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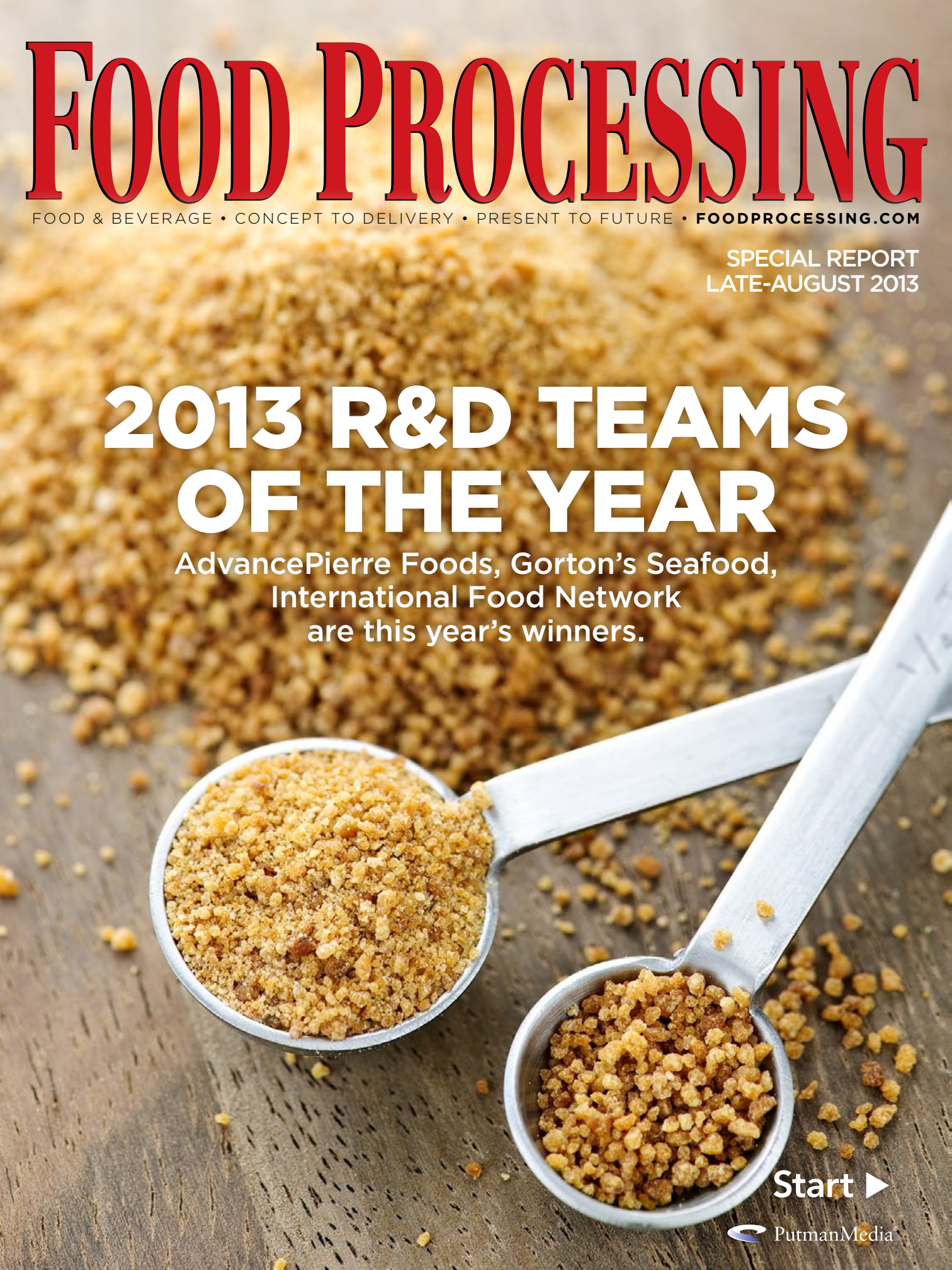
SPECIAL REPORT
LATE-AUGUST 2013

2013 R&D TEAMS OF THE YEAR

AdvancePierre Foods, Gorton's Seafood, International Food Network are this year's winners.



