2014 OPERATIONS Executive of the Year
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Also inside: Venus Wafers
To grow a regional bakery for national accounts, Venus Wafers finds success in knowing and sticking to its niche.

by Charlotte Atchley

When Napoleon Barmakian immigrated to the US, he was a jeweler by trade. He settled in Boston to work as a diamond cutter, and when his wife, brothers and their wives joined him in the US, he and his brothers opened Barmakian Brothers Jewelry Store. That wasn’t enough for Napoleon, however. He wanted to do something more, so he turned the jewelry business over to his brothers, and in 1931, he opened Venus Wafers and began making lavasch crackers and selling them door-to-door in Watertown, Belmont and other suburbs of Boston.

In 1948, Napoleon’s sons, Aram and Ed, took over the business. At first, most of the company’s business was restaurants and institutions, but in 1960, Venus Wafers took on Hickory Farms as a customer, and the company has grown by leaps and bounds ever since.

After multiple moves around the Boston area to make room for the expanding business, the bakery now resides in Hingham, MA, in a 30,000-sq-ft space Venus Wafers moved into in 1981. Seven years ago, the company had to move its offices and warehouse into a separate building up the road to make room for the growing operation. The business has expanded from four to five items at its founding to 50 SKUs in branded products and more than 100 private-label products. And the company still sells to some foodservice customers as well.

Today, Aram’s son, Luke Barmakian, owns the business and operates under the same principles on which his grandfather founded Venus Wafers: natural, nutritious crackers and flatbread that taste good.

Niche evolution

It is important for any business, but particularly a small one, to recognize its wheelhouse and stick with it. That is what Venus Wafers has done by building a product portfolio that stays true to its roots as a producer of crackers and flatbreads. While it’s true, Venus Wafers has evolved its products to meet consumers’ changing tastes, its managers have never forgotten that the company is first and foremost a producer of natural specialty crackers.

"In the early years, we did salt-free, whole wheat crackers. As times changed, we grew into fat-free crackers, and now we’re doing a lot of lavasch, GMO-free, all-natural crackers," Mr. Barmakian said. "We’ve always been all-natural since day one. We’ve never used additives or anything like that."

The lack of definition associated with natural, however, led Venus Wafers to pursue certifications such as organic and non-GMO. Labels such as USDA Certified Organic or Non-GMO Project Verified carry some weight.

As the regional bakery wanted to gain more national accounts, particularly those on the West Coast where
non-GMO is a prerequisite for getting shelf real estate, avoiding bioengineered ingredients seemed like the next step. When Venus Wafers explored how to reinvent the Mariner brand acquired 10 years ago, non-GMO was the push it decided to give the stone-wheat water cracker.

“That's who we are,” said James Anderko, national sales manager. “We're an all-natural baker. As we were looking at how we could differentiate the Mariner brand after we purchased it, we wanted to give it some oomf. When we introduced it, we were the first ones with a non-GMO cracker.’

Venus Wafers has gone on to make many of their products Non-GMO Project Verified. Haute Cuisine, an entertaining cracker for the gift industry, is GMO-free and vegan. Venus 8 Grain is the organic range and also GMO-free and vegan. CaPeachio's water cracker is Venus Wafers' mainstream brand, and while it’s an all-natural cracker, only some of the varieties are non-GMO. NeJaime's Lavasch flatbread is non-GMO and vegan. The company also offers a delicatessen line of crackers and flatbread packaged in trays and sold in supermarket delis.

Eliminating genetically modified ingredients from its facility has been about working with suppliers and training employees. Venus Wafers' Quality Assurance Manager Fran Haddix already runs a tight ship when it comes to allergens, which puts Venus Wafers ahead of the curve when taking on Non-GMO Project standards. The plant is dairy- and nut-free, and Venus Wafers won't take on any product that violates those principles.

While Venus Wafers products have short ingredient lists — some containing as few as three — switching those formulations to GMO-free wasn't always easy. Finding suppliers who can offer a consistent supply of non-GMO ingredients and adequate documentation to prove it was the key. "They have to show me their certification because I have to show that to the Non-GMO Project," Ms. Haddix said. "The Non-GMO Project has guidelines about what it will and won't accept. It wants to see the testing.'

