

Baking Management

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THE ORIGINAL BAGEL COMPANY banks on **PARK AVENUE'S™** growth

Recent capital investments in state-of-the art, customized equipment has this company's premium bagel line heading uptown at 28,000 pieces per hour.

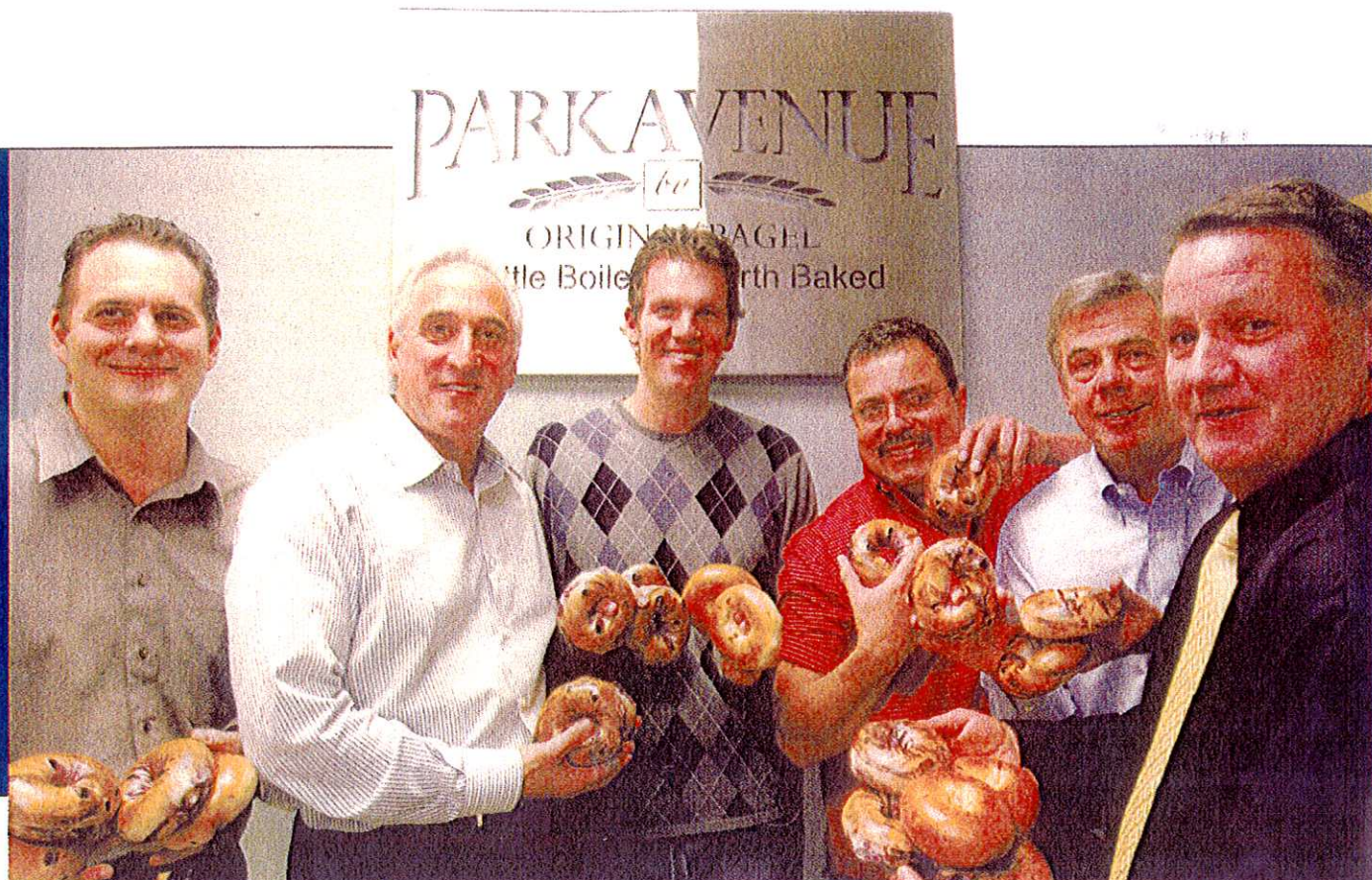
by **Paula Frank**, chief editor

When Bruce Levenbrook and David Harris formed a partnership along with Harris' father Ron to acquire a small bagel operation in Rhode Island in 1995, they never could have imagined the growing pains that lay ahead. Nor could they have foreseen the dynamic, ultra-efficient operation that The Original Bagel Co. would become. Lessons learned over the years convinced the partners that more savvy planning in managing capacity against growth would not only vastly improve efficiency and throughput, but overall product quality as well. Today, the company has the capacity to run 28,000 bagels per hour—more than a five-fold increase over the capacity of just five years ago and more than double the throughput possible before the new equipment arrived in October 2007. Much of this new found ability to manage capacity against growth is because of the

company's most recent investment in a hybridized tunnel oven and high-speed former.

