American cookbooks in the 1870s but these early versions typically included brandy or rum. Non-alcoholic iced tea took a giant leap in popular American food culture in 1904 at the World's Fair in St. Louis. Free samples of hot tea offered in the East Indian Pavilion were a bust due to a scorching heat wave.

So quick-minded marketers quickly adjusted by placing large bottles of tea upside down and allowing the tea to flow through iced lead pipes, turning a failed freebie into a "hot" trend for 20 million fair-goers. It is a classic tale in early product marketing and adapting on the fly.

Today, iced tea accounts for about 85 per cent of all tea consumption in the U.S., driven largely by the southern states where "sweet tea" is a kitchen

staple. In Canada, the concept of "real brewed" iced tea has recently exploded onto the grocery scene. Initially, consumer preferences leaned towards the more familiar iced tea flavour profile (made from concentrate), but real brewed options have now claimed a legitimate share of the grocery cooler.

Teetotallers

Contract Testing Inc. asked 100 female iced tea drinkers from the Greater Toronto Area to evaluate four brands of iced tea. Two samples were "real brewed" while two were made from concentrate. Each participant evaluated 100 ml of each sample, served in clear plastic cups labelled with a three-digit code number and presented in varied order. We first asked our testers about why they purchase iced tea over other beverages — with most people (73 per cent) saying they simply like the taste better. About half our sample also mentioned that they purchase iced tea "for the kids," because it's "healthier," or just "for a change."

The T-test

Statistically, all four products performed at parity, although there was enough directional evidence to declare "most preferred" and "least preferred" brands in this competitive array.

The nicest ice tea was liked best by 30 per cent of our testers and stood apart with the highest scores for liking of the tea flavour. It was also perceived to have one of the strongest intensities of tea flavour, so it did not surprise us to learn that this was a "real brewed" sample, and

shared a similar intensity of tea flavour with the other "real brew" and both had more tea presence than the two brands made from concentrate. What truly set this sample apart from its "real brewed" competitor was a sweeter and more-citrusy flavour profile. So not only did this tea deliver on "tea" flavour, it also packed a greater punch with lemon and sweetness.

Now looking at the other end of the spectrum to the tea that was liked the least by nearly 40 per cent of participants, the flavour profile was really to blame. While it lacked tea flavour similar to its "from concentrate" competitor, the real difference was an unflattering amount of lemon flavouring and sweetness combined.

Consulting the tea leaves

Similar to many packaged food categories, iced tea has experienced a renaissance with the introduction of "real brewed" options.

But "homemade," "natural," "authentic" and "real," are some of the latest buzzwords in our business, and with continued advancements in flavour innovation and processing, food producers are able to deliver on these wholesome adjectives without having to sacrifice convenience. In our modest taste test, "real brewed" iced tea has started to take the lead on taste, putting the pressure on those left behind to up their game and join the party... the tea party that is.

For questions about this research, or how you can leverage consumer taste buds in your business, contact Dan Scholes at info@contracttesting.com or (905) 456-0783.

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			,			
CO	MPANY	2017 SALES (\$000s)	2016 SALES (\$000s)	2016-2017 SALES GROWTH	EMPLOYEES	OWNERSHIP
1.	Kraft Heinz Canada ULC	13,458,158	12,119,360	10%	4,656	Private, but public
2.	Saputo Inc.	11, 649,464	10,657,712	8.5%	12,500	Public
3.	Agropur Coopérative	5,778,152	5,952,187	-3%	4,266	Private, Co-operative
4.	McCain Foods Limited	5,114,697	n/a	n/a	17,000	Private
5.	Maple Leaf Foods Inc.	3,651,676	3,332,000	8.8%	11,500	Public
6.	Cott Corporation	2,953,724	1,623,200	45.1%	10,400	Public
7.	McCain Foods Limited	2,553,468	n/a	n/a	17,000	Private
8.	Kellogg Canada Inc.	2,444,282	2,203,119	9.9%	850	Private
9.	Premium Brands Holdings Corporation	2,275,278	1,857,500	18.4%	6,531	Public
10.	Olymel S.E.C.	2,205,986	n/a	n/a	10,793	Private
11.	Industries Lasssonde Inc.	1,579,591	1,509,505	4.4%	2,214	Public
12.	PepsiCo Canada ULC	1,439,033	1,369,170	4.9%	4,000	Private subsidiary of public co.
13.	High Liner Foods Incorporated	1,369,273	1,199,991	12.4%	1,362	Public
14.	Molson Inc./Molson Breweries of Canada Limited	1,224,024	n/a	n/a	3,000	Public
15.	Pepsi Bottling Group (Canada,) ULC, The	1,105,566	n/a	n/a	6,000	Private subsidiary of public co.
16.	Coca-Cola Refreshments Canada Company	973,401	728,807	25.1%	5,600	Public
17.	Clearwater Seafoods Inc.	621, 031	611,551	1.5%	1,500	Public
18.	Saputo Produits Laitiers Canada S.E.N.C.	792,641	n/a	n/a	4,517	Private
19.	Weetabix Of Canada Limited	734,861	672,910	8.4%	260	Private
20.	Rogers Sugar Ltd.	711,863	564,411	20.7%	681	Public
21.	Post Foods Canada Inc.	647,028	582,408	10%	225	Public
22.	ADM Agri-Industries Company	616,144	n/a	n/a	1,000	Public
23.	Caldic Canada Inc.	598,033	n/a	n/a	208	Private
24.	Mondelez Canada Inc.	568,553	402,897	29.1%	3,600	Private
25.	Unilever Canada Inc.	532,122	460,041	13.5%	3,400	Private
26.	Lantic Inc.	518,944	n/a	n/a	550	Public
27.	Maple Lodge Farms Ltd.	501,262	719,189	-43.5%	2,900	Private
28.	Bunge of Canada Ltd.	462,091	n/a	n/a	750	Public

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TOP BRANDS	OTHER	PARENT (ultimate)
Kraft, Heinz, Cracker Barrel, Nabob, Crystal Light, MIO, Maxwell-House, Certo, Jell-O, Cool-Whip, Ptit-Quebec	n/a	The Kraft Heinz Company;
Saputo, Trutaste, Dairy oh!, Milk2Go/Lait's Go, Dairyland, Neilson, Alexis de Portneuf, Armstrong, DairyStar	Also see company 18, which may affect total sales	Jolina Capital Inc.
Natrel, Quebon, Sealtest, Oka, Island Farms, Agropur Signature, Agropur Grand Cheddar, Farmers, Olympic, Damafro	Also see company 50 and company 61, which may affect total sales	Agropur Coopérative
McCain Superfries, Pizza Pockets	See company 7, which may affect total sales	McCain Food Groups Inc.
Maple Leaf, Prime, Schneiders, Schneiders Country Naturals, Maple Leaf Natural Selections, Mina	n/a	Maple Leaf Foods Inc.
Cott, Vess, Vintage, Red Rain, RC, Stars & Stripes, So Clear	n/a	Cott Corporation
n/a	Also see company 4, which may affect total sales	McCain Food Groups Inc.
All-Bran, Pop-Tarts, Special K, Eggo, Rice Krispies	n/a	Kellogg Company
Harvest Meats, Creekside, Harlan's, Hempler's, Hygaard	n/a	Premium Brands Holdings Corpora- tion
Olymel, Lafleur, Flamingo, Prince, Galco and La Fernandière	n/a	Majority stakeholder: La Coop fédérée
Oasis, Fruite, Allen's, Rougemont, Fairlee, Everfresh, Orange Maison, Graves, Sunlike, Del Monte, Tropic Grove	n/a	3346625 Canada Inc.
Frito Lay, Quaker	Also see company 15, which may affect total sales	PepsiCo, Inc.
High Liner, Fisher Boy, Sea Cuisine	n/a	High Liner Foods Incorporated
Molson Canadian, Coors Light	Partly Canadian-owned enter- prise, part of The Molson Coors Brewing Company	Molson Coors Brewing Company
Pepsi	Also see company 12, which may affect total sales	Pbg Investment (Luxembourg) SARL
Coca-Cola	Also see company 79, which may affect total sales	The Coca-Cola Company
Clearwater	n/a	Clearwater Seafoods Inc.
See Company 2	Also see company 2, which may affect total sales	Saputo Produits Laitiers Canada S.E.N.C
Weetabix, Grainshop, Alpen, Barbara's Bakery	n/a	Westminster Acquisition Limited
Rogers, Lantic	Also see company 26, which may affect total sales	Rogers Sugar Ltd.
Post cereals, Alpha-Bits, Grape-Nuts, Great Grains	Also see company 44	Post Holdings, Inc.
n/a	n/a	Archer-Daniels-Midland Company
n/a	n/a	Caldic Holdco B.V.
Chips Ahoy!, Ritz, Oreo, BelVita, Wheat Thins, Triscuit, Nabisco, Cheese Nips, Cadbury, Toblerone, Tang	n/a	Mondelez International, Inc.
Hellmann's, Knorr, Lipton, Magnum, Red Rose, Pure Leaf, Ben & Jerry's, Breyers, Popsicle, Klondike	n/a	Unilever PLC
Rogers, Lantic	Also see company 20	Rogers Sugar Inc.
Chicken bacon, deli meats, frozen boxed meats	n/a	Maple Lodge Holding Company
n/a	n/a	Bunge Ltd.