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Three for R&D

Two nontraditional companies (AdvancePierre Foods and International Food Network) and one 164-year-old brand (Gorton's Seafood) are this year's R&D Teams of the Year.

We didn't set out to be different, but when we asked for nominations for this year's R&D Teams of the Year voting, we got some nontraditional companies as nominees.

You'd be hard-pressed to find an AdvancePierre retail brand (although that effort is coming along), but this merger of companies has been mastering the foodservice space, especially institutional (school lunches) and convenience stores. Its competitor in the runoff election, Keystone Foods, also lacks retail recognition but has a commanding presence in foodservice, especially quick-serve restaurants.

Those were the competitors in the large company category. In the small-company competition, we put a typical startup, Mamma Chia, up against a consulting product development company. International Food Network has been behind quite a few multimillion-dollar launches, including Ultra Slim-Fast and Benecol, and practically was the R&D dept. for a fledgling ice cream company called Haagen-Dazs.

In the medium-size category, we had a more traditional pairing: Gorton's Seafood vs. Inventure Foods. Traditional, yes, but both very innovative in their own categories.

This is our fifth annual feature on R&D teams, and the process remains the same. Early this year, we asked you in print and on our website to nominate the best R&D teams you knew in three categories: large ($701 million in sales and greater), medium ($100-700 million) and small (less than $100 million in annual sales). Out of a dozen or so nominees, we whittled the list down to those six above.

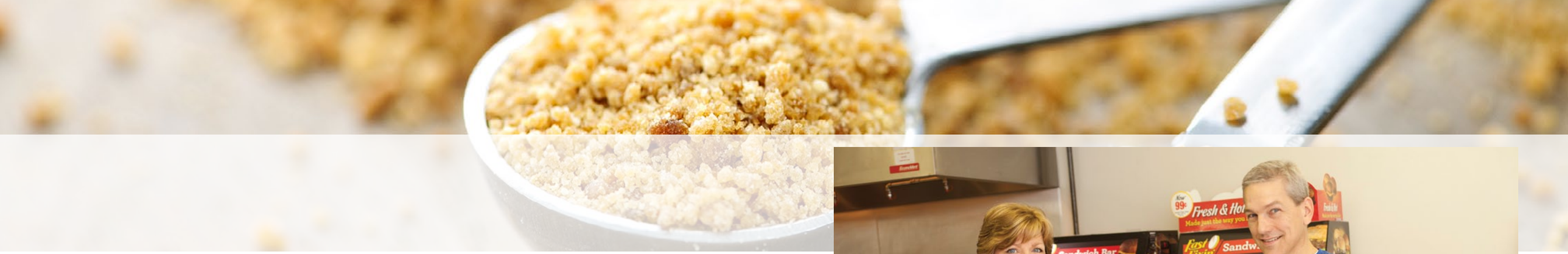
Then in March and April, with the help of essays from the six nominees, we asked for your final vote. Apparently, innovation is valued by many of you, because 1,395 votes were cast. This is purely a popularity contest, so these winners were chosen by you.

On the following pages, we profile the winners in those three categories. But kudos also to those runners-up – Keystone Foods, Inventure Foods and Mamma Chia – who chronicled plenty of innovation in their essays.

Thanks to the 1,395 of you who voted. And if you feel bad that your company and your team was not among this year's contestants, it's not too early to drop us a line for next year. Email dfusaro@putman.net.

PREVIOUS WINNERS

2012: ConAgra, Truitt Bros., Kettle Cuisine
2011: Unilever North America, Herr Foods, HappyFamily
2010: Hormel Foods, Reser's Fine Foods, Annie Chun's
2009: General Mills, Kettle Foods, Peas of Mind



AdvancePierre Foods

Bringing R&D to Foodservice

By Kevin T. Higgins, Managing Editor

Change is a constant, and AdvancePierre Foods Inc. (advancepierre.com) is an organization that is constantly changing, in its approach to the food business, to production and to product development.

Created in 2010 by the merger of three entities, AdvancePierre's roots were planted either 67 or 40 years ago, depending on whose family tree is being traced. A more meaningful milestone would be the year 2008, when the venerable Pierre Foods emerged from bankruptcy reorganization with a new management team headed by William Toler. That set in motion a transformation marked by mergers, acquisitions and the creation of a food giant that thrives on new products distributed through multiple channels.