Levenbrook's knowledge of the baking business dates back to his previous entrepreneurial venture in a company he, Ron Harris and his father-in-law founded in 1986, Proof & Bake Frozen Products—a company known for its onion roll made like a cinnamon roll with a challah-based dough, containing fresh onions and poppy seeds. Chicago-based Quaker Oats acquired Proof & Bake in 1994 as a means of expanding its in-store bakery business, leaving Levenbrook in the title role of Eastern regional sales manager. It was his entrepreneurial spirit that prompted Levenbrook to search for a new venture and ultimately the founding of The Original Bagel Co.

Harris had been in California "living the good life" in 1995, according to Levenbrook, but recognized a good



The Original Bagel's management team has been integral to its success. Pictured from left are: Mark Wolfson, vice president, operations; Bruce Levenbrook, partner and C.E.O.; Dave Harris, partner and president; Ernesto Gonzales, production manager; Terry Martin, national sales manager; and Craig O'Connor, director of engineering and maintenance (not pictured: Jeff Fields, Midwest sales manager).

opportunity when offered the chance to partner in the bagel start-up operation. He spent the first year of the acquisition living in Rhode Island, working almost single handedly to fill bagel orders on old equipment that broke down continuously, while Levenbrook looked for a piece of real estate in New Jersey to renovate for bagel manufacturing. Ron Harris was instrumental in assisting financially with the company's start-up.

Although the partners have dealt with the company's rapid growth over the past 12 years with what Harris refers to as "controlled chaos," they feel all of the pieces of the puzzle have finally come together. The company's goal is to produce the best possible product, similar to that produced in a traditional bagel shop, and to manage capacity against growth. With its high capacity forming and dividing line and its new hybridized direct fired tunnel oven producing ever greater numbers of its premium Park Avenue bagel, The Original Bagel Co. seems to be doing just that.

Entrepreneurial growing pains

Levenbrook, Harris and associates have encountered their share of growing pains over the past 12 years, just as any start-up entrepreneurial venture or company experiencing double-digit growth would. Since its inception, Original

Bagel has had three phases of capital improvements. Phase one was the initial start-up when used equipment was moved from Rhode Island to the newly renovated plant in New Jersey. As Levenbrook, who found and purchased the facility explains, "We renovated the entire building because it had been a Pepsi distribution center. We set up this place and closed down the facility in Rhode Island on a Friday. The following Monday we were manufacturing bagels here."

Phase two came about seven years ago with the introduction of the company's premium branded Park Avenue bagel. The company purchased a small boiler set up for 8,000 bagels per hour to produce a premium and authentic, boiled bagel. It also bought more small mixers, formers and ovens to meet the demand created by its new Park Avenue bagels.

The first two phases involved piecemeal growth with small pieces of equipment. "We'd buy a small spiral mixer and partner it with a single lane bagel former to stay slightly ahead of growth, but we didn't have the speed matched on the baking side," Harris says. "We were either over or under capacity in one area of the bakery or the other. All the pieces of the puzzle have to fit together. So, we'd find that our forming was ahead of our baking. Then, we'd buy more ovens, and would find forming unable to keep up with baking capacity. Our equipment purchasing decisions were constant experiments,



(Top) The wing loader system peels bagels off of boards and stages them for the boiling, seeding and baking process at 465 bagels-per-minute. (Right) Bagels are proofed for a minimum of 12 hours similar to those made in a traditional bagel shop.



The plant's two Shaffer mixers, which produce about 1,200 lbs. of dough each, deposit the dough mixture onto a single former capable of producing 28,000 pieces per hour. A new ABI forming/dividing line replaced two formers that individually produced 12,000 pieces per hour. The new former is equipped with a laser that reads the thickness and density of the dough, which scales more accurately, O'Connor notes. In addition, it uses truer indexing for more consistent placement of products on boards.

Boards are then placed on racks and wheeled into a temperature-controlled room for proofing, where the bagels remain for a minimum of 12 hours. "Some companies make it and bake it," Harris says.

"We don't do that. We're old school," O'Connor adds.

Once the bagels are proofed, the boards are placed on a belt and conveyed to a wing loader system, which peels the bagels off the boards, automatically returns the boards for stacking, and then stages and loads the bagels on the belt at 465 bagels-per-minute. The wing-loader was custom designed for the small footprint of the building, and is servo driven for automated positioning. "We can precisely position a product to where we want it to within a tenth of an inch," Wolfson explains.

Bagels enter a boiler, which was custom designed by C.H. Babb for an extended boiling time of 45 to 60 seconds. They then flow into the first seeder before being flipped and seeded on the other side for bagel shop-style, double-sided seeding. Babbco's direct-fired tunnel oven was hybridized to meet Original Bagel's needs. The 111-ft. direct-fired oven with a 12-ft. hearth was equipped for extended boiling time and steam injection. It has the capacity to run high velocity airflow to ensure adequate coloration around the center of the bagel. The bagels then

exit the oven where they travel by overhead conveyors to an I.J. White spiral cooler, which then leads to either the bulk-pack, the sleeve-pack or the specialized pillow-pack.

