

SEPTEMBER 2022

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ALL SIZZLE,
NO FIZZLE

NEW FLAVORS AND EXPANDED MERCHANDISING
EFFORTS FEED DEMAND.

CONTENTS

SEPTEMBER 2022
VOLUME 236 / ISSUE 9



COVER STORY

BACON REPORT 2022: ALL SIZZLE, NO FIZZLE — Despite product and merchandising innovations in the category, bacon's underlying appeal remains the unchanged.

DEPARTMENTS

[Editor's Note](#)

[Ad Index](#)

[Website Highlights](#)

[Classifieds](#)

FEATURED CONTENT

FIGHT FOR FOOD SAFETY

Food companies must keep strict liability considerations in mind.

THE POULTRY PAYOFF

The poultry industry's impact on U.S. jobs and the economy.

OLD WISCONSIN CELEBRATES 75 YEARS

Focus on employees and meat snacks sustains growth and success.

SUPPLIER'S PERSPECTIVE

Reclosable packaging promotes product shelf-life and consumers' product enjoyment.

TECH TOPICS

HOW MANY SPARE PARTS DO YOU NEED? CONSIDER LIFECYCLE VS. COST

HOW DRY-AGING CAN IMPROVE PALATABILITY IN CULL-COW BEEF

DEMAND FOR PRODUCTS WITH MICROWAVABLE PACKAGING REMAINS STRONG



WINNING FLAVORS AT AAMP'S AMERICAN CURED MEAT CHAMPIONSHIPS

Taking place in conjunction with AAMP's 83rd American Convention of Meat Processors & Suppliers' Exhibition on July 14-16, the 2022 American Cured Meat Championships had participants competing in 29 product classes. Competition coordinator Matt Wenger of Iowa State University shares some thoughts about this year's competition and what makes a winning ACMC entry.



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TOP-VIEWED NEW CONSUMER PRODUCTS:

1. The Habit Burger Grill debuts Basil Pesto Chicken Sandwich
2. Real Good Foods launches high-protein, low-carb chicken nuggets and strips
3. Hissho Sushi, The Hatch Chile Co. launch Crunchy Hatch Chile Chicken Roll
4. Meijer launches Crafted Market heat-and-eat meals
5. Morey's debuts Wild Flounder Garlic & Herb



MOST-POPULAR FEATURES:

1. Awards highlight 2022 AAMP Convention and Exposition
2. Deli Report 2022: Packaged for growth
3. American Cured Meat Championships announces winners
4. Sausage Report 2022: Still cookin'
5. JBS announces leadership changes



MOST-RECENT PODCAST EPISODES:

1. Episode 143: Rockwell Automation's augmented reality technology
2. Episode 142: Superior Farms' CEO Rick Stott discusses the Sheep Discovery Center
3. Episode 141: CEO Ido Savir of SuperMeat plans a 2023 opening for a U.S. cultured poultry production facility
4. Episode 140: Talking consumer trends with 210 Analytics' Anne-Marie Roerink, Part 2
5. Episode 139: Talking consumer trends with 210 Analytics' Anne-Marie Roerink, Part 1

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EMBRACING GROWTH

On Aug. 1, I succeeded my longtime colleague, mentor and friend Chris Luke as publisher of *The National Provisioner* and *Independent Processor*. Chris and I had been a team since 2014, overseeing publications in BNP Media's food, beverage and packaging division, all of which addressed market dynamics and opportunities for growth across multiple industry segments. For me, those areas now include the meat, poultry and seafood sectors covered here, but also dairy foods, snacks and baked goods, candy and confectionery, and packaging. And before I came to BNP Media, I covered agriculture, retail CPG R&D, foodservice, and functional foods, among other categories. Collectively, this broad-based perspective informs our endeavors with distinctive, 360-degree context.



DOUG PECKENPAUGH

This is my life's work. I'm nearly three decades down my career path in food publishing, truly following food from field to fork, and I relish every moment. And I've been behind the scenes here at *The National Provisioner* for several years. The opportunity to continue curating *The National Provisioner*, a stalwart, 130-year-old publication that dates back to the early days of the modern American meat industry itself, is an honor.

Getting a seat at the publisher's desk is unique for an editor. And I won't be like other publishers. In addition to the requisite business of running the publications, I'll continue to closely interact with our audience. I'll regularly interact with processors, digging to better understand today's biggest challenges while shining a spotlight on the new supply-chain innovations that will help solve those very same challenges. It's about continual improvement and embracing growth.

At heart, I'm still a writer. I'll continue to report on my industry interactions, current market challenges, and category dynamics. There's always more to learn about our wonderful world of food, fueling our journey.

Along those lines, I'd love to hear from you — not only to learn about the hurdles you face, but also your success stories. We want to shine a light on the innovation in today's market. Together, we can continue to drive the industry forward and find opportunities for growth.



EMAIL DOUG PECKENPAUGH

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ALL SIZZLE, NO FIZZLE



CREATIVE FLAVORS AND MERCHANDISING HELP FUEL CONTINUED STRONG MARKETS IN THE CATEGORY.

BY FRED WILKINSON
MANAGING EDITOR

If the supermarket meat cooler were a high school, bacon's status as the cool kid would be uncontested.

Bacon's continued sales performance suggests bacon is maintaining its popularity and value for shoppers, even in an inflationary retail food market. Despite product and merchandising innovations in the bacon category, the product's underlying appeal remains unchanged.

"It's simple: Consumers want bacon. It tastes great," said Carl Hermreck, senior vice president of sales and marketing for Burgers Specialty Foods, whose product lineup boasts numerous retail and foodservice bacon offerings, including value-added entrees.

Bacon sales during the 52 weeks ending July 31, 2022, reached nearly \$6.5 billion, representing 22.5% of all processed meat sales dollars, according to IRI retail sales data. This share is down a just hair from bacon's 23% share a year ago but is still up slightly from its 21.8% pre-pandemic market share.