Retail sales are a growing part of AdvancePierre's $1.6 billion portfolio, but foodservice in multiple channels is the Cincinnati-based organization's bedrock. School cafeterias, convenience stores and vending machines are some of the places you will find the company's many branded and private label creations. The company counts more than 3,000 SKUs in a lineup to which products are constantly added and subtracted.

More than 160 new products rolled out of its test kitchens last year, and 2012 wasn't an anomaly, assures Bernie Panchot, vice president of R&D. Her customers and her customers' customers are not interested in the same-old same-old, and it's the job of the 40-person R&D staff to respond with new and interesting alternatives.

Panchot joined Pierre Foods in December 2008 when Toler was building his senior management team. She reported directly to the CEO and served on the executive committee until 2010, when the company merged with Advance Food Co., Enid, Okla. The deal also included Advance Brands LLC, a joint venture between Advance and Cargill Inc. At that point, R&D was folded into the marketing organization, signaling a shift from a conventional foodservice go-to-market approach to a hybrid strategy that is tuned to changing market demands.

The new year ushered in another realignment that assigns R&D professionals to three business units: branded products, foodservice and strategic activities. Members of the R&D team can be found on the premises of all of the company's 10 manufacturing sites, including five in Enid, two in Ohio, and one each in North Carolina, South Carolina and Portland, Maine, the home of Barber Foods, which was acquired two years ago.

Although AdvancePierre shifted production of Barber's fully cooked foods to an Enid plant and shut down Portland's oven, laying off 232 workers in the process, it also signaled it would invest $10 million over two years in plant renovations and equipment upgrades. The facility now accounts for more than 300 of the company's 4,000 head count.

AdvancePierre is a major player in the channels it plays in and the handheld protein foods it creates. The organization ranks among the Top 10 processors of lamb & veal, beef, turkey and chicken; it also holds down the No. 10 spot in refrigerated & frozen foods, according to Gale Research.

As the Cargill joint venture suggests, the organization collaborates with its suppliers; in fact, "one of the requirements in key supplier contracts is that they help us stay ahead of key trends," Panchot explains. But the bedrock of collaboration is spelled C-U-S-T-O-M-E-R-S. Those are the relationships that drive product innovation.