COMPANY	2017 SALES (\$000s)	2016 SALES (\$000s)	2016-2017 SALES GROWTH	EMPLOYEES	OWNERSHIP
29. Canada Bread Company, Limited	370,733	n/a	n/a	4,225	Public
30. Old Dutch Foods Ltd.	356,140	n/a	n/a	1,000	Private
31. Grain Millers Canada Corp.	345,019	n/a	n/a	120	Private
32. Agromex Inc.	315,851	n/a	n/a	150	Private
33. Sunny Crunch Foods Holdings Inc.	264,584	232,958	12%	90	Private
34. Exceldor Coopérative	241,939	625,000	-158.3%	1,400	Private
35. Campbell Company of Canada	236,885	167,848	29.1%	1,500	Subsidiary
36. Qunilan Brothers Limited	201,196	172,677	14.2%	800	Private
37. Gay Lea Foods Co-Operative Limited	182,768	n/a	n/a	412	Co-operative
38. Weston Bakeries Limited	173,297	n/a	n/a	1,975	Public
39. Hershey Canada Inc.	168,451	151,642	10%	1,600	Public
40. General Mills Canada Corporation	167,087	129,275	22.6%	1,000	Public
41. Hain-Celestial Canada ULC	163,290	n/a	n/a	181	Public
42. Aliments Ultima Inc.	162,875	146,613	10%	700	Private
43. Multi-Marques Inc.	157,925	n/a	n/a	1,800	Public
44. Golden Boy Foods Ltd.	156,548	n/a	n/a	280	Public
45. Vita Mills Inc.	155,443	n/a	n/a	55	Private
46. Wholesome Harvest Baking Ltd.	153,495	n/a		1,750	Public
47. Shah Trading Company Limited	149,610	n/a	n/a	180	Private
48. Richardson Oilseed Limited	147,921	133,158	10%	240	Private
49. Northern Gold Foods Ltd.	143,712	n/a	n/a	50	Private
50. Farmers Co-Operative Dairy Limited	128,018	n/a	n/a	550	Private
51. Chapman's, David Ice Cream Limited	127,707	n/a	n/a	700	Private
52. Fiera Foods Company	126,342	114,477	9.4%	1,200	Private
53. Dare Foods Limited	122,861	95,244	22.5%	1,400	Private
54. Pinty's Delicious Foods Inc.	113,806	62,745	44.9%	500	Private
54. Nestlé Canada Inc.	110,855	n/a	n/a	3,500	Private subsidiary of public co.
56. Aliments Krispy Kernels Inc.	106,840	n/a	n/a	300	Private
57. Give And Go Prepared Foods Corp.	106,646	n/a	n/a	1,216	Private
58. Danone Inc.	104,748	94,298	10%	450	Owned by public company
59. Biscuits Leclerc Ltd.	102,955	437,000	-168.2%	500	Private
60. Vantage Foods Inc.	102,227	n/a	n/a	500	Private
61. Scotsburn Co-operative Services Limited	98,850	n/a	n/a	425	Private
62. Voortman Cookies Limited	92,640	83,407	10%	450	Private
63. Maplehurst Bakeries Inc.	89,483	n/a	n/a	850	Public

TOP BRANDS	OTHER	PARENT (ultimate)
Dempsters, Smart, BodyWise, Wholesome Harvest, Tenderflake, New York Bakery	Also see company 43 and 46, which may affect total sales	Grupo Bimbo, S.A.B. de C.V.
Humpty Dumpty, Old Dutch	n/a	Old Dutch Foods Ltd.
n/a	n/a	Grain Millers, Inc.
F. Menard	n/a	F. Ménard Inc
Processor and packer of cereals and bars	n/a	Sunny Crunch Foods Holdings Inc.
Exceldor, Victor, White Rock	Also see company 70, which may affect sales	Exceldor Coopérative
Campbell's soups, Goldfish, V8, Prego, Habitant	n/a	Campbell Soup Company
n/a	n/a	Qunilan Brothers Limited
Gay Lea, Lacteeze, Nordica, Ivanhoe, Salerno, Hewitt's Black River Cheese, Stirling	n/a	Gay Lea Foods Co-Operative Limited
Weston, Wonder, D'Italiano, Country Harvest, Gadoua, ACE Bakery, Dave's Bread, Casa Mendosa	Also see company 63 and company 88	George Weston Limited
Hershey's, Reece, Skor, Twizzlers, Allan, Jolly Rancher, Whoppers, Ice Breakers, Brookside, Oh Henry!, Glosette, Barkthins, Krave, pot of Gold, York, Eat-More, Bridge Mixture, Cherry Blossom, Chipits, Hershey's Kisses	n/a	Hershey Company
Nature Valley, Cheerios, Green Giant, Old El Paso	n/a	General Mills, Inc.
Celestial Seasonings, Casbah, Dream, Earth's Best Organic, Europe's Best, Garden of Eatin', Greek Gods, Imagine, MaraNatha, Robertson's, Sensible Portions, Spectrum, Terra, Tilda	n/a	The Hain Celestial Group Inc.
IÖGO, Olympic	n/a	Agropur Coopérative
Pm!, Bon Matin	Grupo Bimbo, S.A.B. de C.V.	Canada Bread Company, Limited
Nut'n Better, Golden Boy	Also see company 21	Post Holdings, Inc.
n/a	n/a	Manna Food Company Ltd.
See Company 30	Also see company 29 and 43	Canada Bread Company, Limited
NuPak, Dunya, Dunya Harvest, Fresh Nut, New Treasure, All Seasons, Niiagta Rose	n/a	Groupe Somchand Kastur Limitée
Canola Harvest, Crystal, Mirage	Also see company 68	Richardson, James & Sons, Limited
Northern Gold: Granola, Steel Cut Oats, Meusli. Spencer's cereals grain- and nut-bars	n/a	Northern Gold Foods Ltd.
Farmers milk, cream and butter, Farmers by Natrel ice cream, sour cream, Farmers Gold Margarine	See Company 3	Agropur Coopérative
Premium, Yukon, Sandwich, Frozen Yogurt, Chapman's Kids, No Sugar Added, Lolly, Collection, Twister, Sundae, etc.	n/a	Chapman's, David Ice Cream Limited
Bon Appé	n/a	Fiera Foods Company
Breton, Cabaret, grainsfirst, Bremner, Vinta, Vivant, Grissol, Breaktime, Bear Paws, Econo, Whippet, RealFruit, Juicee	n/a	Dare Foods Limited
Pinty's EatWell, Pinty's, Pinty's Pub & Grill, Pinty's Food City	n/a	Pinty's Delicious Foods Inc.
KitKat, Nescafé, Häagen-Daz and Drumstick, Stouffer's, Lean Cuisine, PowerBar, Nestlé waters	n/a	Nestlé S.A.
Krispy Kernels	n/a	Distribution Denis Jalbert Inc
Kimberley's Bakeshop, Mason St. Bakehouse, Uncle Wally's Bake Shoppe, two-bite, Prime Pastries, The Worthy Crumb Pastry Co., Create A Treat	n/a	Thomas H. Lee Advisors II, L.P.
Activia, DanActive, Danette, Danino, Danone Creamy, Silk, So Delicious, Oikos, YoCrunch	n/a	Danone Euronext Paris
Célébration, Célébration European collection, Choco, Praeventia, Tradition 1905, Vital, Chocomax, Muffinmax, Browniemax, Go Pure	n/a	Group Biscuits Leclerc Inc.
n/a	n/a	Westar Foods Ltd.
n/a	Also see company 3	Agropur Coopérative
Voortman Bakery	n/a	Voortman Cookies Limited
n/a	Also see company 38 and company 88	George Weston Limited