Mirroring the meat category overall, bacon has seen sales by weight drop as its dollar sales rise. Bacon dollar sales during the 52-week period increased 5.2%, but that was inflation driven, said Anne-Marie Roerink, president of 210 Analytics. Bacon sales volume ranked at just below 1 billion pounds (956 million) for the 52-week period, down 10.6% versus year ago and also down compared with the pre-pandemic normal by about 11 million pounds.

"The price per volume is likely to cause the unit and volume pressure," Roerink said. "The average price per volume for bacon reached \$6.74, which was up from \$5.73 last year, an increase of 17.7%. Pre-pandemic, the average price per pound was \$5.22, which means the market has seen an increase of \$1.52 per pound."

The price per unit now averages \$6.57, up from \$5.62 a year ago, an increase of 16.9%. Unit cost inflation is slightly less as some manufacturers have adjusted their packaging sizes to keep price points affordable for more consumers, she said.

MUCH LIKE CRAFT BEERS AND ARTISAN CHOCOLATE, BACON IS TAKING ADVANTAGE OF AMERICA'S INTEREST IN FUN NEW FLAVOR COMBINATIONS, AND LIMITED-TIME OFFERS ARE A GREAT WAY TO DRIVE A GREATER NUMBER OF REPEAT PURCHASES.

HOT FLAVORS

Despite new products entering the market, assortment is relatively unchanged with the average store counting about 38 unique bacon SKUs, Roerink said.

"Makers are experimenting with hot flavors, even tying in to the ever-growing popularity of Hatch Chile season," she said. "They are experimenting with various barbecue favorites, from different regional flavors to a nod to the ongoing smoker trend, such as the double-smoked bacon by Kayem. But also, there are some very unexpected flavor combinations, such as Everson Spice experimenting with a number of flavor-infused sugars to put on bacon, either by the meat department or even the consumers themselves. The industry is going full circle with recipe ideation that includes bacon and also meal kits that include bacon."

Although bacon has enjoyed its status as a trendy protein for a while, innovative product development continues to influence bacon offerings.

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"Much like craft beers and artisan chocolate, bacon is taking advantage of America's interest in fun new flavor combinations, and limited-time offers are a great way to drive a greater number of repeat purchases," Roerink said.

During the recent annual American Association of Meat Processors Convention & Exposition in Des Moines, Iowa, the American Cured Meat Championships selected flavored bacon as this year's featured product class. There were 623 products entered in 2022's ACMC competition, and this year's winner of the Clarence Knebel Best of Show Memorial Award was Crabtree, Pa.-based Bardine's Country Smokehouse, which claimed the honors for its entry in the ACMC's Heavyweight Bacon category.

But for many consumers, however, the only flavor bacon needs is ... bacon. "We currently have limited flavors in our bacon, but large processors continue to differentiate and innovate utilizing new flavors," Hermreck said.

While new flavors and formulations such as uncured bacon have entered the market, Burger Specialty Foods continues to market smoked dry-cured bacon, Hermreck said.

"We have seen demand for uncured bacon grow, however we have stuck with our products' recipes and unique process and continue to grow smoked dry-cured bacon," he said. "Uncured bacon will have a place with some consumers, but we do not believe it will expand exponentially."



Retailers are incorporating bacon in their prepared meal solutions.



Long a packaged item, bacon is getting its turn in the full-service meat case as retailers try new approaches to merchandising.

PROMOTIONS PUSH SALES

Promotions, including limited-time offers, have proved to be strong purchase motivators at retail, Roerink said, adding that bacon promotions have started to ramp back up but supply issues remain a challenge.

"Over the past 52 weeks, 34.6% of bacon dollars were promoted," Roerink said. "This is up from 30.9% last year, but still far below the pre-pandemic level that was over 43%. Across categories, executing typical weeklong promotions has been much more difficult due to the supply chain challenges."

Some retailers are literally breaking away from the pack to find new ways to merchandise bacon.

"Having had the opportunity for some 30-plus store visits in markets throughout the U.S. and Europe, it was great to see the creativity in bacon merchandising," she said. "For years, bacon was more of a prepackaged item, but with the emergence of craft bacon and limited-time offers, I'm seeing bacon make inroads in a number of other areas. Despite the increase in price, I think this makes all the sense in the world. Bacon is a perennial favorite with a fan base that cuts across most demographics. That means bacon-merchandise is going to hit home with many consumers."

Some retailers are favoring craft bacon offerings to their full-service meat case, which can mean different flavors, thicker cuts or even regional culinary favorites. Some retailers are taking inspiration from the proposition that "everything is better with bacon."

"I see more bacon-wrapped asparagus and that type of product popping up in the full-service meat case and deli-prepared items," Roerink said. "Jerky and other meat snacks have been on fire for many years now, and we're seeing bacon get in on the fun with producers such as Pederson Farms having a bacon snack stick."

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STRICT LIABILITY VIOLATIONS:

NO WALK IN THE PARK

FOOD DRUG AND COSMETIC ACT VIOLATIONS CAN RESULT IN FOOD COMPANY EXECUTIVES FACING CRIMINAL CHARGES, EVEN IF THEY WERE UNAWARE OF THE VIOLATION.

BY SHAWN K. STEVENS
FOOD INDUSTRY COUNSEL LLC

In most cases, criminal charges are predicated on the accused acting with “scienter.” That is, the criminal conduct must be intentional. Certain criminal misdemeanor offenses, however, are excepted from the scienter requirement — these are known as strict-liability offenses.

With strict-liability offenses, it does not matter whether the perpetrator was aware of or intended to commit the violation. Speeding is an example of a strict liability offense. It does not matter whether the driver intended to speed or knew they were speeding. Similarly, shipping contaminated food in violation of the Food Drug and Cosmetic Act (FDCA) is a strict-liability offense.

Unbeknownst to many, food industry executives can thus be criminally charged for violating the FDCA, especially when it involves shipping adulterated product into commerce. This is true even if they were completely unaware of the adulteration. To make matters worse, convictions may be punishable by large fines and/or significant jail time.

As readers of this column well know, it is illegal to introduce adulterated foods into interstate commerce. In turn, any company that does so has violated 21 U.S.C. § 331(a). When such a violation occurs, the company’s officers can be charged criminally under the Responsible Corporate Officer Doctrine (RCOD), also known as the *Park* Doctrine.

