CHOCK FULL OF CHOCOLATE

Canadian family with long history in the cookie industry takes pride in raising the beloved Laura Secord image to new heights of packaging glory

The Leclerc family, now led by the Laura Secord president Jean (*above*) alongside his brother and vice-president Jacques, has remained at the forefront of the Canadian snack-food industry for over 100 years.

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PHOTOGRAPHY: MARIO JOBIN

It's probably a testament to the manufacturer of the delicious chocolates that its products are more well-known in Canada than the historical heroine for whom it was named after.

To set the record straight, Laura Secord was in fact a real-life heroine of the War of 1812 between British-held Upper and Lower Canada and the still fledgling United States of America, but was never a chocolatier and never ran a business hawking chocolates.

However, back in 1913 Frank P. O'Connor opened a small candy store in Toronto, where he sold hand-made chocolates. He named his store after the same Laura Secord, who was still fondly remembered 100 years later as a Canadian symbol of courage, devotion and loyalty.

While the **Laura Secord** company initially sold chocolates, confectionary and ice-cream, over the next 100 years, it has experienceed tremendous success and transformation, now selling its high-quality, premium goods to an appreciative customer base that extends across North America.

Purchased in 2010 by the Leclerc Brothers, Jean and Jacques, the company is once again going through a profound transformation thanks to these gentlemen from Quebec City, who have been working in the confectionary and chocolate industry their whole life.

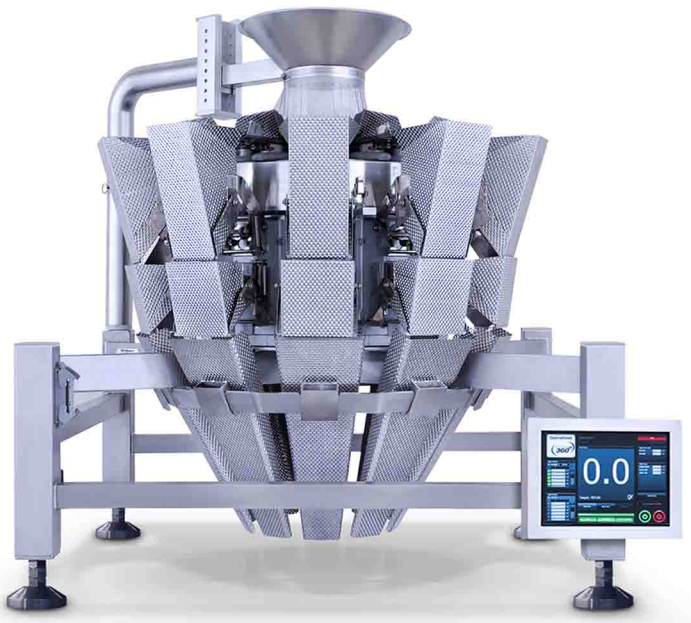
If the name sounds familiar—and it should—the Leclerc family began the well-known and well-respected **Group Biscuits Leclerc** baked goods business producing cookies and snack products back in 1905.

Nowadays, the Leclerc brothers own and operate Laura Secord and **Nutriart Inc.**

Purchased in 2005 by Biscuits Leclerc, Nutriart employs 71 people out of its plant and headquarters in Quebec City. Operating as a separate entity owned by the Leclerc brothers since 2009, it manufactures peanut-free chocolates from cocoa beans that it produces and sells in both liquid and solid form, along with offering: fruit purées, caramel, yogurt coating, compound chocolate, chocolate bars and various inclusions such as chocolate chips and chunks.

Jacques is the president of Nutriart and Jean its vice-president, "But, in a complete flip-flop of responsibilities, I am the president of Laura Secord, while my brother Jacques is its vice-president," Jean Leclerc told ***Canadian Packaging*** during a recent interview.

Laura Secord currently owns and operates 108 stores



WeighPack's PrimoCombi is a multi-head weigher equipped with Windows PC controls and free online support.

