



The spiral cooling conveyor incorporates an icing station partway through the cooling process.

Pride and Potential

Breaking into large-scale donut production, Baker's Pride aims to become the biggest little bakery in town.

by Joanie Spencer and Shane Whitaker

In the world of commercial donut production, the new kid on the block has been in the neighborhood for decades.

Although donut operations at Baker's Pride, Burlington, IA, are fairly new — production at its Mt. Pleasant Street plant began in November — the bakery itself has more than 100 years vested in the industry, with the last 30 years producing bread for Aldi, Inc. When the Aldi bakery business was sold in 2007, an investment firm purchased the bakery's Jefferson Street facility, and Baker's Pride was formed in 2008.

For the past 30 years, through growth, decline, economic ups and downs, changing ownership and subsequent revitalization, company president Robert (Rob) Brookhart has done it all, from working the bagging line to heading a facility chock full of 248,000 sq ft of potential. In procuring the Mt. Pleasant Street facility — a former warehouse — the company opened up a whole new world of opportunity for large-scale donut production.

Humble, high-quality beginnings

Mr. Brookhart, who began working at the then-Aldi-owned Jefferson Street facility bagging bread at age 19, is no stranger to hard work and high standards. He spent three decades with the grocery chain, mostly as director of bakery operations, where he was heavily involved in the company's growth as well as quality control. "I was the guy who would show up — unannounced — to make sure things were going as they should," Mr. Brookhart said.

During his time with Aldi and Baker's Pride, Mr. Brookhart has pretty much seen it all, both in the industry and within the walls of his facilities. Today, he applies the supermarket's model of quality and efficiency to Baker's Pride's operations as the bakery ramps up donut production. Relatively speaking, the Aldi model — which focused on about seven or eight SKUs — still

applies to the roughly 45 SKUs Baker's Pride is shooting for, because the approach is still fairly small, controlled and efficient.

Opportunity and potential

In an industry where large manufacturers can find themselves overextended, Baker's Pride actually finds itself perfectly positioned to ride the wave of potential and create its own destiny.

This potential attracted Lou Mastriano, the bakery's vice-president, sales and marketing, to the company. The big draw for Mr. Mastriano, who spent a good chunk of his career in sales for Kraft Foods, was the entrepreneurial angle that Baker's Pride could offer. "I think a lot of people in this business yearn for an opportunity like this — to bring your experience to something that you can create from the ground up," he noted.

Together, Mr. Brookhart and Mr. Mastriano bring the best of large-scale and smaller-scale production to meet in complementary fashion. "He's got the real-world experience out there in the markets, and I have been mainly focused on private label," Mr. Brookhart said.

"Rob's experience is in specific SKUs, high efficiency, high volume; my experience is a broad list of SKUs," Mr. Mastriano noted. "We occasionally — and respectfully — go back and forth on creating the right mix. He says, 'Too many?' and I say, 'Not enough!' That is one of our key strategies: finding the balance — profitably."

To achieve that balance, the company carefully selects the products it rolls out while staying open to conversations with just about any potential customer. At this stage, Baker's Pride seems to be at the right place at the right time. While some manufacturers are running at capacity, others are looking for help. Baker's Pride is positioned to pick up new business while still operating a line that's new enough to quickly adjust to various customer specifications.



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QA Assistant Deb Zimmerman conducts a quality control check in packaging to ensure donuts have reached their desired temperatures after exiting the spiral blast freezer.

But that doesn't mean the executives aren't willing to strategically, but gently, apply the brakes when necessary. "I like to say we can do just about anything, but we may not want to do everything," Mr. Mastriano noted.

The last thing Baker's Pride wants to be is overextended and over-SKU'd. To make sure the company stays headed in the right direction, Mr. Mastriano keeps one critical question in mind: What's the size of the prize? Once Baker's Pride can hone in close enough to ensure that the goals are copacetic, then and only then will they proceed. Otherwise, negotiations are tabled until the opportunity can better serve both parties, perhaps in six months to a year.

"It's really a two-pronged strategy we're trying to achieve," Mr. Mastriano indicated. About half of the opportunities the bakery looks for, he said, involve co-packing partnerships. The second prong includes more traditional and bulk products, in both private label and branded products for supermarket, convenience and box-store channels as well as in foodservice operations, where the bakery is seeing key growth.