“WITH STRICT-LIABILITY OFFENSES, IT DOES NOT MATTER WHETHER THE PERPETRATOR WAS AWARE OF OR INTENDED TO COMMIT THE VIOLATION.”

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In *U.S. v. Dotterweich*, the U.S. Supreme Court established that corporate officers could be prosecuted for violating the FDCA, even without knowledge or awareness of the violation. The Supreme Court reasoned that, “In the interest of the larger good (the RCOD) puts the burden of acting at hazard upon a person otherwise innocent but standing in responsible relation to a public danger.” In the decades since *Dotterweich* was decided, DOJ prosecutors have routinely prosecuted food company executives for violating the FDCA.

In *U.S. v. Park* (hence the *Park* Doctrine) the Supreme Court held that to sustain a conviction, prosecutors need only prove that the corporate officer had “responsibility and authority either to prevent in the first instance, or promptly to correct, the violation complained of, and that [the officer] failed to do so.” Upon conviction, each violation (i.e., the shipment of each case of offending product) is punishable by up to one year in jail or a \$100,000 fine.

In a recent decision, a Court of Appeals affirmed that the government “need not prove that defendant knew that he (or she) was violating the law or that he (or she) intended to violate the law.” Rather, the prosecution merely needs to establish that the defendant was aware of a condition that “could” lead to harm, and that the defendant failed to take appropriate steps to correct or prevent it.

As federal agencies exercise increasingly aggressive inspection oversight, conduct swab-a-thons, and continue looking for connections between food companies and emerging outbreaks, more companies and by extension, more officers, could face criminal liability.

Perhaps counterintuitively, the incredible job that industry is doing may actually enhance the risk faced by corporate officers. From an optics standpoint, the diminishing number of food-related recalls and outbreaks may foster the impression — in the eyes of both prosecutors and the public — that any foodborne illness outbreak is inherently the result of some culpable wrongdoing. In turn, if your company is among the very few unfortunate enough to be tied to an outbreak, the scrutiny you face will be all the more intense.

In the end, if the Food and Drug Administration or U.S. Department of Agriculture finds harmful pathogens in your facility and links those findings to human illness, you may be subject to criminal charges. The best way to bail yourself out of future trouble is to bolster your food safety programs and decisively respond to any food safety issues today.



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HOW MANY SPARE PARTS SHOULD YOU BUY?

APPLYING THE MARGINAL ANALYSIS PRINCIPLE OF ECONOMICS CAN DETERMINE WHETHER OR NOT THE INVESTMENT WILL PROVE WORTH ITS COST.

BY PHILLIP SLATER

In economics, the marginal analysis principle can be very useful in deciding whether to invest in the next unit or item.

The principle is simply this, a company should increase its investment if the marginal benefit is greater than the marginal cost. If the marginal benefit is less than the marginal cost, then it should reduce or at least not increase the investment.

For example, if a manufacturer wants to increase its output of a particular product it would undertake a marginal analysis. This involves comparing the additional costs of expanding production with the additional revenue that might be earned.

If the extra production can be produced using existing (excess) capacity and the products can be sold without discounting, it may be worthwhile.

If new equipment investment is required and the extra supply pushes down the price that can be charged, then the investment might not be worthwhile.

What does this have to do with spare parts?

Well, marginal analysis can also be applied to the purchase of spare parts.

In fact, it often is, without people realizing it.

Here is an example of something that I have seen in real life.

The item was a sprocket that was specially manufactured for a unique piece of equipment.

The set-up cost (machine set up and configuration) for manufacturing the sprocket is \$2,000. However, once set up the cost of manufacturing each sprocket (labor and materials) is only \$200. Therefore, one sprocket would cost \$2,200 (\$2,000 + \$200) but the company can buy five sprockets for \$3,000 [\$2,000 + (5 x \$200)]. This higher purchase quantity results in an individual average 'unit cost' of \$600 each [\$3,000/5].

Compared to buying one for \$2,200, getting the sprockets for \$600 each seems like a bargain!

This an example of the marginal principle at work. Each additional item helps absorb the fixed cost of the set-up and so the unit cost per item is reduced.

However, this is the marginal principle in relation to procurement only and unfortunately with spare parts this is often where the thinking stops.



The problem is that this is only the cost side of the analysis.

What we haven't yet considered is the benefit side.

The sprockets were being purchased as spare parts, not for immediate use in the equipment. This means that no item will be required until the one in the equipment wears out or fails.

Catastrophic failure will result in lost production, and it takes time to get a replacement made so a spare might well be justified.

However, catastrophic failure is unlikely, so it is more probable that the one in use will be replaced when it wears out. This will require one spare.

Can you see where this is going?

A single spare could be justified, but five really can't be. Maybe two spares could be justified if the risk of being without a spare part at any time was too great.

The company purchased five spare sprockets at a cost of \$3,000.

Their logic was that when required the sprockets would be charged to the maintenance budget at \$600 each. Obviously much lower than \$2,200 for one.

However, the company had spent \$3,000 to buy five spare sprockets and then never used any of them. The one in the machine never failed and the wear out rate was low, so a replacement was never needed.

With hindsight it is easy to say they could have not bought any spare sprockets, but a rational analysis based on what was known at the time suggests that they should have bought at least one.

So what, I hear people say, buying five costs only an extra \$800 compared with buying one.

True.

However, if this same logic is applied across their entire inventory (and there is no reason to believe that this is an isolated situation) then the implications are significant.

What we know is that the company spent 36% more than it needed to on stocking spares for this sprocket [(((\$3,000 - \$2,200)/\$2,200) x 100)].

Apply this across the entire spare parts inventory and the additional money unnecessarily spent can become millions of dollars. In fact, in this case it was millions of dollars.

This analysis also ignores the cost of holding the inventory, which is a topic for another day. This means that the real cost for this decision was much more than these raw numbers suggest.

The message is this: When deciding on how many of a spare part to purchase and put on the shelf, companies need to consider the margin principle of economics on the entire life cycle, not just the purchasing price per item.