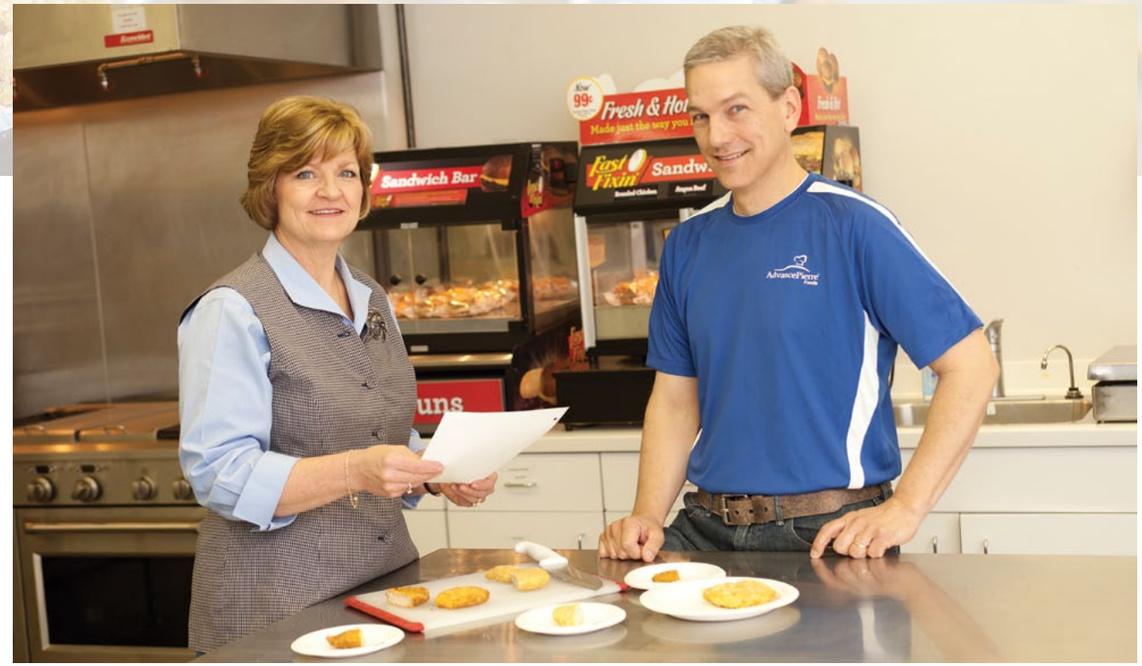
Belly up to the bar

A recent example is the Fast Fixin' Sandwich Bar, a concept developed to help AdvancePierre's convenience store clients. People in search of a hot meal increasingly were gravitating to the C-stores' hot dog roller grills, negatively affecting the handheld foods that AdvancePierre supplies.

At the prodding of a field-sales colleague, the R&D team started work on a self-contained system that approximates the footprint of a roller grill and allows people to build their own sandwich, choosing from three protein options and topping off the sandwich with fresh ingredients of the store owner's choosing. Local and regional favorites help customize the sandwich after the proteins are heated in a microwavable bun R&D had formulated for other channels.

"That was a case where we found a (retail) partner who was willing to collaborate with us on the development of the bar and an equipment manufacturer who developed a warming tray for the buns and then made multiple adjustments as we went through tests," Panchot says. "By the time we launched the system commercially, we had a proven model. It changes the paradigm of the hot C-store sandwich."

Market research also drives innovation. Custom field research buttressed AdvancePierre's march to the top of the C-store sandwich pyramid and helps shape Big AZ, a brand created for the caloric-unconscious and sold in C-stores and vending machines. While the name suggests a Southwestern flair, it's actually "a heartier serving in one of our leading categories," she explains.



Heading the AdvancePierre Foods team: VP Bernie Panchot and Tom Burroughs, director of foodservice R&D.

In April, the company rolled out the Big AZ BaconAddict Cheeseburger, an oversized, flame-broiled patty sandwiched between two layers of bacon-infused American cheese and topped with – what else? – more bacon. "It was a way to create some excitement and enable our C-store customers to better compete with fast food," says Panchot. Not incidentally, it helps AdvancePierre maintain its big-dog status in the $4 billion-plus C-store sandwich category.

"Market research has shown that bacon is one of the most popular sandwich proteins and that many consumers prefer sandwiches with bacon," notes Tony Schroder, the firm's president of convenience channels in a prepared statement. A Technomic research report found that 87 percent of consumers are prepared to pay a premium of at least 50 cents when bacon is added to a sandwich.

Time to market varies considerably, but line extensions like the BaconAddict Cheeseburger can move from concept to commercialization in as little as 18 weeks.

Health-conscious cafeterias

Child nutrition programs have kick-started reformulation efforts at many food companies in recent years. Pierre Foods was a major supplier to school commissaries, and the successor organization has kept AdvancePierre in the vanguard with the same combination of market research and R&D that is applied to other channels.

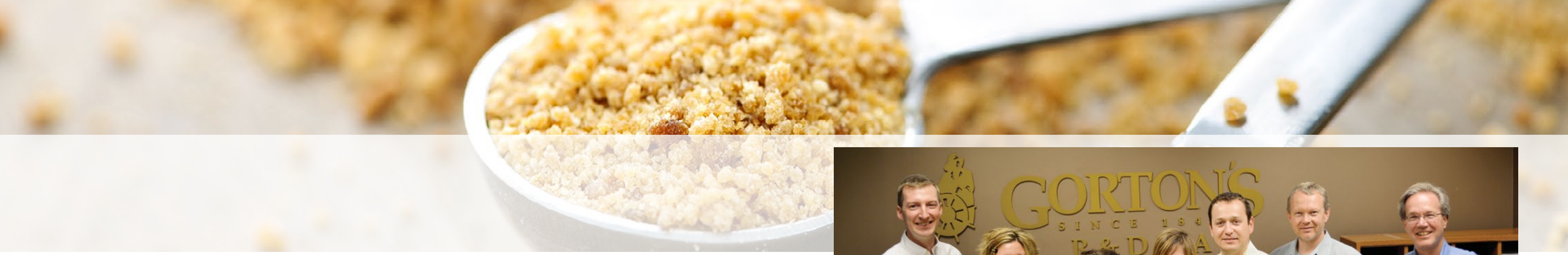
"One of the things we continued after the merger was our directors council of school foodservice operators," Panchot says. "That provides an opportunity to ask, 'What are parents talking to you about?'" Her R&D team includes two school-nutrition specialists.