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	CON	IPANY	2017 SALES (\$000s)	2016 SALES (\$000s)	2016-2017 SALES GROWTH	EMPLOYEES	OWNERSHIP
ľ	64.	Super-Pufft Snacks Corp.	89,028	85,299	4.2%	250	Private
ı	65.	Stephano Group Ltd.	88,223	n/a	n/a	30	Private
L	66.	Ten Peaks Coffee Company Inc.	86,677	81,927	5.5%	30	Public
ı	67.	Granny's Poultry Cooperative (Manitoba. Ltd.	86,430	n/a	n/a	500	Private
L	68.	Richardson Milling Limited	86,222	n/a	n/a	30	Private
	69.	Shearer's Foods Canada. Inc.	80,129	n/a	n/a	225	Private
l	70.	Exceldor Foods Ltd.	79,701	n/a	n/a	350	Private
	71.	Aliments Martel Inc.	78,219	n/a	n/a	500	Owned by public company
V	72.	Highbury Canco Corporation	77,374	n/a	n/a	515	Private
ì.	73.	Oxford Frozen Foods Limited	76,647	68,994	10%	600	Private
L	74.	Sun Rich Fresh Foods Inc.	76,322	73,923	3.1%	1,200	Private
ı	75.	Aliments Wong Wing Inc., Les	75,802	n/a	n/a	480	Private
	76.	Bento Nouveau Ltd.	75,165	n/a	n/a	500	Private
	77.	Kerry (Canada. Inc.)	75,165	n/a	n/a	500	Public
	78.	Associated Brands Inc.	75,165	67,674	10%	500	Public
L	79.	Minute Maid Company Canada Inc., The	74,646	n/a	n/a	405	Public
L	80.	McCormick Canada Co.	73,182	n/a	n/a	487	Public
ı	81.	FG Dell Group Ltd.	71,493	n/a	n/a	350	Public
ı	82.	Fromagerie 1860 DuVillage Inc., La	70,233	n/a	n/a	400	Public
L	83.	FGF Brands Inc.	70,233	n/a	n/a	800	Private
1	84.	A. Lassonde Inc.	70,025	n/a	n/a	1,100	Public
	85.	Northumberland Cooperative Limited	69,817	62,832	10%	300	Co-operative
I	86.	Grand River Foods Ltd.	69,414	n/a	n/a	400	Private
I	87.	Coulombe Québec Limitée	66,334	n/a	n/a	360	Private
	88.	Boulangerie Gadoua Ltée	65,815	51,082	22.4%	750	Public
L	89.	Newly Weds Foods Co.	60,120	n/a	n/a	400	Private
L	90.	Chocolats Favoris Inc., Les	58,223	n/a	n/a	250	Private
L	91.	Allan Candy Company Limited, The	57,911	52,664	9.1%	550	Public
L	92.	Vittoria Reserve West Inc.	57,495	n/a	n/a	20	Private
L	93.	Asia Bio-Chem Group Corp.	57,357	n/a	n/a	600	Public
L	94.	Country Ribbon Inc.	55,0270	n/a	n/a	325	Private
ı	95.	ConAgra Foods Canada Inc.	56,226	n/a	n/a	355	Public
	96.	Sofina Foods Inc.	56,226	n/a	n/a	600	Private
	97.	Hillaton Foods Limited	56,018	n/a	n/a	100	Private
I	98.	Produits Alimentaries Berthelet Inc.	56,018	n/a	n/a	100	Private
Ī	99.	Westmorland Fisheries Ltd.	54,651	n/a	n/a	325	Private
	100.	Solis Foods Corporation Inc.	54,797	n/a	n/a	200	Private
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total tid. n/a Also see company 48 Richardson, James & Sons, Limited Shearer's, Delicious Bakery, Granny Goose, Vista Also see company 34, which may affect sales Martel, Martel Vita, Selection Martel, Relais Frais n/a Grupo Bimbo, S.A.B. de C.V. n/a Martel, Martel Vita, Selection Martel, Relais Frais n/a n/a Also see company 34, which may affect sales Martel, Martel Vita, Selection Martel, Relais Frais n/a n/a Also see company 34, which may affect sales Also see company 34, which may affect sales Tridnish Holdings Limited n/a n/a Nor Tidnish Holdings Limited n/a McCain Foods Group Inc. N/a McCain Foods Group Inc. N/a Bento Nouveau Ltd. LowLow, Cheestrings, Dairygold, Charleville, Denny, Galtee, Richmond, Wall's, m/a Mattesons, Fire & Smoke, Yollies n/a N/a Minute Maid Also see company 16 Treehouse Foods, Inc. Minute Maid Also see company 16 The Coca-Cola Company Club House n/a Premium Brands Holdings Corporation n/a DuVillage 1860 n/a DuVillage 1860 n/a Oasis, Rougemont, Fruité Northumberland Milk, Milk on the Moove, Northumberland's by Natrel Cream, Northumberland My Natrel Cottage Cheese, Northumberland by Natrel Sour Cream n/a Northumberland Milk, Milk on the Moove, Northumberland's by Natrel Cream, Northumberland My Natrel Cottage Cheese, Northumberland by Natrel Sour Cream n/a Read Gaduoa, Melleux, MultiGo, Pain de menage See also company 38 and Corporation Less Northumber Foods Ltd. Entreprises Courem (1988) Ltée Gaduoa, Melleux, MultiGo, Pain de menage Newly Weds Foods Co. Chocolats Favoris Northumber Foods Ltd. Rewly Weds Foods Co.			
n/a Stephano Group Ltd. n/a n/a Ten Peaks Coffee Company Inc. Granny's Poultry Cooperative (Mani- toka) Ltd. n/a Also see company 48 Richardson, James & Sons, Limited Shearer's, Delicious Bakery, Granny Goose, Vista n/a Shearer's Foods Canada. Inc. Exceldor Also see company 34, which may affect sales from may affect sales fr	TOP BRANDS	OTHER	PARENT (ultimate)
n/a Ten Peaks Coffee Company Inc. Granny's S n/a Granny's Poultry Cooperative (Manitoba) Ltd. 1/4 Also see company 48 Richardson, James & Sons, Limited Shearer's, Delicious Bakery, Granny Goose, Vista n/a Shearer's Foods Canada. Inc. Exceldor Also see company 24, which gray affect sales Martel, Martel Vita, Selection Martel, Relais Frais n/a Grupo Bimbo, S.A. B. de C.V. n/a Highbury Cance Corporation n/a Highbury Cance Corporation n/a Na Sun Rich Fresh Foods Inc. Wong Wing n/a Na Sun Rich Fresh Foods Inc. Wong Wing n/a Na Bento Nouveau Ltd. LowLow, Cheestrings, Dairygold, Charleville, Denny, Galtee, Richmond, Wall's, Mattesons, Fine & Smoke, Yollies n/a Na Greyop Public Limited Company n/a Kerry Group Public Limited Company n/a McCain Foods Group Inc. n/a Trechouse Foods, Inc. Minute Maid Also see company 16 Kerry Group Public Limited Company n/a Kerry Group Public Limited Company n/a McCornick & Company Inc. Freybe n/a McCornick & Company Inc. Premium Brands Holdings Corporation n/a Premium Brands Holdings Corporation n/a FGF Brands Inc. Northumberland Milk, Milk on the Moove, Northumberland by Natrel Cream, Northumberland Milk, Milk on the Moove, Northumberland by Natrel Sour Cream n/a Grand River Foods Ltd. Pepsi, Aquafina, Montellier, Mountain Dew, Orange Crush, 7 Up, Dole, Gatorade Gaduoa, Melleux, MultiGo, Pain de menage See also company 38 and company 93 and Chocolats Favoris Inc., Les	n/a	n/a	Super-Pufft Snacks Corp.
Granny's n/a Also see company 48 Richardson, James & Sons, Limited Shearer's, Delicious Bakery, Granny Goose, Vista n/a Exceldor Martel, Martel Vita, Selection Martel, Relais Frais n/a n/a Also see company 34, which may affect sales Martel, Martel Vita, Selection Martel, Relais Frais n/a n/a n/a n/a Righbury Canco Corporation n/a n/a Nord Highbury Canco Corporation n/a n/a Sun Rich Fresh Foods Inc. Wong Wing n/a McCain Foods Group Inc. n/a LowLow, Cheestrings, Dairygoid, Charleville, Denny, Galtee, Richmond, Wall's, Mattesons, Fire & Smoke, Yollies n/a Minute Maid Also see company 16 The Coca-Cola Company Club House n/a DuVillage 1860 n/a Northumberland Milk, Milk on the Moove, Northumberland by Natrel Cream, Northumberland Milk, Milk on the Moove, Northumberland by Natrel Coream n/a Read Granny's Poulitz Cooperative See also company 33 and Chocolats Favoris Inc., Les n/a Newly Weds Foods Co. Chocolats Favoris n/a Newly Weds Foods Co. Chocolats Favoris n/a Newly Weds Foods Co. Chocolats Favoris n/a Newly Weds Foods Co.	n/a	n/a	Stephano Group Ltd.
Name of tobal Ltd. In/a Also see company 48 Richardson, James & Sons, Limited Shearer's, Delicious Bakery, Granny Goose, Vista Also see company 34, which may affect sales Martel, Martel Vita, Selection Martel, Relais Frais Also see company 34, which may affect sales Martel, Martel Vita, Selection Martel, Relais Frais Also see company 34, which may affect sales Martel, Martel Vita, Selection Martel, Relais Frais Also see company 34, which may affect sales Also see company 16 Also see company 16 Treehouse Foods, Inc. Minute Maid Also see company 16 The Coca-Cola Company Also see company 18 Also see company 18 Also see company 18 Also see company	n/a	n/a	Ten Peaks Coffee Company Inc.
Shearer's, Delicious Bakery, Granny Goose, Vista Exceldor Also see company 34, which may affect sales Martel, Martel Vita, Selection Martel, Relais Frais n/a n/a Nartel, Martel Vita, Selection Martel, Relais Frais n/a n/a n/a Highbury Cance Corporation n/a n/a Norga Highbury Cance Corporation n/a n/a McCain Foods Group Inc. Wong Wing n/a Norga McCain Foods Group Inc. n/a LowLow, Cheestrings, Dairygold, Charleville, Denny, Galtee, Richmond, Wall's, Mattessons, Fire & Smoke, Yollies n/a Minute Maid Also see company 16 The Coca-Cola Company n/a McCornick & Company Inc. Freybe n/a McCornick & Company Inc. Premium Brands Holdings Corporation n/a Northumberland Milk, Milk on the Moove, Northumberland's by Natrel Cream, Northumberland Milk, Milk on the Moove, Northumberland by Natrel Coream n/a Response of Brands Inc. n/a Response of Brands Inc. n/a Northumberland Milk, Milk on the Moove, Northumberland's by Natrel Cream, Northumberland Milk, Milk on the Moove, Northumberland by Natrel Cream, Northumberland Dy Natrel Cottage Cheese, Northumberland by Natrel Coream n/a Response of Corporative Limited Gaduoa, Melleux, MuttiGo, Pain de menage n/a Newly Weds Foods Co. Chocolats Favoris Inc., Les	Granny's	n/a	Granny's Poultry Cooperative (Manitoba) Ltd.
Exceldor Martel, Martel Vita, Selection Martel, Relais Frais n/a Martel, Martel Vita, Selection Martel, Relais Frais n/a N/a Mighbury Canco Corporation n/a n/a Mighbury Canco Corporation n/a n/a McCain Foods Inc. Wong Wing n/a McCain Foods Group Inc. n/a LowLow, Cheestrings, Dairygold, Charleville, Denny, Galtee, Richmond, Wall's, Mattesons, Fire & Smoke, Yollies n/a LowLow, Cheestrings, Dairygold, Charleville, Denny, Galtee, Richmond, Wall's, Mattesons, Fire & Smoke, Vollies n/a Treehouse Foods, Inc. Minute Maid Also see company 16 The Coca-Cola Company Club House n/a McCormick & Company Inc. Freybe n/a DuVillage 1860 n/a Qasis, Rougemont, Fruité Northumberland Milk, Milk on the Moove, Northumberland's by Natrel Cream, Northumberland Milk, Milk on the Moove, Northumberland by Natrel Coream n/a Pepsi, Aquafina, Montellier, Mountain Dew, Orange Crush, 7 Up, Dole, Gatorade n/a Chocolats Favoris n/a Newly Weds Foods Co. Chocolats Favoris n/a Newly Weds Foods Co.	n/a	Also see company 48	Richardson, James & Sons, Limited
Martel, Martel Vita, Selection Martel, Relais Frais Martel, Mar	Shearer's, Delicious Bakery, Granny Goose, Vista	n/a	Shearer's Foods Canada. Inc.
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If you would like to be considered for next year's Top 100, please contact Andrew Joseph at <code>ajoseph@foodincanada.com</code>