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UPDATING HOW THE POULTRY INDUSTRY

CONTRIBUTES TO U.S. JOBS AND THE ECONOMY

USPOULTRY IS UPDATING ITS POULTRY ECONOMIC IMPACT REPORT TO PROVIDE A SNAPSHOT OF HOW THE POULTRY INDUSTRY IS FARING ECONOMICALLY.

USPOULTRY is in the process of updating its poultry economic impact report, which provides a snapshot in time of how the poultry industry is faring economically. From an industry standpoint, we realize we could do better job of communicating the positive aspects of the industry, and the poultry economic impact study helps us do this.

USPOULTRY funded the first study in 2012, and it is updated every other year. When the first survey was conducted in 2012, the poultry industry provided 1.3 million jobs, \$63 billion in wages, \$23.4 billion in government revenue and \$265.6 billion in economic impact to the U.S. economy. So, we have definitely seen the industry grow as apparent from the last study conducted in 2020 that shows the poultry industry providing 2.1 million jobs, \$121.1 billion in wages, \$41.9 billion in government revenue, and \$576.6 billion in economic activity.

The information can be viewed in many ways: by county, state Senate district, state House district, congressional district, by the entire state or by the industry as a whole. And, we have broken the study into four areas: the entire poultry industry as a whole and then chicken, turkey and eggs separately.

The poultry economic impact study is important because it allows local, state and governmental officials to understand the role that the poultry industry plays in the U.S. economy. When you think about what the poultry industry contributes at any of these levels, it is rather eye opening from an economic standpoint. Then, when you also think about what the poultry industry donates each year in terms of food, money and other initiatives, as well as the employee volunteer efforts that are not always recognized, it really adds up.



BY GWEN VENABLE

Eagle Meat Minute

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Our association works with a group called John Dunham & Associates, who developed the poultry economic impact model based on data provided by Infogroup, the U.S. Department of Agriculture, several national and state poultry trade associations and groups, and various state agriculture departments. The analysis utilizes the Minnesota IMPLAN Group to quantify the economic impact of the poultry industry on the U.S. economy. The model adopts an accounting framework through which the relationships between different inputs and outputs across industries and sectors are computed. It is based on the national income accounts generated by the U.S. Department of Commerce, Bureau of Economic Analysis and can show the impact of a given economic decision on a pre-defined, geographic region.

If anyone would like information about the methodology for the report, this information can be found on any of the economic impact websites: PoultryFeedsAmerica.org, ChickenFeedsAmerica.org, TurkeyFeedsAmerica.org and EggsFeedAmerica.org.

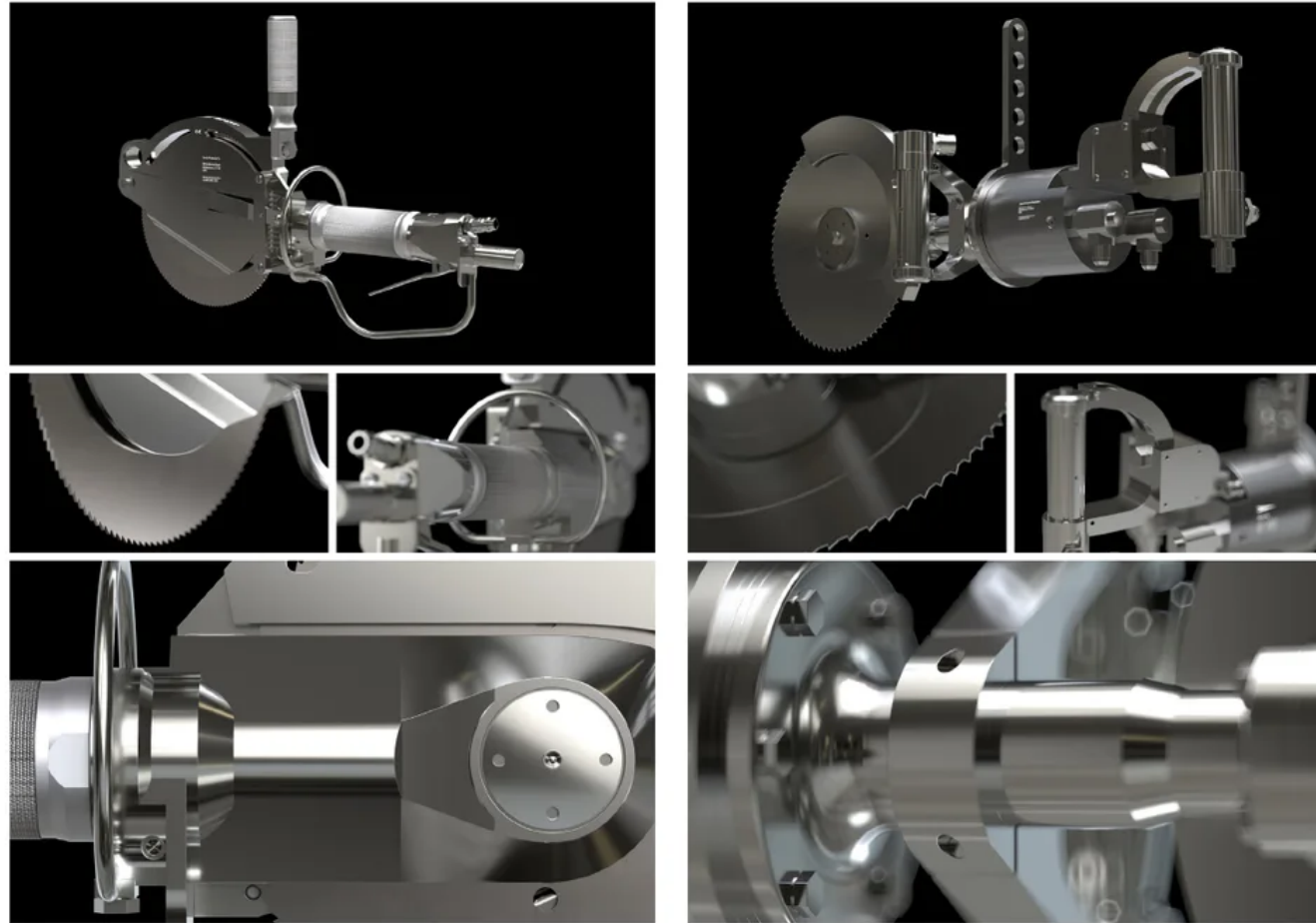
The next poultry economic impact study should be completed by the end of October, and we look forward to relaying the positive contributions that the U.S. poultry industry has on jobs, wages, federal and state revenue, and the U.S. economy!