Three years ago, the firm introduced the Smart Picks line at the School Nutrition Assn.'s annual conference. The 60 school-cafeteria items have one or more of the following attributes: reduced sodium, reduced fat, zero trans fat, no hydrogenated oils, whole grains or a good source of protein.

AdvancePierre was one of the first food processors in 2011 to join the Alliance for a Healthier Generation, a coalition founded by the William J. Clinton Foundation and the American Heart Assn. that set science-based standards for school foods, including lean protein products, low-fat entrees, reduced sodium levels and whole-grain products.

Regardless of which distribution channel is targeted, new products are battle tested and come with a realistic profitability expectation. "We test in real market conditions and get real results" before a roll-out, she says.

"We are constantly changing, constantly looking at ways to optimize our resources and get every pound out of our production plants," summarizes Panchot. To help make the call on what items are dropped from the production schedule, R&D professionals embedded in the plant management teams are on hand, ensuring the need for innovation is a metric in optimized production scheduling. FP



Meet Your New R&D Partner – Your Equipment Manufacturer

How equipment manufacturers are assisting food companies improve their processes and products

By Michael Campbell, Vice President of Food Industry Marketing & Development, Pick Heaters Inc.

In today's ever-changing food market of expanding product lines with new products, improving current products, etc., the research and development groups for food processing plants and ingredient facilities are turning to equipment manufacturers to help develop their concepts and provide them with the equipment to carry their ideas from concept to finished product in a manner that saves time and money.

In many situations the research and development people for food processing plants are working on small batch/stove top projects in which they test out a new recipe or perhaps an existing product improvement for taste or texture. With the recipe or concept in hand they turn to the equipment manufacturing research group to see how that team can take the recipe and provide a continuous process with a desirable finished product.

The task set before the equipment manufacturing research and development group is to take the recipe and review with the food processing group the key elements they need to see or taste in the finished product. The product texture, look and taste are very important when it comes to selecting equipment for a food processing group. Does the customer expect a specific flavor or note that might need to be added to enhance the taste of a product? Does the product need to have a silky mouth feel or perhaps a grainy look when the product has set up? Is the product sensitive to high heat, or are there any issues with particulates?

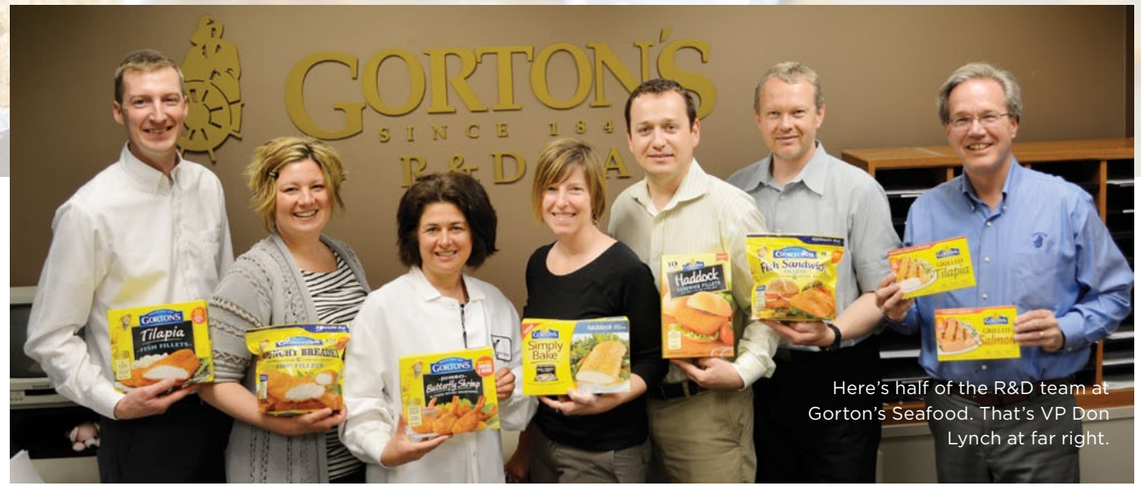
All of those questions need to be addressed before the equipment manufacturer can provide the proper equipment, and in many cases the equipment research group needs to actually make the customer's product and demonstrate to the food processing company that color, taste and texture will meet the expectations of the customer.