A close-up view of clean, legible lot code data applied to the thin protective layer of film covering chocolate-coated cookies by a Domino A320i inkjet printer.

across Canada and has two head offices—one in Mississauga, just west of Toronto, and one in Quebec City—with a total of about 1,000 employees.

Today Laura Secord ranks as Canada's largest and best-known chocolatier selling a very wide variety of premium-quality chocolates, including dark chocolate, white chocolate, flavored and pure chocolate, and an assortment of unique confectionary items.

Along with being able to purchase the delicious chocolates at the Laura Secord stores, customers can also purchase the iconic brand in pharmacies and grocery stores across Canada.

Prior to the Leclerc brothers' purchase, Laura Secord chocolates were actually manufactured in Pennsylvania, but were not readily available in the U.S., which is something the Leclerc's say they hope to remedy soon. Excluding the *Laura Secord* brand chocolates, Leclerc says the Nutriart chocolates are delivered to clients across Canada and the U.S.

"Of course, customers who visit our stores can also purchase ice-cream and other treats such as caramel crunch and chocolate fudge," says Leclerc, noting that about 15 per cent of the products sold by the stores are manufactured by an outside third party.

"Still, with over 400 products under the Laura Secord brand, we continue to use the time-honored recipes," relates Leclerc. "Why mess with a very good thing?"

Adds Leclerc: "At Nutriart, we produce only chocolate-based products, which means we make products ranging from a simple high-quality 100-gram chocolate bar to chocolate-coated wafers, and everything in-between.

"But what is extremely important to us is maintaining the reputation Laura Secord brand chocolates have with the consumer. Whether it's through providing excellent customer service or dedicating ourselves to stringent quality controls, we backup every product carrying our name with an unconditional guarantee of quality."

Leclerc says that it's been within the past two years that they began to develop licensed products for the Laura Secord brand with trusted partners.

He says that just in time for the holiday season this December, partner **Top Desert** will be launching a full collection of ***Laura Secord Sorbets***, along with other frozen deserts. For its part, **Brands Unlimited** will also be launching a full collection of Laura Secord gift baskets, with Leclerc promising that more innovative ideas will be forthcoming soon.

The Leclerc brothers are in full agreement about the fairer sex being their primary targeted customer base.

"We know that women are big chocolate consumers, and they are therefore certainly a big part of our target market," explains Leclerc. "They are the ones buying chocolates for kids and purchasing gifts for others, and even for themselves."

Back in Time

This helps explain why three years ago the Leclerc brothers decided to revise the iconic Laura Secord image of the bonneted heroine of 1812.

While Leclerc is adamant that no one at the company was ashamed of the age of the company or its image, they simply looked at creating a more modern version of Laura, as if she was still around in 2013, as a way to attract younger consumers and invigorate the brand.

There is a bit of a blurring of lines when it comes to the two businesses operated by the Leclerc brothers, but whereas Laura Secord does not manufacture for Nutriart, Nutriart does produce a fair bit for Laura Secord.

Prior to the Laura Secord purchase, Nutriart was a plant without a brand, and Laura Secord was a brand without a plant—so it was a perfect match, and one of the reasons why the Leclerc brothers purchased the Laura Secord business.

Operating under the Nutriart banner, Laura Secord produces the majority of its products within a 250,000-square-foot *HACCP (Hazard Analysis Critical Control Point)*-certified processing facility in Quebec City, with Leclerc adding that it will be *GFSI (Global Food Safety Initiative)*-accredited by early 2014.

"There is no Laura Secord facility as such," he says. "About 85 per cent of Laura Secord's products are actually made at the Nutriart facilities in Quebec City, but Nutriart is the larger business, with the Laura Secord production accounting for about 10 per cent of its total production.

"However, Laura Secord is certainly the far better-known of the two entities when it comes to consumers."

According to Leclerc, Laura Secord processes two billion cocoa beans per year to produce some 50 tons of chocolate daily.

"The majority of our cocoa beans are purchased in the Ivory Coast of Africa, and a smaller amount of a different cocoa bean from South Africa," explains Leclerc. "We have very specific requirements for bean quality."