Gwen Venable is executive vice president, communications, for the U.S. Poultry & Egg Association gvenable@uspoultry.org.

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CELEBRATING 75 YEARS AT OLD WISCONSIN

THE SUMMER SAUSAGE AND MEAT SNACK MARKETER HAS BASED ITS GROWTH ON NURTURING ITS EMPLOYEES AND SHARPENING ITS FOCUS ON GROWING ITS SNACK STICK PRODUCT LINE.

BY FRED WILKINSON
MANAGING EDITOR

Marketer of summer sausage and meat stick products Old Wisconsin is marking the company's 75th anniversary, and when it comes to commemorating the occasion, the company's philosophy is the more the merrier.

"I think part of it is a celebration of the industry, but it's really about the people who've been here for a long time," said Bob Buddig, CEO of Carl Buddig and Co., which owns Old Wisconsin. (Carl Buddig and Co. was The National Provisioner's 2019 Processor of the Year.)



BOB BUDDIG

Old Wisconsin's focus on ready-to-eat and shelf-stable sausage and snack stick products has enabled the company to widen its distribution channels beyond grocery retail. In the last five years, the brand's sales have increased 235% in the convenience market and 312% across mass, club and drug retailer markets. Sales growth in e-commerce has increased by 66% in the past year.

Buddig said Old Wisconsin owes its success to its employees (400 full-time and 100 temporary and seasonal) and has invited them to join the party in marking the company's 75th anniversary, holding celebratory events including a company picnic, hosting food trucks and staging other food events for the staff.

"We typically do that anyway, but this year was kind of special," Buddig said.

He credits Old Wisconsin's success and longevity not only to the company's employees, but also the company culture they help create and the larger community that Old Wisconsin and its workers call home.

"The one thing I can tell you about our Old Wisconsin team is that we come from a community up in Sheboygan of really good employers," Buddig said. "I'm talking about a town of multiple family-owned businesses, from the Kohler Co. to Johnsonville, Sargento, Masters Gallery. There's a lot of good family-owned companies. We try to take care of our associates as well as we can."

Old Wisconsin has been part of the Buddig Co. for more than 40 years, but the company is basically all homegrown, Buddig said.

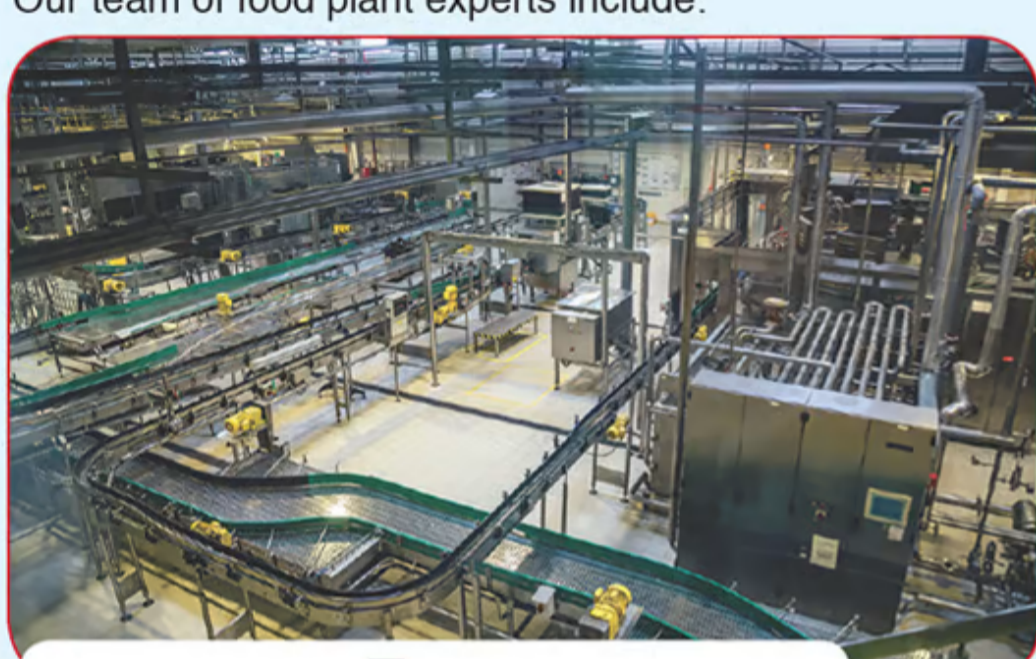
"There's not a single Buddig employee up at Old Wisconsin," he said. "They built it, and Steve Harrison is one of the guys that did it. He and I are like brothers almost."

OLD WISCONSIN'S FOCUS ON READY-TO-EAT AND SHELF-STABLE SAUSAGE AND SNACK STICK PRODUCTS HAS ENABLED THE COMPANY TO WIDEN ITS DISTRIBUTION CHANNELS BEYOND GROCERY RETAIL.

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Old Wisconsin Vice President and General Manager Steve Harrison said the company's close-knit culture and community focus coupled with taking time to nurture employee buy-in proved crucial during marketplace challenges in the past couple of years.

"If we hadn't earned the trust of the employees prior to COVID, it would have been very difficult to have them believe us when we get in front of them and talk about the responsibility of producing food so other people can eat," Harrison said.

Buddig and Harrison both agreed that Old Wisconsin's staff and their hard work and commitment helped the company navigate the past two years of COVID-19 shutdowns and supply chain disruptions.

"We went from having heartburn and anxiety over not finding staff, to opening up trucks and not having the meat that you anticipate, different supply chain challenges," Harrison said, adding that those marketplace realities spurred the company to consolidate some product lines.