Equipment manufacturing research groups generally will work from a base sample of the customer's final product, plus the initial recipe. They will take that recipe and process the product, making necessary changes for color shifts, moisture retention, etc., and begin the process of selecting the appropriate equipment that will give the customer the desired finished product while providing improvements in time savings, energy savings, and increased levels of production. Potentially any and all of those things are important to the customer.

If the product requires heating, the equipment research group will process the product using indirect and direct contact heat methods to determine the most efficient method that brings the product to temperature quickly, while retaining all the essential elements of that product (taste, texture, color, etc.). The same holds true for cooling a product. The equipment supplier should be looking at ways to cool a product while still retaining the desired finished look of the base sample.

The end result is that the equipment manufacturing research group takes the customer's recipe and runs various trials using different equipment to determine what process will give the customer an acceptable finished product that adheres to texture, taste, and color if required, while providing a continuous operation at a reasonable cost for equipment. At the conclusion of testing the equipment manufacturer should provide research reports noting changes, if any, to the recipe that were required to meet the objectives of continuous operation, include any sensory evaluations, plate counts if required, and finished samples for customer evaluation. Most important is the equipment list necessary to take a batching operation and turn the process into a continuous operation, or the equipment needed to provide that enhanced final improvement to an existing product.

What this means for the food processing manufacturer or ingredient producer is that in an ever-changing market where consumers want new flavors, new textures, different choices, etc., that they can turn to the equipment supplier and their research group to work up a formulation, modify an existing formulation and create a process that will meet the goals and expectations of the food processor for their desired product.



Here's half of the R&D team at Gorton's Seafood. That's VP Don Lynch at far right.

Gorton's Seafood

Making Seafood Easy for Consumers

By Dave Fusaro, Editor in Chief

Product development at Gorton's Inc. is limited by a number of factors. Imagine working in only one protein – seafood – and turning out nothing but frozen products.

But the R&D team at Gorton's (gortons.com), better known as Gorton's Seafood, doesn't feel constrained by those factors; they revel in them. "There's so much opportunity and consumer interest in seafood these days," says Don Lynch, vice president of R&D and quality assurance at the Gloucester, Mass., company. "We've tried a few other vehicles over the years, but we're really best at frozen seafood."

What can they do with frozen seafood? More than you think. Recent projects have reduced sodium without affecting flavor; reduced fat without affecting texture; and reduced calories without affecting the pleasant, filling experience.

Nearly all raw products are flash-frozen at sea and stay that way through the product development cycle – which presents more challenges for product development. "Over the years, we've developed technology to cut [seafood] to size, add batter, breading or seasonings and then package – all the while keeping the product frozen," he says. A new line of Grilled Fillets are grilled while the product remains frozen. The Grilled Fillets also are gluten-free and under 100 calories.

Perhaps the overriding theme for Gorton's product development is to make consumers comfortable with seafood – in purchasing, preparation and taste. That's behind the company's long-running ad campaign: "Trust the Gorton's fisherman." He won't sell you a bad piece of fish.

"A lot of consumers still are not comfortable buying or cooking seafood," says Lynch. "We try to make it easy for them."

Easy? How?

The new line Simply Bake is to consumers all that the name implies; but there's plenty of multidisciplinary product development behind the product. The haddock, tilapia or salmon fillets – coated with what Gorton's calls a "healthy" savory coating – are packed in a part-foil cooking pouch. The product is partially visible through a window. As the product bakes, it steams in the pouch, which includes micro-perforations. The result is a thoroughly but gently cooked piece of fish. And consumers never touch the fish.

For consumers willing to do a little more of the cooking, Skillet Crisps (in two flavors of tilapia and shrimp) are flipped once in the frying pan.

Snack-It is a new line of fish and shrimp bites being positioned for after-school/before-dinner snacks.