THAT CAN DO ATTITUDE

A mobile canning service saves time and money for the craft beer industry

By Andrew Joseph —

eff Rogowsky is passionate about Canadian craft beer — so passionate in fact, that he's taking packaging and labelling for the sector to a whole new level.

The Canadian craft beer industry is constantly hopping with exciting new taste creations, with nearly 250 registered breweries doing things their way in Ontario alone.

Unfortunately for the craft beer brewer or cidery entrepreneur, bringing that dream to life can be expensive, what with the outlay of cash for all of the equipment required to produce the alcohol, and then the machinery required to package it.

That's where Mississauga, Ont.-based Sessions Craft Canning Ltd. enters the scene.

"The people who brew beer and ciders certainly enjoy the process of creating new products, but when they began their operations, few probably realized that the filling, packaging and labelling aspects of the business would not be as enjoyable," Sessions Craft Canning founder and chief executive officer Jeff Rogowsky told Food in Canada magazine during a recent visit to its new 33,000-square-foot facility the company has occupied since early this year.

Sessions Craft Canning founder and chief executive officer Jeff Rogowsky in front of towers of pre-printed cans from Crown, stretchwrapped by film from Uline in preparation for scheduled production run deliveries and mobile filling and sealing by the craft beer and beverage pioneering business.







Sessions Craft Canning utilizes the cutting edge technology manufactured by Aesus Packaging systems to label silver bullet cans by adding a thin plastic film sleeve before heat/steam is applies to adhere it to the substrate to create a high-quality graphic for craft breweries, cideries and beverage processors.

"To relieve that tedium — and the capital expenditure costs of purchasing packaging equipment — our company provides a mobile packaging solution that helps new and existing breweries scale their brands without having to invest a significant amount of capital on equipment that they might only be using a few times a month," he said.

New level

Taking things to another level, Sessions Craft Canning began offering labelling services, adding a preprinted film sleeve to an empty silver bullet can to give the craft brewery and cidery products an individual, high-quality packaged look.

Rogowsky says he became inspired to start his own business to help local Ontario craft breweries after visiting an industry trade show in the U.S.

"Not long after, the company formed in late 2014, and we had our first mobile canning line delivered a few months later in January of 2015," he said.

Nowadays, Sessions Craft Canning continues to be

a force within the Canadian craft brewing and cidery industries, with four mobile canning lines on the road daily from its Mississauga headquarters, and another from the Ottawa satellite office. Each is crewed by a two-person team.