Buddig said Harrison takes the lead in shaping the company's culture of commitment to producing quality products and supporting their staff.

"Steve has been one of the key people in building that culture," he said. "During the pandemic because we have such a high emotional value, I think we're able to get through a lot of things through the challenges. I got a chance to spend a lot of time up there. I think that people were very supportive of the Buddig family. I think, in turn, we did the same to them."

Harrison said the supportive company culture starts at the top.

"Every year, Bobby (Buddig) comes up and talks to the staff and summarizes what has occurred in the last year and then what the plans are in the upcoming year," he said. "We call it the kickoff meeting. It's a four-legged stool that a company is built on. One is having a great staff, another is having great products. The third is having supportive ownership. The last is having customers that appreciate all of the above. I think that it goes a long way in saying what the values of the Buddig family are and how that's been supportive of the Old Wisconsin facility here."



IN THE BEGINNING

The Old Wisconsin story dates back to its beginnings in Sheboygan, Wis., in 1947. A defining moment in the company's growth came in 1981, when Carl Buddig and Co., a family-owned meat processor, purchased what was then known as Rammer Sausage Co., expanding distribution and changing the company name to Old Wisconsin Sausage Co.

"Old Wisconsin has really enhanced the Carl Buddig line," Buddig said, adding that the company also markets its Kingsford® barbecue line.

"The three companies work hand in hand together," he said. "It's made us a lot more efficient out in the field. It gives us more opportunity to have more value to our buyers so that when we go in there, we're not just sitting there trying to sell one line of products."

PRODUCT DEVELOPMENT GROWTH

The growing market for on-the-go protein snacks has been among the trends shaping Old Wisconsin's growth and product development.

"Over the last several years, Old Wisconsin really spent a lot of time focusing on the snack side of our business, predominantly with the meat sticks, deli bites and snack bites," Buddig said. "We've really done an outstanding job of being on-trend in protein snacking."

Buddig said one thing that sets Old Wisconsin apart in the competitive meat snacks category is the focus on snack sticks.

"One thing we do not do is jerky," he said. "That sets us apart, and we really focus just on the meat stick side of things. It really goes back to our heritage from the old traditional sausage made up in Wisconsin, up in Sheboygan. That's really where our roots come from."

On the product side, turkey is one of Old Wisconsin's largest-selling proteins, Harrison said, and consumer demand for on-the-go, single-serve convenience snacks has powered development on the packaging side.

"Something that can get thrown into a tackle box or a lunchbox. Something that's more convenient for an individual serving," he said.

Having Old Wisconsin products available for shoppers whenever a snacking occasion may arise is foundational to the company's merchandising strategy.

Buddig said the strong retail presence established by the Carl Buddig line of lunch meats and other products gives their Old Wisconsin-branded line an established presence to build on in retail grocery that crosses over to other retail venues such as convenience stores.

Old Wisconsin products are even marketed in some unexpected venues for meat snacks sales.

"We also have a foodservice team that gets us into some places like the airlines," Buddig said. "I saw Old Wisconsin in my local hardware store, or even in a shoe store."

Old Wisconsin has more new products in the development pipeline.

"We've introduced a natural cut meat and cheese combo pack," Buddig said. "It's a little individual single-serve in a tray combo pack. We're just getting that released in parts of the country."

*Kingsford is a registered trademark of The Kingsford Products Company, LLC and is used with permission by Carl Buddig and Company

FUNCTIONAL PACKAGING SOLUTIONS FOR THE DELI MEAT INDUSTRY

RECLOSABLE PACKS IMPROVE PRODUCT SHELF-LIFE AND HELP ASSURE CONSUMERS THAT THE BRAND'S PACKAGING CAN BE TRUSTED FOR CONTINUED USE. BY JESSE BUSCH

Food packaging is invariably changing to keep up with consumer demands, giving rise to an increasing array of innovations — one being the continued development of functional packaging through reclosable solutions.

When deli meat brands provide reclosability, they are not only creating a design that will help maintain their product's shelf-life but assuring consumers that the brand's packaging can be trusted for continued use. Since there is no one-size-fits-all answer to reclosable packaging solutions, it's essential that producers understand what options are available — especially if their operation poses initial challenges to closure application. Collaborating with industry partners can be the first advantageous move toward discovering the proper course of action in overcoming said challenges. With ongoing innovations, more producers can accommodate their consumer's lifestyles and experience increased marketing benefits by packaging their fully cooked, ready-to-eat meat products with reclosable technology.

OVERCOMING OPERATIONAL CHALLENGES

There are some high-performance processes within the meat packaging environment that should be carefully considered when choosing a closure technology. Brands that use thermoform package processing, for example, can have some unique challenges. Time, temperature and pressure are the three pillars to sealing of flexible materials. Brands should look to closures that can be hermetically sealed at lower temperatures. Since cooling time is often a critical factor in the overall cycle time for the thermoform process, it is important that all other parts of the process be extremely fast and efficient. Pliable closures that feed smoothly and seal cleanly can help improve a producer's operating window.

Brands not requiring thermoforming that don't have in-line zipper sealing equipment can benefit from pre-applied closures. This technology is designed to be added to film rollstock so packaging can be pouched, filled and sealed without the additional zipper application station. This allows brands to maintain ultimate efficiency in the manufacturing process while creating a more practical package for consumers to enjoy.

Overall, seal integrity is paramount in maintaining freshness throughout the product's shelf life. While some operations pose more challenges than others, meat packaging companies should feel free to explore various options without worrying if closure application is even viable. There are solutions to augment even the most challenging processes.

WITH THE MARKET FOR HEALTHY SNACKS FORECASTED TO GROW 6.6% BY 2030, DELI MEATS CAN SERVE AS A GREAT ALTERNATIVE FOR CONSUMERS THAT WANT TO MAINTAIN HEALTHY HABITS AND SAVE TIME IN THE KITCHEN.

RECLOSABILITY TO SUPPLEMENT CONSUMER LIFESTYLES

When it comes to mealtime, many consumers appreciate the advantage of something fast and easy to prepare. With the market for healthy snacks forecasted to grow 6.6% by 2030, deli meats can serve as a great alternative for consumers who want to maintain healthy habits and save time in the kitchen. As a protein-rich option for on-the-go snacking and simplified sandwich making, fully cooked meat products provide a convenience many consumers will value — so its packaging should function similarly.