Accoding to Leclerc, the Nutriart manufacturing plant can operate three shifts in a 24-hour workday, five days a week.

Says Leclerc: "We don't currently manufacture during our night shift, which leaves us the oppor-

Laura Secord / Nutriart utilizes a 10 Head PrimoCombi 2.5L multihead weigher and XPdius vertical form & seal bagging machine, manufactured by WeighPack Systems to ensure accurate pack fills of chocolates produced at the company's 250,000 square-foot facility in Quebec City.

A Leclerc Robotique machine uses a Fanuc Robotics M-3iA/6S robot for quick and accurate pick-and-place of individual chocolate pieces from one line onto another.

The Quebec City plant operates four Loma Systems metal detection units and one LCW 3000 checkweigher system to ensure optimal product qualityand weight accuracy.

tunity to increase our production even more in the future. In the meantime, we do a thorough cleaning of the equipment and premises during that night-shift time."

This past summer Nutriart expanded its operational footprint when it purchased a warehouse next door, with plans to make it the primary distribution center for the *Laura Secord* brand.

The manufacturing plant has seven production lines running at any given time, including:

- Two dropping lines for chocolate chunks, pellets and pastry sticks;
- One molding line for chocolate bars, pieces, etc.;
- An enrobing line;
- One panning line;
- One line to form and produce seasonal products, such as miniature chocolate Easter Eggs;
- Two lines of conching (surface scraping), which Leclerc describes as topping and creating a chocolate compound.

As with any quality product, great care is taken by the manufacturer to create it.

When the cocoa beans arrive at the Nutriart facility, they are throroughly cleaned to remove foreign materials such as rocks or dirt, and then stored for processing.

After steaming and roasting, the beans are cracked and sieved, with the shell vacuumed away. After crushing, the beans are milled and turned into a chocolate liquor.

It is at this point in time that the process can be altered to create the desired recipe, with the liquor mixed with sugar, cocoa butter and milk powder.

The paste that comes out then gets refined via a five-roller machine.

"This is where the particle size really makes a big difference," says Leclerc. "The more pressure the refiners apply, the finer the chocolate."

After it is broken down in a powdery form, the chocolate is moved into a conche for an eight-hour period, where it is beaten and heated at a high temperature to achieve just the right flavor and richness of the chocolate, according to Leclerc.

The resulting mix is then blended with more cocoa butter to achieve a silky smooth texture, before being transferred to 45,000-kilogram tanks.

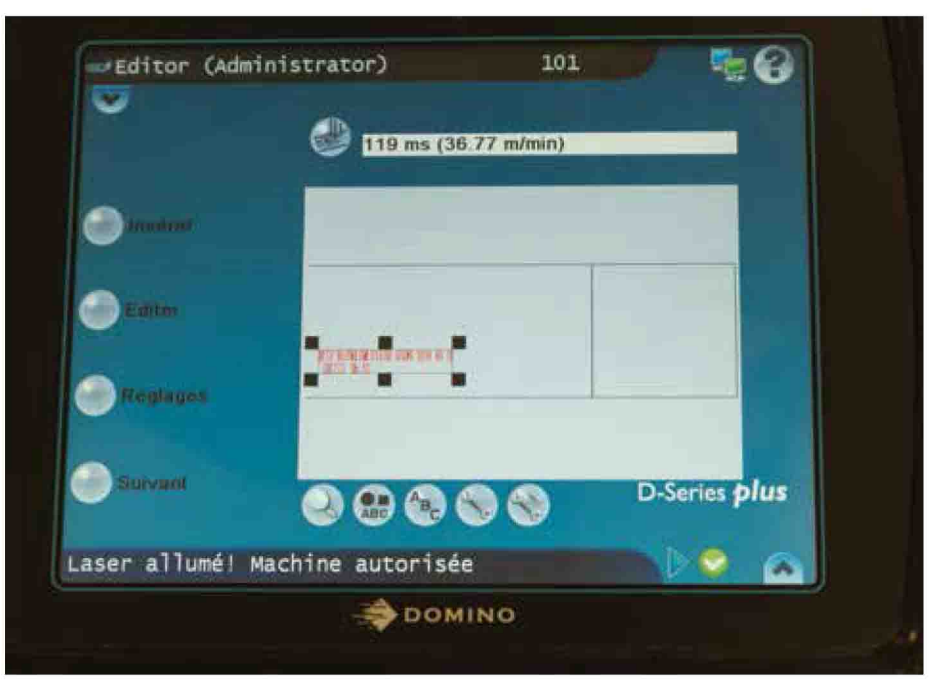
This chocolate mass is then ready for further processing, such as molded shaping, after which it is placed into refrigeration to harden.