Like the industry it serves, Sessions Craft Canning only fills, caps and labels canned products, not bottles.

"The craft beer and cidery industry was, generally speaking, only utilizing the 355 ml and 473 ml cans," Rogowsky said. "But we have recently begun offering the tall and sleek 355 ml cans — a packaging concept utilized more for the cocktail-type alcohol drinks that have become popular with the Canadian consumer."

One-stop shop

The company is also an official supplier of silver bullet and pre-printed cans manufactured by Crown, who produce a wide range of aluminum and tinplate cans for the beverage industry. The set-up allows Sessions Craft Canning to be more of a one-stop shop for its customers — providing options to purchase cans,



Sessions Craft Canning lead canning line operator Ellen Dannys performs a regularly scheduled maintenance overhaul on one of its mobile filling and capping lines manufactured by Wild Goose Canning at at the Sessions HQ to maintain top-notch efficiency when on the road at a craft brewery, cidery or beverage producing facility.



Shrink sleeve machine operator Eric Ronald Soplet moves a pallet load of sleeved cans from the Sessions Craft Canning production line's automatic SKA Fabricating LLC repalletizer.

having labelling applied, as well as filling and capping operations available.

Now with some 175 breweries, cideries and beverage companies as customers, Sessions Craft Canning has filled over eight million cans throughout the Ontario and Quebec marketplaces.

"Featuring better canning equipment than what most breweries just starting out are likely to own, we can package up to 65 hectolitres in an eight-hour shift — which is more than 13,000 16-ounce cans of beer or cider," he said.

Equally important to the filling and sealing requirements, Rogowsky's company boasts top-quality food safety equipment and analysis.

"Before filling the product, we run a pre-canning sanitation protocol to ensure that that the equipment involved in the process — ours and the customer's — is clean," Rogowsky said. "We then confirm all of our sanitation data with the brewmaster or owner to ensure all parties are happy with the results."

Sanitation

"Sanitation is extremely important for both us and the customer, as it helps protect the brand. It's why we bring all of our own chemicals to the facility to run a full CIP (clean-in-place) on our equipment before and after all of our jobs."

Rogowsky says the pre-fill testing checks the beverage dissolved O2 levels to ensure product shelf-life levels will be consistent. The filling crews will also confirm that the CO2 levels will provide proper carbonation within the beverage product.

"We also perform a bacteria swabbing on the equipment to ensure it is devoid of unwanted organic and inorganic substances — all part of the pre-filling process," he said.

Following the filling and sealing of the cans and before they leave the facility, the members of the Sessions Craft Canning mobile filling line will create a report to give to the brewery or cidery.

"The report details: how many cans were filled, can weights; all of the sanitation data, and, show all of the quality assurance checks we performed during our stay at the facility," said Rogowsky.

Sessions Craft Canning uses the chemical and sanitation solutions produced by Sani Marc Group, a company well-respected within the food and beverage industry.

Products used are:

- Caustek Free, an industrial degreaser used for automatic washers and CIP, formulated with a mild alkaline and non-foaming cleaning agents, while also being phosphate-free and compatible with soft metals. It removes oil, grease and parts lubricant;
- Ovation, a heavy-duty phosphorus-free, non-foaming cleaner with a surfactant-enriched formula providing better surface wetting and residue emulsification;
- Ecosan, is applied to clean surfaces, and is a chlorine-based sanitizer that reduces microbiological contamination of the liquid during filling, with zero formation of chlorine byproducts. It effectively removes biofilm;
- Activator, a non-foaming, odourless activator for Ecosan designed for industrial food and beverage plant usage.

In early 2017 Sessions Craft Canning began offering sleeving/labelling options for its beverage customers, running two lines at its Mississauga headquarters.

It recently installed a new Aesus Packaging Systems sleever line featuring: a Ska Fabricating, LLC depalletizer to off-load the empty cans into the line; an Aesus Delta Shrink MB rotary sleever which shoots a pre-printed plastic film over the top of the cans, that Sessions Craft Canning operates at a rate of 200 cans per minute; an Aesus 72-inch Hybrid heat/steam tunnel that shrinks the plastic film to the can to provide high-quality

labelling; and a Ska repalletizer — both Ska machines utilize an easy-to-use Siemens Simatic HMI (human-machine interface) operating system.

Film used by Sessions Craft Canning to create the sleeves is purchased from IMS (Identification Multi Solutions) of Montreal.

"We think it's a great option for the craft brewery and cidery, as they can now have great-looking and affordable small printrun labelling," Rogowsky said.

Summing up, Rogowsky says he is very proud of the role Sessions Craft Canning has within the craft brewing and cidery industry in Ontario and Quebec.

"When we started the mobile canning business a few years ago, I had no idea if we would succeed or fall flat on our face," he said.

"But with the addition of the sleeving and sales of our preprinted cans, Sessions Craft Canning is better positioned to continue its success in the present and the future."



PASSPORT TO EDIBLE ADVENTURES

With the rise of food tourism, food and beverage processors are benefitting from letting consumers go behind the scenes

- By Rebecca Harris -

he food industry is constantly evolving with new products, tastes, health claims, and packaging, but the latest trend is the consumer activity dubbed "food tourism."

More than a visit to a winery gift shop, food and beverage tourism connects the visiting consumer with producers, chefs, restaurateurs, and beverage producers via food festivals, tastings, and facility or farm tours. It provides an opportunity for the tourist to learn how their food and beverage is transformed from ingredients to finished product.



However, because of fast-operating machinery, moving forklifts, and strict safety and hygiene rules, food and beverage processors and their facilities may feel stuck on the sidelines of this growing tourist movement. But they aren't.

There is a huge opportunity for manufacturers opening their doors to the public to take visitors on edible (and drinkable) adventures.

"People nowadays are looking to travel for food and they're looking for hands-on experiences, and processors and artisans are intrinsic to the food stories of a region," says Agatha Podgorski, director of community engagement at Toronto-based Culinary Tourism Alliance, a not-for-profit organization focused on developing culinary tourism experiences.

Citing Prince Edward County's hundred-year-old and now long-gone canning facilities as an example, Podgorski said it would have been a huge draw for today's food traveller. "It was the canning capital of Ontario and to see that happen (in operation) and buy the products at the source — those are the things people are looking for."

Or, if French's opened a ketchup museum at its Leamington, Ont. plant, "that would be something people would flock to," she said. "There's so much story there and people get a personal experience that they can pass on to their friends. So, it becomes a marketing [vehicle], but it's also way to connect with consumers and get live feedback."

Podgorski acknowledges that food tourism isn't necessarily an opportunity for everyone within the food industry — it's particularly difficult to open on-farm facilities to the public, for example, but "it can be a really profitable, marketable way to grow your business."

For King Cole Ducks located in Stouffville, Ont.— a family-owned, vertically-integrated farm that does everything from breeding, hatching and growing, to processing and product development — hosting visitors has become a way to educate people about ducks and generate word of mouth for its products. The company opened its Farm Fresh Store and new head office just three years ago — a 10,000-square-foot building that includes the retail store, events space, and a gourmet presentation kitchen it also turns into a once-amonth "Duck School" cooking class.

"Duck is a great protein, but a lot of people have never tried it, so we're trying to get people to give it a chance," says King Cole Ducks chief executive officer Debbi Conzelmann.

She says that the events, retail store and other on-site activities have generated word-of-mouth buzz, and have helped open up King Cole Ducks to the community.





The B.C.-based Fanny Bay Oysters process is on display, but in a way that preserves biosecurity.





"We always say good farmers make good food, and we want to show that to the community and beyond."



King Cole Ducks recently opened a new facility housing a store, and gourmet kitchen offering "Duck School" cooking classes.

"For a long time, we stayed to ourselves. We didn't really talk about our story and our offerings," said Conzelmann. "Certainly, [opening our doors] has improved our profile within the community and people know now what we do. We always say good farmers make good food, and we want to show that to the community and beyond."

It's why Fanny Bay Oysters in Fanny Bay, B.C. has hosted tours of its processing plant for a number of years.