The company also invested in training its employees in good manufacturing processes, FDA labeling regulations and allergens. Venus Wafers has relied on AIB International, Manhattan, KS, for some training, third-party webinars and in-person training required by the various certifications the company maintains.

Sanitation is also a challenge because the company's organic certification requires a stricter cleaning process than the more conventional products. A sanitation crew cleans the bakery to organic standards at the end of the day's production, and organic products are run first on
Consumers' interest in gourmet entertaining crackers has driven Venus Wafers' growth.

Venus Wafers got its start when Napoleon Barmakian began selling lavasch-type crackers to restaurants and institutions in the 1930s. His grandson continues that business today with the Nejamae's Lavasch brand.

the line in the morning when the equipment is pristine.

Non-GMO and organic ingredients also must be kept separate from conventional ingredients. To eliminate this and other challenges, Ms. Haddix said Venus Wafers strives to procure all its ingredients from acceptable GMO-free sources. Currently, she estimated that 99% of the company's ingredients are non-GMO.

Dedicated to agility

Staying true to your niche also applies when talking about operational capabilities. Having only one production line with a 100-ft long, 26-in. wide oven requires that Venus Wafers take certain considerations when taking on new customers. Agility is critical in order to keep the business growing.

"We have fast turnarounds and short runs," said Bob Pollara, chief engineer. "That's our forte. That's what keeps us on the cutting edge." The ability, even necessity, to changeover product quickly and turn orders around quickly makes Venus Wafers a nimble producer.

"We have to remember where we are as a company now," Mr. Pollara said. "If we take on big customers, we lose our flexibility."

Not only must the size of the product runs fit with Venus Wafers' business profile, but the company also won't budge when it comes to the product profile. When a customer comes to the sales team with a formulation, the ingredients must be first approved by Ms. Haddix, who will not allow any allergens other than wheat into the bakery.

When considering a new customer's product, an acquisition or developing a new brand for itself, Venus Wafers takes on products that fit within the existing portfolio. By developing products that are similar, Mr. Pollara can schedule like products to run together, taking into consideration ingredient delivery schedules. This makes production as flexible as possible, and with as many as 10 changeovers possible in one day, Venus Wafers needs every advantage that production scheduling and equipment can offer.

A nimble production line

Every day, a mixer operator arrives at the bakery at 4:30 a.m. After hand-scaling ingredients into the Peerless horizontal mixer, the dough is mixed, 700 lb at a time. While most of the products Venus Wafers makes are straight doughs, during Baking & Snack's visit, the plant was preparing the dough for its Mariner crackers that will rest and then be mixed again with additional ingredients.

After mixing, the dough is placed on a conveyor and chunked to be processed on a Thomas L. Green line. Corrugated rollers sheet the dough into a lapper that turns a 90° corner. The lapper aids development of the dough and laminates it. The dough sheet is then reduced and weighed every 15 minutes to ensure the proper thickness is achieved. Too thin and the crackers will burn. Too thick and the crackers won't bake all the way.

Once the dough has been rolled, reduced and laminated, the cracker shapes are cut by rotary cutters built in-house. The line features three different cutters that can be raised or lowered for a quick changeover that takes just one minute. Just after the cutter and before the oven, the conveyor can quickly be switched out for a sprayer to make sprayed crackers.

After being cut, the crackers enter a Thomas L. Green direct-fired 100-ft oven to be baked. After baking, the products pass through Venus Wafers' latest addition a Radio Frequency Macrowave dryer that addressed a challenge a customer had presented the bakery.

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A potential customer approached Venus Wafers to produce a light-colored cracker. With only the plant's oven, Mr. Pollara had been unable to achieve the proper moisture level without over-coloring the product. He attended the International Baking Industry Expo in 2010 searching for some technology that would address this challenge. He found Radio Frequency's Macrowave dryer. The Radio Frequency post-baking dryer eliminates the final drying requirement from the conventional oven and then heats and dries only the moist interior of the product without adding color. This seemed like the answer to Venus Wafers' dilemma.