In any channel the company pursues, the goal is clear, according to Mr. Brookhart. "The objective is to grow."

There's no doubt the bakery will grow — because at

Line worker Megan Coffey helps remove scrap dough after it has been sheeted, sliced and docked. Next, a guillotine cutter will create the final piece sizes for these long johns.

Baker's Pride, donut business is bustling on Mt. Pleasant Street.

Oz in Iowa

Entering the newly designed production floor is like walking through the doors of the Emerald City, Mr. Brookhart said, describing its "hi-tech" donut line. The bright lights, white walls and floors as well as sweet smells prompt a feeling of magic.

During the past three years, Baker's Pride assembled this line, but not on its own. "In our opinion, we have some of the best equipment available," he said. "We worked with a lot of the name-brand suppliers who have good reputations in the industry."

When selecting equipment vendors for the new donut line, Mr. Brookhart pointed out that in many instances the company's choices were based upon relationships developed through the years. "We've dealt with most all of the suppliers we purchased equipment from, and we had knowledge of them from working with them directly over the years," he added. "But not to this magnitude by any means."

Baker's Pride also looked for equipment that would be easy to maintain.



"One of the biggest areas of importance was the willingness of those suppliers to work with us," Mr. Brookhart continued. "This was a new project for us, and we had to rely heavily upon their expertise."

While the equipment vendors offered assistance with installation and training, the relationships did not end there. "We still call them up and say, 'Hey, something is not quite right here,'" he said. "They will suggest do this or make this adjustment, and sometimes it helps, and sometimes it doesn't, but they are always there."

The line features more automation than what Mr. Brookhart was accustomed, as PLCs tie together all of its operations. "Everything automatically adjusts itself when you have to make minor changes here and there,"

he said. "We have preset programs that we have determined give us the best results to start with, and we work from there."

While employees can make minor tweaks along the line, if taken too far out of spec, the line automatically goes back to its original settings, he explained.

Time to make donuts

The hi-tech donut line produces both yeast-raised and cake donuts, depending on how it is set up. The bakery was making yeast-raised long johns, which it can produce at approximately 10,000 pieces per hour, when *Baking & Snack* editors toured the facility in April.

Two Topos/Redco remanufactured 1,000-lb horizontal mixers with PLC controls prepare dough for yeast-raised donuts. The bakery

Once on the line, always on the line

From his days at an Aldi supermarket bread plant to today's Baker's Pride donut operation, Robert Brookhart, president of the Burlington, IA-based company, has been the bakery's centrifugal force.

Mr. Brookhart began in bakery by bagging bread at age 19 in Burlington's Aldi facility, and he worked for the company until it was sold in 2007.

However, he never truly left the facility, and in some ways, he's never left the line at all.

"I came from production, so I sometimes have a difficult time staying out of production," he said. "I like to be involved, even though I try to step back and give people the reins and responsibility."

Mr. Brookhart looks for employees with a work ethic as strong as his, and he rewards it. This is what he saw in Jacob Quinn, whom he promoted from the production line to assistant foreman and, eventually, QA manager.

But he also strikes a balance between empowerment and involvement. In fact, it's not uncommon to see Mr. Brookhart on the production floor of the Jefferson Street facility, conducting impromptu quality control on his products, inspecting bags on the AMF bagger and pulling a loaf right off the line and checking it, slice by slice.

After all, an AMF bagger was where he got his start, and he hasn't forgotten — and he hasn't left — where he came from.

uses dough concentrates and will mix in 30 to 40% seed dough to impart more flavor into the yeast-raised donuts, according to Jim Eagen, the bakery's director of operations. The bakery starts the day by mixing a batch of seed dough, and it also incorporates trim into its finished dough.

After 15½ minutes of mixing, dough discharges into the hopper of a Topos dough chunker with a twin-belt dough elevator, which delivers pieces to the Moline donut production system. Makeup starts with a rotary dough sheet former. Next, two roller stations ensure consistent depth side to side, and the dough sheet is docked.

To make long johns, cutting wheels slice the slab into

4¼-in. strips, which will produce 6-in.-long donuts. Trim automatically feeds back to the mixing area to be incorporated in future doughs.

A guillotine cuts dough strips into 1¾-in.-wide bars that will make approximately a 2½-in.-wide long john. For quality control purposes, operators pull off dough pieces every few minutes to be hand weighed.