"It's very important that we let people know where their food is coming from, as well as how it's being handled, managed and monitored to ensure food safety," said Fanny Bay Oysters general manager Brian Yip. "At the same time, it provides more knowledge to the consumer, so they're well-informed when they purchase the product."

With biosecurity at the top of mind, guests of Fanny Bay Oysters are limited to an office area with windows providing a view into the processing and holding areas, to avoid contamination concerns.

"By coming here, they get to see how [the oys-





ters and clams] are being farmed — from larvae to finished product — and how they're being processed once they come from the beaches when they're market-ready," said Yip.

For years, Muskoka Roastery Coffee Co. in Huntsville, Ont., has been providing guests a peek into its roasting operations through a large roll-up window. "It kept us in front of the consumer," said Muskoka Roastery Coffee co-founder and president Patricia Snell. "They could give us feedback and let us know what they liked about the product."

In 2011, the company expanded its processing operations into a 12,000-square-foot roasting facility



"It's important to be accessible to consumers, so they can get excited about your brand and products, and share their experience."



and turned its former factory into an interactive showroom where visitors can talk with staff members, watch videos about the farms where the coffee is grown, sample coffee, buy merchandise and watch small-batch roasting on Friday afternoons.

"It's important to be accessible to consumers, so they can get excited about your brand and products, and share their experience," said Snell, as she offers advice to other food and beverage companies considering hosting visitors. "Be transparent, and don't be afraid to show them who you are and what you're all about."

Steam Whistle Brewing has been showing consumers what it's all about since it opened in 2000. Housed in Toronto's historic Roundhouse, which still maintains the former occupants' outwards appearance of a steam locomotive maintenance facility, the brewery has become one of the city's top tourist destinations.

In the early days of its operation, tours of the brewery were more informal and lasted upwards of two hours.

"In 2008, when the craft beer renaissance really started to take off in Ontario, our tours needed to be elevated," said Josh Hillinger, manager of on-site experience at Steam Whistle Brewing.

Beginning in 2009, Steam Whistle began offering more an experience for the brewery visitor, creating a large catwalk system encircling the entire pro-



location in Canada's largest city, many other food and beverage processors don't have it so easy. Simply put, being located in an out of the way area could dissuade people from visiting a facility as part of their food tourist destination.

"A lot of manufacturers, for completely valid business reasons, are located in not very beautiful places," said Culinary Tourism Alliance's Podgorski. "The way manufacturing is set up in Ontario, you'll find a lot of companies making beautiful, delicious products in warehouses in the suburbs. And it's not an inherent tourist destination unless the product is already garnering a huge following that drives people to that area."



Visitors to Steam Whistle Brewery receive a bottle of pilsner to start off their tour.

When considering opening your doors to the public, Podgorski advises companies to "look at your region and whether it makes sense for you and the community you're in, and whether or not there's already a big movement around food and those kinds of experiences that are bringing people there."

duction facility, providing a bird's eye view of the bottling and canning lines.

As part of the customer experience, guests are offered a free bottle of Steam Whistle premium pilsner at the start of the 30-minute tour, and are then escorted around the facility with a guide discussing the history of the building and, of course, the creation of the beer.

"We want to create a connection with every single guest and fan of Steam Whistle who drinks our beer, and we want them to know where every single drop of Steam Whistle comes from," Hillinger said. "Our goal was to create the most epic brewery tour experience that guests will have a connection with, and then talk to their family and friends about to propagate the Steam Whistle story."

While Steam Whistle has the added benefit of being in a historic, downtown



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www.alipro-mistral.com

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www.bdflavours.com

Flavour agency

Located in Quebec, Foodarom Group Inc. is a custom flavour designer and manufacturer serving the food, beverage and nutraceutical product industries with complete formula-

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tion and service. It offers flavours: fruity, botanical, sweet, savoury, alcoholic, dairy, vanilla and more. It works with customers to target consumers with a signature taste to deliver the flavours of the food.

www.foodarom.com

The process of blending

Founded in 1989, Les ingredients Alimentaires BSA of Montreal is a processor of meats and foods, providing customized blends for all types of meat, poultry, fish and seafood. With pulses and vegetables, BSA produces quality soups, sauces, side dishes, as well as baked goods, dips, spreads and more. BSA is also a supplier of spices and herbs, antimicrobial agents, and is a distributor of ingredients. www.bsa.ca

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NOUVELLES



APPROVISIONNEMENT

Les brasseries artisanales canadiennes se disputent les canettes d'aluminium

Les représailles tarifaires américaines sur l'aluminium raréfient la ressource

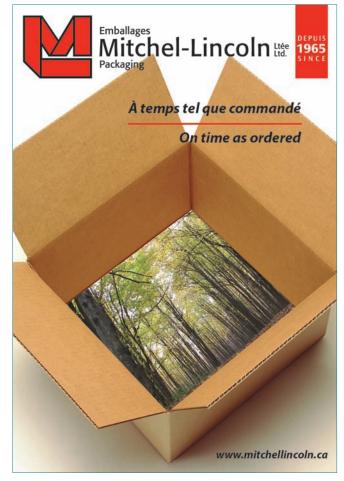
Selon un rapport de Reuters, les microbrasseries canadiennes font face à une pénurie de canettes et à des coûts plus élevés, obligeant certaines d'entre elles à réduire leur production de bière après que le pays eut imposé des tarifs douaniers de représailles sur les importations d'aluminium américain pendant la saison estivale occupée.

Bien que le Canada soit le troisième producteur mondial d'aluminium et que plusieurs canettes soient fabriquées au pays, les fabricants de bière comptent également sur l'importation de plus de deux milliards de canettes par an, principalement en provenance des États-Unis. Ainsi, lorsque le Canada a réagi aux tarifs imposés par les États-Unis sur les importations d'aluminium le 1er juillet dernier, incluant les canettes, certains brasseurs artisanaux ont reçu un avis de hausse de prix reflétant les nouveaux tarifs douaniers, alors que d'autres ont été incapables d'obtenir leur approvisionnement habituel de canettes en aluminium.

Crown Holdings et Ball Corp. figurent parmi les principaux fournisseurs de canettes au Canada, en particulier aux

microbrasseries. Plusieurs d'entre elles ont été incapables de se procurer des canettes auprès de Crown, ce qui a contraint certaines à suspendre leur production pendant des semaines. Quoique la raison derrière la pénurie de canettes de bière de Crown pour certaines petites brasseries canadiennes demeure floue, le directeur général de l'entreprise, Timothy Donahue, a confié aux analystes au mois d'août que la fermeture de l'usine du Massachusetts en janvier aurait peut-être été prématurée, à la lumière de la forte demande américaine de boissons gazeuses. M. Donahue a déclaré que la compagnie disposait d'une quantité de stock invendu en Amérique du Nord qui aurait dû fournir aux demandes de l'été.

Plus de 60% des bières vendues au Canada le sont maintenant dans des canettes, a précisé Luke Harford, président de l'association commerciale Bière Canada. Il estime que le tarif de 10% imposé sur les canettes de bière en aluminium coûtera quelque 10,5 M\$ à l'industrie brassicole nationale en 2018, si elle demeure en place. «Il y a eu une perturbation, et la plupart des brasseurs travaillent maintenant au jour le jour. C'est toute une tempête», a-t-il exprimé.





Des chercheurs chez Virginia Tech ont mis au point une nouvelle méthode pour extraire le ketchup jusqu'à la dernière goutte des emballages qu'utilisent bon nombre d'établissements à restauration rapide, dans le but de réduire le gaspillage alimentaire et d'améliorer la sécurité.

Les aliments laissés dans leur emballage en plastique contribuent aux millions de livres d'aliments comestibles qui sont jetés chaque année. Ces petites quantités d'aliments collants — comme les condiments, les produits laitiers, les boissons et certains produits de viande — emprisonnées dans leur emballage finissent par représenter de grandes quantités de nourriture, même pour un seul ménage, d'autant plus que le nombre de ces emballages ne cesse de croître.