However, Radio Frequency did not sell a dryer sized for Venus Wafers' 26-in. wide oven band. Instead of providing Venus Wafers with a larger system that would be too much for the throughput of a regional bakery, Radio Frequency offered a smaller, pilot-line machine previously used for testing at the vendor's facility.

Since installation five years ago, the Macrowave dryer has increased Venus Wafers' productivity 25% and enabled Mr. Pollara to produce a light-colored cracker with a moisture level of 2%. The dryer can take cracker moisture level as low as 1.3% without adding color to the crackers.

"Not only is productivity up, but we also eliminated some checking problems we had on a few of the different products we produce," Mr. Pollara said. "It's been a great addition. Productivity is right where we want it, so now we can go out and make commitments to clients and have confidence in our ability to produce."

Venus Wafers' success with the pilot-line sized system prompted Radio Frequency to introduce the Bantam Series dryers. These dryers feature a smaller, air-cooled generator that makes these systems less costly, easier to maintain and much more suited to a regional bakery.

After the crackers finish in the Macrowave dryer, they move to the packaging line where employees fill trays. The crackers then go through a Formost Fuji wrapper and Econo Seal packer. The products are visually inspected between every step. The bakery also has a Heat and Control vertical form/fill/seal bagger. The two packaging lines can handle trays and pillow-pack. Once the products are boxed in cases, they are driven up the road to the building that houses the company's offices and warehouse and distribution operations.

Venus Wafers' 27,500-sq-ft warehouse does not boast much ceiling clearance, but that isn't a problem, said Dave Seprinski, supply chain manager, because crackers are too fragile to stack high anyway. Venus Wafers adopted this warehouse space seven years ago, moving
storage of everything except raw ingredients to this space. The perimeter is lined with stored packaging while product ready to ship is held in the center.

Tickets for each order are organized on clipboards arranged on a wall in the center of the warehouse. Product is picked and staged for pick-up. "Someday we'll automate our system, but I still like the hands-on approach," Mr. Seprinski said. Triple checks on all the orders throughout the filling and staging process maintain 99 to 100% accuracy. "If an order is late or not filled, there is a good reason," he said. "Usually it's out of the bakery's control like machinery breaking down or a supplier running late on a delivery" Turnaround on products is quick, and production is based on a combination of projection and orders, usually placed 18 days out. During the busy season, fourth quarter, the warehouse fills up quickly. Distributors pick up Venus Wafers' branded products, and private label customers pick up their own. During this time, when the warehouse is filled to the brim, the company can use the 30,000 sq. ft. of space next door. Someday, the company could expand into that space permanently.

Growth within the wheelhouse

For Venus Wafers, the future depends on its commitment to non-GMO ingredients. The future also requires agility. And there's plenty of potential growth existing inside the company's wheelhouse.

While Venus Wafers may have a presence in all sections of the supermarket deli, shelf, specialty — Will Ross, regional sales manager, sees the largest opportunity for growth in the natural channel. "In the cracker category, natural companies are trying to make conventional items with non-GMOs that just taste great," he said. "That's the challenge: to make conventional items that are natural but taste better than conventional." It's a challenge that Venus Wafers believes it has answered.

As consumers' obsession with cracker-friendly superfoods such as chia and ancient grains continues, Venus Wafers expects more growth for its non-GMO portfolio. "I think the brands that we have will continue to grow and become a bigger part of Venus," Mr. Anderko said. One day he hopes Venus Wafers can expand into sweet snacks and gluten-free with a building divided into three dedicated production lines.

Until that day, Venus Wafers will continue to grow in the best way it knows how — playing to its strengths by producing gourmet flatbreads and crackers with agility.
Simple Robust Design
- Perfect for 1 meter wide bands Producing 3,000lbs/hr or less

Low Capital, Installation & Maintenance Costs

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Conventional Baking Oven

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