Even old-fashioned beer battering needed some R&D. "We developed a proprietary method for taking the carbon dioxide out of the beer for our batter," Lynch says. "That's necessary for processing."

One of the team's biggest successes was simply a repositioning of a breaded fillet for a fish sandwich. "That's what one type of fillet was always used for, but now we explicitly call it a Fish Sandwich Fillet," he says. The relaunch did involve resizing and reshaping a fillet into "the perfect size and shape for sandwiches," as the ad campaign goes.

Gorton's works in several types of fish, most of them comfortably white. It calls out tilapia, salmon, haddock, flounder and sole. Alaskan pollock is the type used most generically for sandwich fillets and fish sticks. All species are specified in the ingredient statement of each box.

The company has been around since 1849, but went through a number of ownership changes, including General Mills and Unilever. It has been owned by Japanese seafood firm Nippon Suisan Kaisha Ltd., better known as the Nissui Group, for the past 10 years.

"They are themselves an extremely innovative seafood company.

They pride themselves on R&D, so they've been extremely supportive of new product development," Lynch says of the owner.

At Gorton's, R&D and quality assurance are under the same umbrella. There are 24 people in the group, 13 dedicated to R&D. Eight of the R&D people are food scientists (five of them with Ph.D.s), three are R&D associates, one is a trained chef and one is a packaging engineer. Lynch is one of the doctorates; he's been with the company for 25 years.

The team's focus is on culinary art and science. But new product development "is very much a team approach," Lynch explains. "Multiple departments get involved – marketing, engineering, packaging, QA, the supply chain.

"When a product idea is generated, we do some concept tests. We always make sure we're aligned with what consumers want. If it seems good, we bring it to the lab and start playing with it. We cook it and taste it. When we get the product to a level where we think it's good, we scale it up some and do more consumer testing. We look for feedback, how to make it even better. That's the point at which we commit to rolling it out to the market.

"We always keep in mind three goals:

- It has to taste good.
- It has to be really convenient.
- It has to be a good value."

Retailers get the first samples, and a negative reaction from them could scuttle the project. But if all goes well, the new product is on the market – sometimes in as little as five months, although most take about 15 months.

"We try to keep new products under 200 calories per serving," says Lynch. "We now have more than 20 main-meal products with fewer than 200 calories." The company's only brand is Gorton's.

Gorton's hometown Gloucester dates back to 1623 and claims to be America's oldest seaport and the birthplace of the U.S. fishing industry. For the past 15 years, R&D and QA have been housed in the Stephen Warhover Innovation Center, named after the company president who retired three years ago.

"We have kitchens, labs, a scale-up facility – but when we get to that point, we prefer to go right to the factory," for scaling up, Lynch says. "All we do is fish. We've been first to market with so many things. We really think we're the category leader. We want to keep it that way." FP

International Food Network

When Your R&D Team Needs Help

By Dave Fusaro, Editor in Chief

Our winning R&D team in the smallest category has no products to its own name. While it's a very small company, it has helped some of the world's largest companies launch such products as Ultra Slim-Fast, Haagen-Dazs and Benecol.

International Food Network (www.intlfoodnetwork.com) is a contract product development team for the food, beverage and nutrition industries. It provides as much or as little assistance as you need, from initial idea generation through commercialization. IFN was started in 1987 by Peter Salmon, a certified food scientist (and MBA) who worked for both General Foods and General Mills.

"With hands-on skills from a wide variety of areas, IFN is prepared and capable of entering a project at any stage in the development cycle – from concept design to manufacturing site selection," its marketing materials say. "With our significant internal and external resources we can move forward quickly and economically, reducing time-to-market cycles that allow you to take advantage of sales opportunities and improve market positions. We make the most of what already exists within your organization or supplier network, involving ourselves where we can add real value to your success."

More simply, "We're a bunch of food scientists, primarily formulators," Salmon says. "When a client comes to us, we explore whatever areas they want to explore. Then we break the product development process into discrete phases," and decide who does what parts.

Salmon started the company in Ithaca, N.Y., to be close to the Cornell University food pilot plant and not too far from his former General Foods office in Tarrytown. He eventually opened an office in the UK to support a client launching there, and more recently located a lab in Naples, Fla., also to support a client.