For deli meats, a strong moisture and oxygen barrier is important for extending the product's shelf-life. Closures that feature a tear bead design can further improve the package's hermetic seal over other perforated styles. This helps to slow down oxygen transmission and maintain product quality. Pairing this feature with reclosability can also reassure consumers that their package has not been tampered with prior to purchase.

Whether it's a family buying in bulk to feed various people or consumers shopping to supplement a smaller household, it's important that deli meat packaging hold up for multiple servings. When used in combination with proper refrigeration, a zipper or slider on a flexible pouch can help keep food fresh and conveniently contained. By having a reclosable feature consumers don't have to worry about decreased protection after their first serving. Instead, they are more likely to have the same great experience with every use.

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INCREASED MARKETING BENEFITS

Given that today's consumers are looking for easy-to-use products in their busy lives, reclosability should be a given. According to a recent Insider Intelligence report, 71% of global consumers switched brands at least once in the past year, and more than half of those respondents were seeking better quality products. When consumers enter a grocery store, they are bombarded with an overwhelming number of options, and it can be difficult to determine which products are going to deliver a high-quality experience. Consumers cannot smell, taste or feel the product inside the package — but when they notice a closure, they can see that they will get specific benefits immediately. Reclosable flexible packaging that is transparent with simple graphics and fonts can help consumers feel as though the product came straight from the deli. This trend helps the product feel more authentic, as if it were freshly sliced from the refrigerated deli-meat section. These characteristics provide a clear competitive edge over competitor brands that are also competing for the consumer's attention.

Reclosable packaging also presents opportunities for continuous consumer engagement with the brand. When consumers purchase a product that cannot be securely reclosed, they are more likely to repackage their deli meats into an airtight container. This removes the manufacturer's branding and becomes a missed marketing opportunity every time the consumer uses the product. Even if the consumer has an otherwise positive experience, in a non-branded container it is seemingly comparable to every other deli meat product in the market. Offering a reclosable pouch for ready-to-eat meats can extend the entire household's exposure to the brand, potentially leading to repeat purchases in the future.

While it may have been difficult in the past, modern technology has opened more doors for companies in the deli meat industry to advance with reclosable flexible packaging. With the ability to overcome complex operational challenges, brands can differentiate their meat products on the shelf and change consumer perceptions about these products.

Jesse Busch is business development manager for Fresh-Lock.

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MICROWAVABLE FOODS

ENJOY STEADY GROWTH

MEAT-BASED MEALS GAIN POPULARITY AT BREAKFAST.

BY HALLIE FORCINIO

Microwave ovens have enjoyed favored status in virtually every kitchen for decades. Despite the appliance's longevity, the demand for microwavable products shows no signs of plateauing or slowing. In fact, the U.S. microwavable food market is expected to experience a 5.4% compound annual growth rate (CAGR) to expand from \$31 billion in 2021 to \$43 billion in 2027, according to a report from Research and Markets. (1)

This is largely due to the convenience factor heat-and-eat meals, entrees and side dishes bring to the table. A survey by Bob Evans Farms Inc. shows this is especially true at breakfast because Americans place a high priority on eating breakfast during the workweek, yet nearly two-thirds of those surveyed (63%) would rather sleep longer than wake up in time to cook and eat the first meal of the day. Other barriers to eating breakfast include the time/energy needed for prepping and cooking (40%), deciding what to make (39%) and managing cleanup (38%).

"Our survey findings have confirmed that while eating breakfast is a priority for the majority of American consumers, many of these same consumers view breakfast as a daily chore," said Maia Daly, senior marketing manager for Bob Evans Farms.

She added, "The connotations toward the process of cooking breakfast are overwhelmingly negative in the minds of working Americans." To eliminate that barrier to breakfast, Bob Evans Farms offers an array of refrigerated heat-and-eat breakfast items. This provides consumers "with meal solutions they need to maintain their busy schedules, all while building a convenient, delicious, and nutritious foundation for their day," Daly said.

The appeal of refrigerated heat-and-eat options is clear. Roughly three-quarters of survey respondents reported that they purchase refrigerated heat-and-eat breakfast items at least once a month to make breakfast prep easier. Additionally, 41% are more interested in refrigerated heat-and-eat breakfast items than they were before the 2020 global pandemic. Convenience, taste and price are the top reasons cited for purchasing refrigerated heat-and-eat breakfast items

Lunch and dinner also are seeing an expanded array of heat-and-eat meals, main courses and sides. The global ready meals market is registering a CAGR of nearly 12% per year, according to a report from Allied Market Research. (2) New products are appearing in both freezer and refrigerated cases in an array of packaging, including trays, cups, pouches, bowls and cartons.



Bowls are particularly popular, especially for single-serving portions. Conagra Brands has chosen a bowl for several recent product introductions including:

- P.F. Chang's Home Menu Beef & Broccoli, Chicken Teriyaki, Chicken Lo Mein and Chicken Fried Rice meals
- Frontera Chicken Fajita, Carne Asada Burrito, Chicken Verde Burrito, and Pork Carnitas Burrito meals and Banquet MEGA Bacon Mac & Cheese.
- Bowls also are the packaging format selected by Sweet Earth Foods for its new frozen Korean BBQ-Style Chik'n and Cacio e Pepe entrees.

Meanwhile, packaging for retail products as well as dine-in and take-out applications is shifting to more sustainable options such as fiber-based bowls, trays and cartons. Although the renewable fiber typically is sourced from wood, sugarcane also may play a role. In some cases, these fiber-based structures can be qualified as compostable and are dual-ovenable to accommodate either microwave or conventional oven heating.