"Once the product exits the refrigeration part of the line, the chocolates move directly to the packaging area," explains Leclerc.

The chocolates are then hand-placed into trays and then are conveyed to a new wrapping machine purchased earlier this year—a ***CM Fima*** from **Carle & Montanari-OPM s.p.a.**—that wraps the trays of chocolates at a speed of 400 units per minute.

Before the tray of plastic-wrapped chocolates is placed in a presentation box, each tray is labeled with lot code information on the plastic film by an ***A320i*** continuous inkjet coder from **Domino Printing Sciences plc**, one of the plant's three model *A320i*'s.

After the trays are placed in a box, each box of chocolates is labeled again with the best-before date and lot number data by one of two Domino ***D100+*** laser coders.



A close-up of the easy-to-use control panel on the D100+ laser scribing system used to mark the outer packaging, either tray boxes or bar wrappers, with the best-before data.

Code of Conduct

After coding, each box is sealed by the automatic hot-glue **Nordson *ProBlue 7*** adhesive applicating system and placed into master cases by hand before being sealed and placed onto a pallet and taken to a stretchwrapper, where it is prepared for either warehousing or immediate delivery to the customer.

Leclerc says he is equally happy with the performance of both Domino systems to date.

"Domino makes great equipment," he says. "We find that the A320i inkjet systems offers us an impressively great low total cost of ownership."

Founded in 1978, Domino has a global network of 25 subsidiary offices—including Canada—developing, manufacturing and selling total industrial coding and printing technologies.

According to Domino, the low total-cost-of-ownership is enabled by the use of a new ***i-Tech***—intelligent technology—service-free ink system that delivers ultra-low make-up usage, which reduces costs and operator intervention.

The robust and easy-to-use *D-Series plus* line is considered to be a highly versatile range of industrial scribing lasers, which Domino says was designed to provide high-quality coding across a wide range of production speeds.

Laura Secord/Nutriart uses a Domino ***DPX*** fumes extractor on the *D100+* laser line to ensure efficient extraction of fumes and particles for a safe and clean working environment.

"We bought from Domino because of the industry-wide respect for the reliability of the equipment," explains Leclerc.

A close-up view of the Domino D100+ laser coder quickly applying best-before data and lot-code information onto the Laura Secord 40-gram Milk Chocolate bar wrapper.

The finished product of a 40-gram Mik Chocolate bears a permanent laser-scribed coding applied by the Domino D100+ coder at the Laura Secord/Nutriart plant.

"As well, we felt that the cost-of-use was less than the competition, as well as posessing a very efficient service team".

"Whenever we experience a problem with one of the coders - and such problems are actually very rare - the Domino team always finds an effective solution quickly and without delay.

"The quality of their equipment is excellent, and the coding inscriptions are very visible and high quality," Leclerc states, adding that the most recent Domino purchase at the plant was for an A320i installation in early 2013.

"We use that particular machine to print onto our new bulk-bag products," relates Leclerc. "Right from the get-go, as soon as it was installed, it worked right away and without any problems."

Another piece of impressive machinery at the Laura Secord/Nutriart facility is a pick-and-place work cell from **Leclerc Robotique.**

Founded by the Leclerc family in 2004, Leclerc Robotique specializes in the integration of industrial robots and automation processes.