Salmon uses the term "protocepting" to describe much of what IFN does. But that's only the front-end work, often the sexiest stuff. "Other firms focus only on the front end – we certainly do that too. But we can do it all for a food processor – prototypes, scale-up, process specifications, HACCP (hazard and critical control points) analysis, shelf life testing, even overseeing final commercialization."

Slim-Fast was one of his earliest clients. "We helped develop the Ultra Slim-Fast line of shake mixes, and we were involved in supporting manufacturing operations in contract manufacturing facilities around the U.S. Later we began to extend the brand into other forms, for meal replacements as well as snacks. Then IFN supported Slim-Fast's expansion into the United Kingdom in 1990."

IFN helped out Haagen-Dazs when it was an independent up-and-coming company, and was retained by subsequent Haagen-Dazs owners Pillsbury/Diageo and General Mills. "We usually had at least one person working in their labs there at all times, while the rest of the work was being done in Ithaca," Salmon recalls of Haagen-Dazs' early days. "We supported them when they relocated their offices to Minneapolis and for that year we carried most of their R&D out of Ithaca. After Minneapolis was up and running smoothly, our role transitioned to supporting their international business, again mostly new flavor development. Altogether, we worked 10 years with the Haagen-Dazs brand."

In the late 1990s, McNeil Nutritionals came to IFN looking to expand its food business, which at the time consisted only of Lactaid milk. "We did a lot of foundational research and found the Benecol technology at the University of Helsinki," says Salmon. The plant stanol-based technology looked adaptable to spreads so, through a license from the university and development help from IFN, McNeil launched the world's first cholesterol-lowering margarine.

It was groundbreaking and exciting news at the time and received one of the earliest FDA-certified health claims. The technology was applied to salad dressings, bars and yogurts. For whatever reasons, the brand faded in the U.S., although it still exists in Europe.

IFN also does some applied research. It has created a stomach model, which models the digestive process so clients can see how ingredients or products are digested, when bioactives are absorbed, when encapsulated ingredients are released, etc.

The Ithaca office (run by Ed Collins and Scott Martling) has 30 technical people. Ten more are in the UK (headed by Rick Henson), and eight are in Naples (supervised by Brett Ceulvels, who started that lab). All those numbers are people dedicated to product development; they don't include nontechnical support employees. Almost all have food science degrees, most of them with master's or doctorate degrees, and four have culinary arts degrees.

"It's a fantastic team with a fundamentally optimistic outlook," Salmon says. "Most of our people have been with us a long time. Most of the time, we have to operate in secrecy because of confidentiality agreements. I'm glad we can recognize their work with this award." FP

It's better than that. It's the day Sandy Roberts, R&D, got credit for her suggestion that cut production costs across the entire product line without changing a single ingredient. The suggestion? To change the process by which products are heated from the traditional batch method to direct steam injection (DSI).

So now, when faced with the seemingly insurmountable challenge of making the same product for less -from jellies to stews to baby foods to salsas – know that it can be done. The Pick Sanitary DSI system injects culinary steam directly into the emulsion – to heat, cook, sterilize or pasteurize products in-line through hundreds of small orifices in the stainless steel injection tube. Fine bubbles of steam are immediately absorbed into the liquid or emulsion, resulting in a 100% transfer of heat energy with precise control of target temperature.

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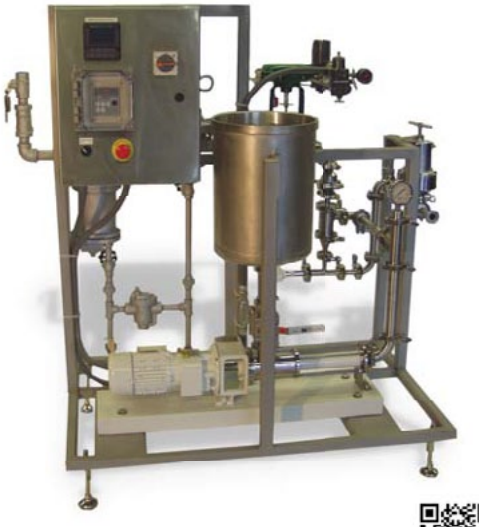

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