Harris credits the new oven with two major product quality improvements. The first major difference is the outside crust of the bagel, which reminds Harris of a bagel boiled from a traditional bagel shop. Other manufacturers claim to have a boiled bagel, but run their bagels through a high-speed boiler for only 10 to 15 seconds, he notes.

The second major change is the moistness of the product. "The efficiency of the bake is so good that the bake time is shorter, so the product itself retains a lot more moisture," Harris explains. "You have a nice softness on the inside, which is what we're looking for. That will also add shelf life without any formulation change. For example, bake time used to be 14 minutes, but now we're down to 7 ½ minutes for the same product. We're keeping moisture in the product because we're not baking it out and our throughput is much better. All of these great benefits are achieved from both our custom design changes and the efficiency the oven has with its new technology."

All of the PLCs on the new equipment are set up on modems, so if a machine goes down, either the company's management staff or an outside vendor can log in and repair the problem remotely. As a result, the efficiency that has been built into the baking process has been embraced throughout the company's management and administration as well.

At 30,000 sq. ft., the building's size made equipment installation a challenge. Production was very fragmented before the upgrade, but is a lot more streamlined now. "We started here in May of '95 by setting up the facility with all used equipment because you have to crawl before you run,"

The Original Bagel Company

at a glance

Headquarters: West Caldwell, N.J.

Ownership: Partnership (Bruce Levenbrook, Ronald Harris and David Harris)

Web site: www.originalbagel.com

Management: Bruce Levenbrook, C.E.O.; David Harris, president; Mark Wolfson, vice president, operations; Craig O'Connor, director of engineering and maintenance; Ernesto Gonzales, production manager; Terry Martin, national sales manager; Jeff Fields, Midwest sales manager

Product line: Super premium quality kettle-boiled bagels in 28 flavors: plain, poppy seed, sesame, pumpkin, onion, cinnamon raisin, garlic, whole wheat, honey oat bran, egg, marble, blueberry, rye, everything, eight grain, spinach, sourdough, apple cinnamon, double cinnamon-raisin, chocolate chip, sun-dried tomato, very berry, cranberry orange, variety pack, jalapeño, French toast, wheat bran with oats, harvest

Bagel sizes: 4.25-oz. most commonly sold; 5.25-oz. jumbo bagels; 1-oz., 2.3-oz. and 3-oz. sold mainly to schools

Packaging: About 250 SKUs available. Packaged in a variety of pack sizes, including 7-count sleeve packs and 15-piece pillow packs

Marketing territory: East Coast, Midwest, Southeast, but expanding westward

Plant size: 30,000 sq. ft.


Production lines: ABI forming/dividing line capable of running up to six forming lanes. Babbco hybrid hearth bagel oven with custom-scaled wing loader, double-sided seeding, boiler, steam injection, and high-velocity airflow capabilities. IJ White overhead conveyers and spiral coolers

Plant throughput: 28,000 bagels per hour

Primary customers: In-store bakeries and food service distributors

Distribution: About 75 percent of product sold is picked up at plant by distributors; about 25 percent of product is shipped via common carriers

Number of employees: 50



Individual layers of pillow-packed bagels give vendors the flexibility to use smaller quantities of product without exposing an entire box to freeze/thaw cycling.

Levenbrook says. "There are a lot of challenges, not only in manufacturing, but really being able to financially run a business properly without overextending yourself. Now we're pursuing national accounts to fill the pipeline because of the capacity which we've created."

Baking in high society

Levenbrook and Harris have truly established a brand identity for their company's premium bagels. One of the most unique features associated with the Park Avenue line is its double-sided seeding. The bagels also are fermented for 12 hours on wooden boards, which is a traditional method of proofing bagels.

Most bagels sold by the company are either 4.25 oz. or 5.25 oz. "A traditional bagel is a 4-oz. bagel," Levenbrook explains. "We scale our bagels at 4.25 oz. so the consumer is truly getting a 4-oz. bagel."

Unique packaging also sets the company apart from many of its competitors. The company offers 4-packs, 6-packs and created the 7-pack in a customized sleeve, which sells for the same price as the 6-pack at retail, but looks substantially bigger when they're sold side-by-side. The 15-piece pillow pack is another item of distinction.

Bagels are pillow packed in individual layers of 15, which holds in the freshness. Instead of opening a 75-count box of bulk-packed bagels, the retailer can take out one pillow of 15 bagels at a time, seal the box and return it to the freezer, without fear of freezer burn dehydrating the remaining bagels.

Original Bagel plans to produce a more healthful bagel in light of consumers' demand for more nutritious foods. Interestingly enough, the company developed a whole-wheat bagel based on customer requests, but demand for the product never took off. The company then came up with a wheat bran bagel topped with whole oats. "Our Wheat Bran topped with Oats has completely outsold the traditional whole wheat product and has become one of our top three sellers," Harris says.

The Original Bagel Company's next venture in manufacturing will be the production of an all-natural bagel. "Today's in-store bakery consumer is looking for the same healthful products that are taking over the food industry," Levenbrook says. "It's no longer a 'me too' product that will survive. It's the better product that will survive and that's how we've positioned ourselves with the Park Avenue bagel." ●