Afin de réduire ces déchets, les chercheurs de Virginia Tech ont créé un emballage industriel super glissant. Ils ont mis au point une méthode utilisant des surfaces poreuses glissantes imprégnées de liquide (SLIPS) qui permettent d'introduire des huiles végétales chimiquement compatibles dans la surface de plastiques extrudés courants pour faciliter l'expulsion des aliments collants de leur emballage. Et, pour la première fois, cette méthode peut également être appliquée à des plastiques peu coûteux et facilement accessibles, tels que le polyéthylène et le polypropylène.

Ces polymères à base d'hydrocarbures représentent 55% de la demande totale de plastiques dans le monde actuellement, ce qui signifie que les applications potentielles de la recherche vont bien au-delà des emballages de ketchup.

«À ses débuts, la technologie SLIPS avait recours à des polymères à base de silicium ou de fluor, lesquels s'avèrent très coûteux», a fait remarquer Ranit Mukherjee, étudiant doctorant au Département de génie biomédical et de mécanique de la faculté d'ingénierie de Virginia Tech et auteur principal de l'étude. «La bonne nouvelle, c'est que nous pouvons fabriquer des SLIPS à partir des polymères à base d'hydrocarbures, lesquels conviennent à une grande majorité de produits emballés quotidiennement.»

Les SLIPS sont des surfaces poreuses ou des polymères absorbants dans lesquels on peut introduire une huile chimiquement compatible à leur surface. Ces surfaces sont non seulement très glissantes, mais elles sont également autonettoyantes, autocicatrisantes et plus durables que les surfaces superhydrophobes traditionnelles.

Pour que les SLIPS maintiennent ces huiles, les surfaces doivent avoir une sorte de nanorugosité ou de microrugosité, ce qui maintient l'huile en place grâce à la tension superficielle. Cette rugosité peut être obtenue de deux manières: en rendant le matériau de surface rugueux par l'application d'un revêtement, ou en choisissant un matériau de surface en polymère absorbant.

Les deux techniques ont récemment gagné en popularité grâce à des entreprises en démarrage, et certaines applications commerciales ont été explorées. Néanmoins, les SLIPS actuels qui utilisent des polymères absorbants à base de silicone et de fluor ne sont pas intéressants pour les applications industrielles en raison de leur coût élevé, tandis que la méthode consistant à ajouter de la rugosité aux surfaces peut également s'avérer un processus coûteux et compliqué.

«Nous avons réalisé deux grandes percées», a indiqué Jonathan Boreyko, professeur adjoint en génie biomédical et mécanique et coauteur de l'étude. «Nous utilisons non seulement des polymères à base d'hydrocarbures abordables et très demandés, mais nous n'avons pas besoin d'ajouter de la rugosité à la surface. Nous avons en effet trouvé des huiles naturellement compatibles avec les plastiques, de sorte qu'elles pénètrent dans le plastique lui-même, pas dans un revêtement rugueux appliqué».

M. Boreyko s'empresse d'ajouter que les huiles compatibles sont naturelles, comme l'huile de coton, et ne représentent aucun risque pour la santé. «Nous n'ajoutons pas de nanoparticules mystérieuses à la surface de ces plastiques, lesquelles pourraient susciter le questionnement des gens».

En plus des percées évidentes que pourrait jouer cette méthode dans l'alimentation industrielle et l'emballage de produits, elle pourrait également être largement utilisée dans l'industrie pharmaceutique. Les surfaces en plastique imprégnées d'huile se révèlent naturellement antisalissures, ce qui signifie qu'elles résistent à l'adhérence et à la prolifération bactériennes.

TRANSFORMATION

Convertir le problème d'amas de graisse en solution d'énergie utilisable

L'huile de cuisson et certains déchets similaires peuvent obstruer les tuyaux, nuire aux poissons et même s'agglomérer en dépôts solides pour former des amas de graisse comme celui qui a récemment bloqué le réseau d'égout de Londres en Angleterre.

Des chercheurs de l'Université de la

Colombie-Britannique (UBC) ont peutêtre trouvé un moyen de traiter les corps gras, huiles et graisses — appelées collectivement matières grasses — en les transformant en énergie. Ils ont constaté que le volume de solides dans les matières grasses pouvait être réduit de 80% après en avoir chauffé des échantillons à 90 C et 110 C et y avoir ajouté du peroxyde d'hydrogène pour déclencher la décomposition des matières organiques. Ce traitement a également permis de libérer les acides gras du mélange, lesquels peuvent être décomposés par les bactéries lors de l'étape suivante. Bien qu'il existe des méthodes chimiques simples pour décomposer les matières grasses, Victor Lo, professeur émérite de génie civil à l'UBC et chercheur principal de ce projet, a déclaré: «À notre connaissance, ce type de prétraitement n'a jamais été étudié».

«Les matières grasses s'avèrent une source formidable de matières organiques que les microorganismes peuvent utiliser pour produire du méthane: une source d'énergie renouvelable et précieuse. Mais si ces dernières s'avèrent trop riches en matières organiques, les bactéries ne pourront pas les gérer et le processus se dégradera. En les préchauffant à la bonne température, nous nous assurons que les matières grasses seront prêtes pour le traitement final et pourront générer le maximum de méthane», a expliqué Asha Srinivasan, associée de recherche.

La chercheure a ajouté que les méthodes développées à l'UBC permettront aux agriculteurs de charger davantage de matières

grasses dans leurs digesteurs de biogaz: ces grands réservoirs qui traitent les déchets agricoles, y compris le fumier de vache, pour produire du méthane.

En fin de compte, la technologie pourrait être utilisée dans les programmes

municipaux de gestion des matières grasses, a commenté M. Lo. «Le principe serait le même : vous prétraitez les matières pour éviter qu'elles bouchent les tuyaux, et vous les ajoutez aux boues d'épuration pour générer du méthane».





out ce que Claudia Poulin essayait de faire était de trouver une façon rapide et silencieuse de préparer des smoothies santé pour son petitdéjeuner et celui de son copain, Dominic Dubé, ainsi que celui de ses deux camarades de classe à l'Université de Sherbrooke. Trois ans à peine après que le couple ait commencé à s'amuser avec des recettes et des concepts originaux de smoothies dans leur cuisine, il exploite maintenant une entreprise alimentaire québécoise en pleine croissance avec un produit surgelé populaire.

«C'est complètement fou», s'exclame Mme Poulin, cofondatrice et copropriétaire avec M. Dubé d'Evive Smoothie, un fabricant montréalais de cubes de smoothie surgelés innovateurs et nutritifs, vendus en ligne et dans plus de 700 magasins d'alimentation au Canada. «Les choses se sont passées si vite que nous avons l'impression de vivre sur un tapis roulant», ajoute-t-elle en riant.

Aux dires de Mme Poulin, la compagnie est passée de zéro vente au début de 2015 à un chiffre d'affaires estimé à 3,5 millions de dollars cette année. Elle espère, et croit, que ces chiffres continueront de grimper en 2019, alors que la compagnie envisage de pénétrer le lucratif marché américain. «Notre objectif est de rendre les aliments sains accessibles au plus grand nombre de personnes possible», a communiqué Mme Poulin à Food in Canada au mois d'août. «Nous voyons chacun de nos cubes comme une pierre ou une brique de construction aidant les gens à mener une vie plus saine.»

C'était loin de l'objectif que Mme Poulin avait en tête à l'hiver 2015, étudiante en psychoéducation à l'époque, alors qu'elle en avait assez de chercher dans les magasins d'alimentation des smoothies de qualité,

frais et surgelés. «Ceux que vous retrouvez sur les étagères sont faits à partir de fruits en purée et pasteurisés, précise-t-elle. Ils ne sont pas vraiment frais et crus ni intéressants, et leur durée de conservation est courte».

Bien que les smoothies surgelés durent plus longtemps et contiennent de meilleurs ingrédients, explique Mme Poulin, les choix se limitaient principalement aux produits à base de fruits. «Cela signifie que vous devez acheter, ajouter et mélanger les protéines et les autres ingrédients que vous voulez, commente-t-elle. Ce n'est pas une tâche simple, et ça coûte plus cher en temps et en argent. De plus, si vous en voulez un pour déjeuner, vous devez utiliser un mélangeur, qui est bruyant le matin quand tout le monde dort encore».