The line also features a rotary cutting station, and cutting wheels can be easily changed to form hexagonal- and ring-shaped dough pieces as well as shells for other yeast-raised donut styles.

Moline flour dusters apply flour on the sheeting conveyors to prevent dough from sticking, and a flour removal system eliminates excess dusting flour prior to proofing. The formed dough pieces enter a spreading conveyor synchronized with the retractable shuttle at the entrance of the proofer.

Long johns undergo a 32-minute proof in the Moline dual-zone pass-through continuous system. Mr. Eagen observed that the first half of the proofer was set at 102°F with 55% humidity while the second part featured a little more heat, 105°F, and lower humidity, 50%, to help dry the product's surface a bit before frying.

The Moline 28-ft direct-gas-fired fryer cooks long johns for 97 seconds at 373°F. Donuts are automatically flipped halfway through the fryer, and flights in the fryer help keep the donuts in place.

Cake donut production begins near the start of the fryer. Two Topos Mondial T-750 350-l planetary mixers create batters, which are transferred using a Topos/Mallet bowl-to-hopper lift and transfer conveyor.

The conveyor between the proofer and fryer flips up, making room to roll in the Moline DonutKing depositor, which dispenses batter directly into the fryer. Cake donuts range from ½ to 3 oz.

The line can make about 20,000 large cake donuts, 29,000 mini cake donuts or 72,000 cake donut holes per hour.

Transforming Baker's Pride into a donut powerhouse took a skilled bakery management team: (from left) Lou Mastriano, vice-president of sales and marketing; Richard McCoy, director of operations, Jefferson Street; Rob Brookhart, president; Jim Eagen, director of operations, Mt. Pleasant Street; Jacob Quinn, QA manager; and Rita West, human resources manager.

A brand to hang your hat on

Part of the sales strategy for Baker's Pride, Burlington, IA, is ensuring that the bakery is the right fit for the right customers, without diving into more SKUs than the company is comfortable with. To accomplish this, according to Lou Mastriano, vice-president, sales and marketing, the bakery must understand the objectives of each potential customer. "First, I take a step back and define the strategy for how a customer wants to grow its private label," he said. "When I know that, I can lead with the private label hat or the branded hat."

Front and center on the "branded hat" is the bakery's Flint Hills brand, which represents Baker's Pride as a local bakery, as well as a manufacturer, Mr. Mastriano noted. The brand name emerged from companywide brainstorm that offered up more than 100 possible names. From those, the company narrowed the search and chose the Flint Hills brand. "It's a beautiful fit because it represents the history of the area, and it also has legs to take it much further along," Mr. Mastriano said.



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A glazing station can be set up on the line prior to the donuts entering an IJ White cooling spiral.

This ambient-temperature spiral features an icing/set system. After an initial cooling stage, the donuts can be conveyed through the Topos/DCA remanufactured icing station immediately followed with a Christy Manufacturing topping system, also remanufactured by Topos. To allow cleaning access, this system is configured as a bypass between two tiers of the cooling conveyors. Operators can select cooling times using a PLC touchscreen system.

After exiting the spiral cooling conveyor, yeast-raised donuts can be diverted to a Tromp injector system that automatically fills donuts with creme or jelly. The donuts flip on their sides when entering the filling station, using flighted conveyors to hold donuts in place. Sensors tell the injector equipment when a donut is not in position so it will not make a deposit and create a mess along the line.

Cake donuts can be sent to any of the four sugaring machines located on either side of the conveyor system. Four 2,000-doz-per-hour sugar tumblers — two new systems from Topos and two Topos-remanufactured DCA units — coat donuts in powdered sugar or cinnamon sugar. Yeast-raised or cake donuts may also bypass these stations and travel directly to the IJ White spiral blast freezer.

Mr. Brookhart said blast freezing prior to packaging represents a unique aspect of this bakery's operations. "Because product is frozen when it is packaged, we have no damage," he noted.

However, Mr. Brookhart observed that blast freezing also makes an exceptional product. "The quick freeze has shown great value as far as assuring product quality when thawed," he said. "We have done significant testing and held products right at six months. When you thaw it out, you wouldn't know that it wasn't freshly made."

