

Bar Marking and Beyond: How Thermal Processing Adds Value Across Food Segments

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The demand for quality is one of the most influential consumer demands shaping food trends today. Whether they're in a grocery store, a quick service restaurant, or even the corner convenience store, shoppers want foods that look and taste fresh, authentic, and just plain good.

Evidence of the importance of quality can be seen in how people choose to spend their food budget. A [Nielsen study](#) released last year found that over a 12-month period, spending on premium foods grew 8%, more than twice the rate of spending on food overall (3%). And a [2015 Technomic study](#) found that food quality was the driving force behind QSR sales growth — the top 10 fast-food chains for food quality grew an average of 10.9%.

To learn more about this trend, and about how thermal processing solutions like searing, grilling, roasting, and bar marking can help processors meet consumers' quality demands, we spoke with Kathi Gilleland, the director of marketing at [Marlen International](#).

Marlen, a privately held [Duravant](#) company, has been in the food processing business for more than 60 years. They got their start in pumping, portioning, filling, and extrusion. Through acquisitions, they developed a full size-reduction offering, including dicing, slicing, and shredding. This year, they've strengthened their presence in the thermal processing arena by acquiring [Afoheat](#), which specializes in gas-powered enhancement equipment, and [Unitherm Food Systems](#), which makes a wide range of thermal processing equipment.

Gilleland has been in the food processing and packaging space since 2004, and has led the marketing efforts at Marlen for four years. During her tenure in the industry, she's had the opportunity to become familiar with just about every process on a production line. "I've spent time with everything from slaughter equipment to food package labeling," she says. Today, she puts that expertise to work extending Marlen's reach both domestically and globally.

Bar marks on everything, even pet treats

As middle-class incomes rise, consumers are willing to pay more for value-added products. And, as anyone whose mouth has ever watered at a commercial for a flame-grilled burger knows, one of the best ways to add value to proteins is to grill it over an open flame, which imparts that delicious charred flavor. Next, come the bar marks for eye appeal.

The bar marking trend has become so widespread that Jimmy Fallon has featured grill marks on his list of things he loves.



“Thank you, grill marks, for making steaks look ripped.”

Processors seeking to add value to their products can replicate that backyard grill taste and appearance by applying flame grilling and bar marking to their products before they finish cooking them, typically using a sous vide or steam cooking process.

What’s different today from just a few years ago is that manufacturers are looking to apply these processes to a wide range of products, not just steaks and chicken. “We’re bar marking things you wouldn’t even think of,” Gilleland says. “From meats to peppers and peaches, the list goes on...”

Some manufacturers are even grilling and bar marking pet foods. “Processors are not only adding bar marks to premium beef fillets but also to pet treats. Searing and roasting also adds to the taste. As a result, processors have a high-value product that they can mark up in price and that also provides the quality characteristics people are looking for.”

Marlen’s Afoheat line is a powerful and flexible solution that has several advantages for processors seeking this value-add capability. First, it provides consistent results. The Afomarker™ can apply grill marks without damaging the product surface, whether that product is cooked, chilled, or frozen.

Afoheat equipment also achieves the desired results in a fraction of the time some other solutions require. Gilleland notes that utilization of infrared or flame searing enables meat processors to add desired coloring while sealing the meat’s surface without denaturing the product, which results in better yields. So, how does this save time? Many processors have claimed that by searing products inline they have been able to remove the additional coloring step, which previously required an impingement or hot air linear oven to add color prior to cooking.

The Afoheat offering is a modular process, requiring just one belt to move the product through infrared searing, flame grilling (using a blue flame), and then bar marking. The whole process through an Afoheat unit takes only a few minutes. “This is all done inline in a continuous process,” Gilleland says. “That means you can increase throughput and get your products downstream faster.”



For processors that want to see the processes for themselves, Marlen operates a 4,000 ft² solution center at their headquarters located just 15 miles south of the Kansas City International airport. The center, which features an Afoheat unit, is open to both customers and prospects for R&D. “It’s a great environment to test out products and processes without interfering with plant production,” Gilleland says.

“Afoheat applications feature everything from searing creme brulee to bar marking fruits, vegetables, and pita bread,” she says, emphasizing that these processes apply to all food segments, not just meat, poultry, and seafood. “The possibilities are endless.”

Flexibility to manage growing product lines

One of the benefits that distinguishes both the Afoheat and the Unitherm lines is their flexibility. Gilleland explains: “With other solutions, it can take a lot of time simply to get the machine dialed in. We have the ability to change parameters like the intensity of the flame, the temperature, and even the belt height on the fly. If the charring on a product isn’t as dark as the processor would like, they can change it inline.”

That kind of flexibility is in very high demand right now, as the number of products manufacturers make is steadily increasing. And, more often than not, they’re running many of those products all during the same shift. “It’s not uncommon for a processor to run 14 or more products through a line, one after another,” Gilleland says, “so they need to be able to make adjustments quickly. This is one of the biggest challenges our customers are dealing with today.”

With their custom-engineered Afoheat and Unitherm solutions, Marlen is able to meet processors’ needs to turn on a dime.

Convenient, protein-rich snacks foods to eat on the go

Beyond the grilling and bar marking trend, Gilleland also sees growing demand for innovation in the snack market, in particular for convenient, precooked, clean-label, and protein-rich foods. Consumers want more single-serving packs to eat on the go, for both themselves and their pets. Processors are responding with more value-added nutritional snacks with strong flavor profiles.

A major challenge of these products — and a pressure that Gilleland says is fueling much innovation — is portion control. “Processors want to test out new concepts, and they’re pushing to design new products for the meat and snack segments. This is driving product innovation, forcing us all — processors and OEMs alike — to think outside the box and do things we’ve never done before.”

As an example, Gilleland points to the growing popularity of individual portions of value-added shredded meats for pet foods. “The pulled meats trend is gaining attention even in Europe and the UK,” she says. “Manufacturers want to fill and portion pulled meat recipes for pets. So, if you’re traveling with your pet, you just peel off the film, set the package down, and your dog has food for the day.”



The right-sized snack segment is growing on the consumer side as well. Gilleland gives the examples of tuna snack packs that contain 1- or 2-oz portions and often even come with a spoon, single-slice snack packs of bacon, and jerky snack packs. Precise portion control for snack and convenience foods poses a challenge, she notes, because the industry is accustomed to filling larger portions and these new products require miniature versions of filling equipment.

What the future might bring

Looking into the future, Gilleland believes that we've just skimmed the surface of demand for convenience foods and that this segment will continue to drive innovation. "We have all of the big players — the top 5 pet food manufacturers, the top 100 food producers — but then we have all of these smaller companies with a niche in the marketplace. Think about the one-off pet treats and the boutique snack sticks competing with Jack Link's. They're going to keep the big processors on their toes. We're just on the cusp of it. There's a lot more to come."

Another area where Gilleland expects to see developments is in the processor-OEM relationship. She notes that many processors today are looking for more dedicated project management than is standard. "Project management remains an in-demand competency," she says. "In future, we'll see more collaborative relationships as processors seek value-added engineering and design as well as other services from OEMs."

If you're interested in this type of collaboration and want to see Marlen's innovative equipment on display, visit them in Booth 1041 at PROCESS EXPO. You can also check out Unitherm's offerings in Booth 2243. See you at the show!