C'est ainsi que Mme Poulin a commencé à faire de petits lots de recettes originales de ce qu'elle appelle des smoothies «plutôt complexes» de déjeuner. «J'utilisais des fruits, des légumes, des protéines végétales texturées et des superaliments comme le chia, se souvient-elle. Ces aliments sont amusants à préparer et ils sont si bons pour vous, parce qu'il est facile d'intégrer des ingrédients à haute valeur nutritionnelle comme les algues, les graines de citrouille et le baobab».

Mme Poulin a également eu l'idée géniale de congeler ses préparations maison en petits cubes s'incorporant facilement dans un verre. Les cubes fondent en quelques minutes après avoir été mélangés et brassés avec de l'eau, du jus, du lait d'amande (son préféré) ou tout autre liquide. Voilà! des smoothies instantanés sans utiliser de mélangeur. Selon Mme Poulin, il fallait quatre (maintenant trois) cubes ou doses pour concocter un smoothie ordinaire et huit (maintenant six) pour en faire un véritable smoothie déjeuner.

Enthousiastes à l'idée de partager leur découverte bénéfique pour la santé avec le monde, Mme Poulin et M. Dubé ont créé une page Facebook via laquelle ils ont offert à leurs amis et à leur famille l'occasion de goûter leurs cubes faits maison. «La réaction a été immédiate, beaucoup de gens étaient intéressés», confie Mme Poulin à propos des cubes, que le couple fabriquait en petites séries et surgelait dans des sacs en papier brun. «Nous avons donc décidé de pousser l'expérience un peu plus loin en les vendant dans les paniers à provisions locaux, ce qui a également très bien fonctionné. Nous nous sommes ensuite lancés dans la sollicitation au hasard de magasins d'alimentation».

La nouvelle entrepreneure raconte que les propriétaires et gérants de magasin adoraient la nouveauté du produit, qui s'avérait unique dans la section des aliments surgelés. En un rien de temps, le couple approvisionnait 20, 40 puis 100 magasins et plus. «C'est là que nous avons réalisé que nous avions une entreprise», exprime Mme Poulin avec humour.

Ils lui ont donc trouvé un nom: Evive, un mot original issu d'une séance de remueméninges avec son partenaire, expose Mme Poulin. «Ce nom évoque l'esprit de revivre (renouveau spirituel ou physique) et c'est un palindrome (se lit en commençant vers la gauche ou la droite), un peu comme le cercle de la vie».

Au départ, la production se faisait à la main — ces mains appartenant au couple d'entrepreneurs et à une demi-douzaine d'amis et membres de la famille — souvent dans la cuisine spacieuse de la maison des parents de Mme Poulin. En 2016, ils ont déménagé leur production dans une petite cuisine commerciale qu'ils louaient les soirs et les fins de semaine.

À ce moment-là, ils ont innové côté présentation en assemblant des rondelles de smoothies surgelées comportant huit pointes coupées séparément. La demande pour le produit a continué de croître jusqu'au début de 2018, lorsqu'Evive lança une plateforme de vente en ligne avec un programme d'abonnement mensuel à travers le Canada.



"We see every one of our cubes as a stone or a building block that help people lead healthier lives."

Les frais d'abonnement de 45 \$ comprennent l'envoi gratuit d'une boîte de 12 smoothies surgelés. Six recettes sont actuellement offertes, dont une demeure exclusive aux ventes en ligne. «Nous livrons un peu partout, mais surtout au Québec, en Ontario et en Colombie-Britannique», indique Mme Poulin, ajoutant que le programme compte maintenant environ 3500 abonnés.

Les produits Evive sont maintenant également vendus dans plus de 700 magasins 🥕

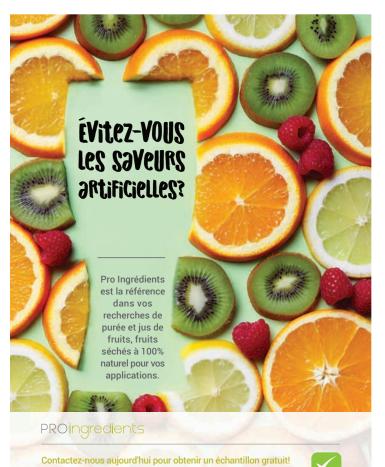


PROFIL D'ENTREPRISE

au Canada, dont environ 300 au Québec. Les emballages de magasin contiennent trois smoothies — l'équivalent de trois déjeuners ou six collations, sans gluten ni OGM et certifiés biologiques — pour 9,99 \$.

Afin de fournir à la demande, le jeune couple d'entrepreneurs a récemment déménagé leurs installations de production au Centre de recherche et de développement de Saint-Hyacinthe, un incubateur d'entreprises agroalimentaires exploité par le gouvernement fédéral situé à une demi-heure au sud de Montréal. Onze employés répartis sur deux quarts de travail mélangent, moulent et surgèlent quotidiennement les produits Evive prêts à être expédiés à l'aide d'un système semi-automatisé, lequel s'automatisera davantage lorsque les propriétaires déploieront du matériel nouvellement acheté. «Fabriquer et expédier des produits surgelés représentent un défi», a fait savoir Mme Poulin par téléphone depuis les bureaux d'Evive à Montréal. «Mais nous apprenons constamment et nous le faisons de mieux en mieux».

L'entrepreneure mentionne que les affaires ont monté en flèche depuis le début de juin 2018, moment où le couple a participé à l'émission Dans l'oeil du dragon à Radio-Canada. Ils se sont présentés sur le plateau avec en tête d'obtenir 100000 \$ en échange d'une





participation de 10% dans leur entreprise. Ils ont fait valoir aux cinq entrepreneurs québécois vedettes de la populaire émission télévisée qu'Evive avait réalisé 550000 \$ de ventes en 2017 dans plus de 500 magasins. Et que cette année, alors qu'ils livraient désormais leurs produits dans d'autres provinces canadiennes, ils s'attendaient à ce que leurs ventes s'élèvent à 1,5 million de dollars.

Ils ont expliqué qu'ils cherchaient à la fois du financement et du réseautage pour accroître leur présence sur le Web, augmenter leur nombre de points de vente à plus de 1000 magasins et accroître leurs

activités de marketing, comme d'organiser des dégustations en magasin. «Nous voulons devenir des chefs de file canadiens dans le domaine», a déclaré M. Dubé lors de l'émission.

Deux des dragons leur ont fait des offres concurrentes qui reflétaient ce qu'ils croyaient être une surévaluation de la valeur de l'entreprise. Mais le jeune couple est resté sur ses positions, déclarant avoir investi 200 000 \$ de son propre argent dans l'entreprise et réitérant être convaincu de son succès à la lumière de la croissance de ses d'affaires. Ils ont finalement accepté une participation de 15% dans leur entreprise en échange de 100000 \$ en provenance de l'actrice et entrepreneure en bijouterie Caroline Néron ainsi que de Martin-Luc Archambeault, créateur de l'application mobile pour téléphone cellulaire AmpMe.

«Nous sommes heureux de la tournure des événements», estime Mme Poulin en parlant de leur présence à l'émission. «Ce fut une expérience fantastique et l'effet a été très bénéfique sur l'entreprise». Parmi ces effets, elle fait remarquer le bond prodigieux de 800% des ventes depuis la diffusion de l'épisode. «Nous avons dû réajuster nos prévisions de ventes annuelles pour 2018, lesquelles pourraient atteindre 3,5 M\$», croit-elle.

Pour l'instant, l'objectif qui prévaut pour M. Dubé et elle, qui viennent tout juste d'avoir 27 ans, est d'aider Evive à devenir rien de moins qu'une entreprise alimentaire prospère de renommée internationale. «Nous voulons continuer à développer d'autres recettes composées d'aliments biologiques qui offrent la même qualité et la même valeur nutritionnelle aux gens de partout dans le monde, conclut Mme Poulin. En ce moment, Evive est notre bébé». •

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