Donuts enter the blast freezer at waist level and exit at the top. Long johns dwell 32 minutes in the -20°F freezer



Maintenance employee Shawn Whitmore looks on as proofed long johns enter the 28-ft-long fryer, where they will cook for 97 seconds.

Baking breads on Jefferson Street

Baker's Pride, Burlington, IA, also wants to build its breadmaking business at its Jefferson Street plant. The 32,000-sq-ft brick bakery, located in the downtown area of the Mississippi River community, features two processing lines, one making loaf breads and the other more specialized breads, buns and dinner rolls. Richard McCoy serves as its director of operations.

The plant includes two Shick 160,000-lb flour silos as well as Great Western sifters. A Shick bulk system delivers flour to hoppers above the mixers. The bakery follows the sponge-and-dough process.

Mixing is located on an upper level of the plant, so dough feeds by gravity into the Oshikiri four-pocket divider. After dividing, dough pieces roll through a Baker Perkins rounder, and then the dough balls travel to a Peerless sheeting and moulding station. The dough drops into strapped pans previously conveyed under a Mallet pan oiler.

After proofing 55 minutes, the pans are unloaded and travel under a Burford sprayer and topping machine before entering the Baker Perkins lapped oven. After baking, breads are depanned and travel through an overhead race-track conveyor for a 55-minute cooling cycle before entering the packaging area.

The bakery runs two packaging lines. The bread line features Bettendorf Stanford slicers and an AMF 50D bagger, and each packaging line ends with a Burford twist-tyer.

Despite its age, this plant and its systems have been extremely well maintained, and as such, it continues to efficiently produce quality breads.

to reach an internal temperature of 12 to 14°F before exiting, Mr. Eagen said.

The freezer includes four cooling banks, and each goes through an automatic coil defrost cycle during a 24-hour period to keep it running at high efficiency. It features an insulated stainless-steel floor with proper drainage for its clean-in-place system.

Dunbar Systems worked with several of its preferred vendors to source equipment for the bakery's packaging operations, helping to find the correct blend of automated and manual processes. After exiting the freezer, donuts travel along Benda Manufacturing conveyors through packaging. A Weigh Right bulk net weighing system drops donuts into poly-lined boxes formed on a Little David case erector with taper. A menu-driven conveyor control system makes automatic packaging diversion possible.

The bakery also hand-packs clamshells and then case-packs those products. Mr. Eagen said he expects the company will invest in additional packaging formats such as mini bags and form/fill/seal machine sleeves as it builds clients.

After packaging, donuts are kept in a holding freezer at -10°F until they are shipped.

"When running absolutely perfect, I can operate this line with as few as eight people," Mr. Eagen said.

The director of operations complimented his workers. "The employees here are very eager to learn and extremely competent," Mr. Eagen added. "We have already promoted two employees to line foremen."

Mr. Brookhart agreed, noting there is as much promise in the employees as there is in the bakery. "We're a

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Chunked dough pieces travel up the twin-belt dough elevator to a horizontal conveyor that delivers them to the dough former.

growing company, and we've got a lot of potential ahead of us. We are all a part of something bigger here."

He said he is confident that within a year the new line, as well as the Jefferson Street facility, will be running at capacity. "We are in discussions with some very reputable companies that fit into the way that we produce," he said.

In the right direction

Mr. Mastriano also expressed optimism regarding the future. "We just signed a big contract a few weeks ago and are in conversations with several more," he added. "We are very inspired by that,"

Its geographic placement represents another key selling point for the bakery by providing transportation efficiencies to customers, according to Mr. Mastriano. "Our location has enabled us to establish ourselves as a formidable competitor down the road," he noted. "By being centrally situated, we can take advantage of some of those opportunities."

While Mr. Brookhart plans to run three shifts at both plants, he also realizes the lines need some downtime for proper maintenance. "We schedule a set number of hours of production per week, with the balance to maintain equipment and the facility. And I think that is very critical," he observed. "There must be time to make sure you can take care of the equipment. We have a huge investment in it, and we have to maintain it properly, so it will perform properly when it's needed."

After filling the donut line's capacity, the facility has space for additional lines. In fact, Mr. Eagen noted that three more lines could be built in areas within the former warehouse already renovated for production.

Baker's Pride beams potential. While it's currently ramping up, the future looks to be extremely bright for this burgeoning bakery. •

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