The Leclerc Robotique picker at the Laura Secord/Nutriart facility utilizes a ***M-3iA/6S*** four-axis robot, manufactured by **Fanuc Robotics**, to quickly and accurately pick individual pieces of chocolate candy from the manufacturing line and place them neatly into a second line for further packing.

The M-3iA/6S robot utilizes a Fanuc ***iRVision Visual Tracking*** system that aids the speed of the robotic accuracy in picking chocolates placed at various angled from the first moving conveyor.

According to Fanuc, encoders within the tracking system allow for greater speed, position and direction inputs for accurate location of the individual chocolate pieces.

The Nutriart facility also utilizes a 10-bucket ***PrimoCombi*** and bagging unit designed and manufactured by the Montreal-headquartered **WeighPack Systems,** which is used by chocolate manufacturers to run at a speed of up to 30 bags per minute depending on product weight.

As appropriate weights of chocolates are released by the weigher, the product passes through a vertical ***XPdius*** bagger from WeighPack as well as a **Fortress Technology *Phantom*** metal detector unit.

The *Phantom* metal dectectors are rugged units offering a heightened stability with excellent sensitivity performance, thanks to their *DPS (Digital Signal Processing)* technology. As well, the system's *AutoCal* (Automation Calibration) is quickly set with the touch of a button, enabling quick production line startups.

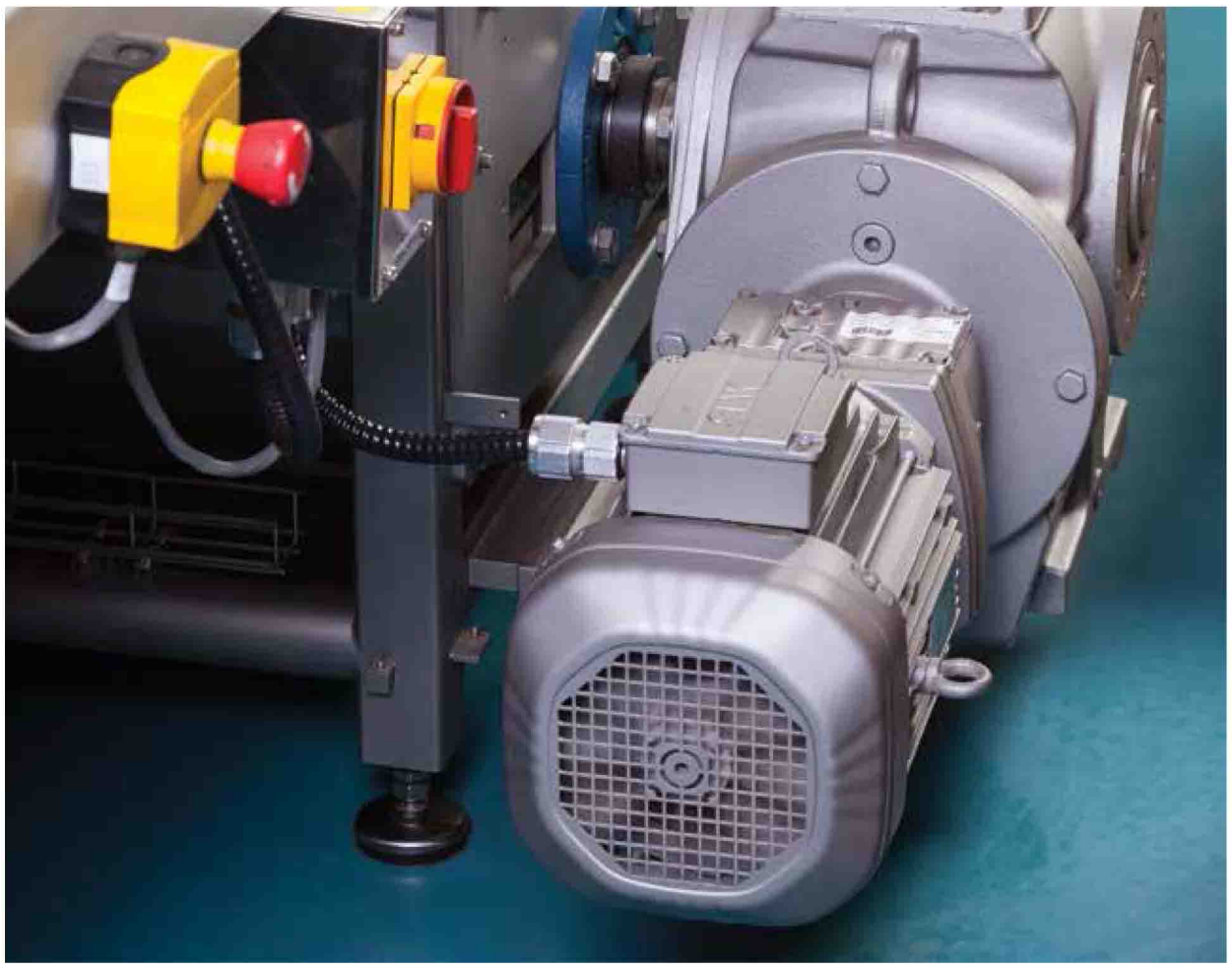
The facility also operates four metal detection units from Loma Systems, including the IQ^3 model, as well as one LCW 3000 checkweigher also designed and manufactured by Loma.

The LCW 3000 is a versatile machine designed to handle all types of flexible and rigid products and packages, according to

For Laura Secord and Nutriart, the LCW 3000 checkweigher offers full advantage of being hygenic and easy to maintain, providing excellent line speeds up to 325 feet per minute, while being

The reverse side of a D100+ laser coder, inscribing lot-code data onto a paperboard package before it is sealed by Nordson's ProBlue 7 hotmelt adhesive applicator.

A Leclerc Robotique case-erector uses Festo pneumatics (*inset*) to form corrugated cartons in a swift, gentle motion.



Perched on the floor, a SEW-Eurodrive motor provides smooth movement and power to the conveying system within the Leclerc Robotique pick-and-place robotic workcell at one of many production lines at the Laura Secord/Nutriart plant.

Featuring a Rockwell Automation Allen-Bradley PanelView Plus 700 operator touchscreen, the easy-to-use CM Fima wrapping machine, manufactured by Carle & Montanari, quickly foil-wraps individual pieces of chocolate.

able to handle package weights up to 6.6 pounds.

Other notable packaging and supplier equipment utilized at the Laura Secord/Nutriart plant includes:

- One **Anritsu** X-Ray system purchased from **Abbey Packaging**;
- a Leclerc Robotique carton erector;
- an ***Econoseal*** horizontal carton erector built by **Econocorp**;
- **Nordson** hot-melt adhesive applicating systems for sealing snack-packs;
- Chocolate boxes manufactured by **Jones Packaging** of London, Ont.;
- Corrugated cases are from **Norampac, a Div. of Cascades Canada**;
- ***3M-Matic*** case sealers manufactured by **3M Company**.

For Laura Secord, being green does not just mean its delicious ***French Mint*** chocolates.

"Sustainability is very important to us," explains Leclerc.

"We are in the process of installing a brand new furnace that was designed specifically for us to allow us to heat our premises by burning all the refuse cocoa bean shells rejected from the chocolate-making process."

Leclerc points out that at store level, customers are asked if they would like a bag, and if they answer yes, they are always provided one made from recycled materials.

Within the packaging itself, molded trays inside are now made of corn-based materials and are 100-percent biodegradable.

"By standardizing many of our box formats, we have reduced production time and, therefore, our energy consumption," Leclerc notes.

"In addition, we have optimized our box-production planning processes, thereby considerably reducing the number of our deliveries and cutting our CO_2 emissions."

It's all part-and-parcel for Laura Secord, as it continues to support responsible cocoa cultivation, sound environmental management, respect for all communities, and recognition of international fair labor standards and more.

"For Laura Secord, the packaging is the core of our marketing strategy since we adapt the way we do business in accordance to every big holiday during the year," sums up Leclerc.

"It's our mission to offer best-quality products in a package that's going to please our loyal customers and to attract new ones."

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