Whatever the base material, efforts continue to reduce plastic use. Sometimes, this reduction is achieved by lightweighting, as Tyson Foods Inc. did when it replaced a three-component package (rigid amorphous polyethylene terephthalate tray, polyvinyl chloride overwrap and label) with a recyclable, high-barrier pouch for its Tyson Instant Pot Kits. The winner of a Gold Award for Expanding the Use of Flexible Packaging in the 2022 Flexible Packaging Achievement Awards Competition, the pouch represents an 80% reduction in carbon footprint and a 75% reduction in packaging weight. It also eliminates chloride-based materials.

However, when plastic is necessary, biodegradable resins can sometimes serve as an alternative to traditional resins, and mono-material films are replacing more complex structures that are less likely to be recycled. A growing number of suppliers offer food-grade plastic packaging with post-consumer-recycled content.

1 Research and Markets, "Microwavable Food Market Research Report by Product (Frozen Food and Shelf Stable Microwavable Food), Packaging Technology, State - United States Forecast to 2027 - Cumulative Impact of COVID-19," Report, April 2022.

2 Allied Market Research, "Global Ready Meals Market, Opportunities and Forecasts, 2022-2031," Report, February 2022.

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ADDING VALUE TO CULL-COW BEEF THROUGH DRY-AGING

RESEARCH SUGGESTS CONVENTIONAL DRY-AGING IMPROVES THE PALATABILITY OF CULL-COW BEEF.

BY DERICO SETYABRATA^{1,3}, SIWEN XUE¹, KELLY VIERCK^{2,3}, JERRAD LEGAKO², PAUL EBNER¹, STACY ZUELLY¹ AND YUAN H. BRAD KIM^{1*}

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Cull cows play a significant role in fulfilling the U.S. beef demands. It is estimated that cull cows account for up to 19% of the total cattle harvested in the U.S. every year [1]. Although cull cows generate a considerable amount of beef, most products often end as ground/manufactured beef and/or low-quality cuts, substantially decreasing its economic value. This is often due to the inferior palatability, such as increased toughness and off-flavor, which is inherently generated as the animal ages.

While techniques such as brine injection and blade tenderization can be utilized as a post-harvest intervention to reduce palatability issues, consumers' demand for minimally processed meat products has been growing. Dry-aging is a natural aging method that has been known to considerably improve the palatability of meat. The process generated a unique dry-aging flavor, often reported as "beefy", "buttery", "nutty" and "brown-roasted." A previous study reported that dry-aging could improve the palatability of low-marbled grass-fed beef [2], showing higher flavor liking scores when compared to its wet-aged counterparts. This finding displayed great potential for dry-aging as a natural value-adding process to improve the quality of low-quality/low-value products such as cull cow beef.

During dry-aging, however, meat cuts are exposed to the environment, increasing the potential risk for microbial contamination. Multiple approaches have been developed to minimize contamination, including moisture permeable bag utilization and ultraviolet (UV) light application during the aging process. While the impact of dry-aging in moisture-permeable bags is relatively well-reported, the effect of UV-light application during dry-aging on final product quality has not been fully known yet. Therefore, the main objective of this study was to identify the impact of different aging methods on the palatability and quality of cull cow beef.

“WHILE TECHNIQUES SUCH AS BRINE INJECTION AND BLADE TENDERIZATION CAN BE UTILIZED AS A POST-HARVEST INTERVENTION TO REDUCE PALATABILITY ISSUES, CONSUMERS' DEMAND FOR MINIMALLY PROCESSED MEAT PRODUCTS HAS BEEN GROWING.

For the study, we collected paired bone-in striploin from 13 cull cow carcasses and assigned them to four different aging treatments:

- wet-aging (WA)
- conventional dry-aging (DA)
- dry-aging in moisture permeable bag (DWA)
- and UV-light dry-aging (UDA).

All the samples were aged for 28 days at 2°C, 65% relative humidity and 0.8 m/s airflow. For the UV light treatment, samples were exposed to UV light twice daily for 5 minutes per exposure. After the aging process, samples were deboned, trimmed of dried surfaces, and cut into steaks for instrumental tenderness measurement, color and oxidative stability, microbial analysis and sensory analysis by both trained and consumer panels.

As expected from the dry-aging treatments, more product loss was observed in all dry-aged products when compared to the WA control ($P < 0.05$), mainly attributed to the increased moisture loss and surface trimmings. However, DWA exhibited the least moisture and trim loss among the dry-aging treatments, increasing the yield by 6% compared to other dry-aging methods. In regard to meat quality and chemical attributes, similar tenderness, cook loss, lipid oxidation and protein oxidation quality were measured from all samples. The color analysis showed that DWA had the lowest color stability, demonstrated by the rapid discoloration of the products by the end simulated retail display. Interestingly, UDA steaks had comparable color and color stability to WA throughout the simulated retail display.

The application of UV light did minimize the growth of microorganisms on the meat surface during the dry-aging process. However, the inner meat portions were observed to have similar microorganism concentrations following the trimming process, regardless of the aging methods. While still unclear, microorganism presence and activity might benefit product development. Some microbial and molds have been shown to have protein and lipid degrading ability, thus potentially aiding in flavor pre-cursors liberation during aging.

For the sensory analysis, consumer panelists determined that the steaks had similar sensory attributes across all the aging treatments. The consumer panel also found that all the steaks had acceptable quality regardless of treatments. A consumer panel survey revealed a greater interest in dry-aging and dry-aged products compared to wet-aging. However, the trained panel found that DA significantly reduced the presence of sour and animal fat flavor compared to other aging methods, indicating its potential benefit for flavor improvements. The application of UV light showed a trend of increasing oxidized flavor in the final meat products in UDA samples compared to other treatments.

The findings of the current study suggested that conventional dry-aging could be utilized as a natural value-adding process to improve the palatability of cull cow beef through the reduction of off-flavor presence. Dry-aging in moisture permeable bags could increase product yield, although relatively fast discoloration should be considered for retail conditions. Implementing UV light as a safety measure might be beneficial as it minimizes the growth of surface microorganisms. However, further investigation is still needed to understand its impact on overall meat quality and palatability. More studies evaluating the effects of microorganism involvement, flavor generation process and safety of the dry-aging process should be warranted to fully utilize the beneficial impacts of dry-aging on beef quality attributes.

ACKNOWLEDGMENT

This study was funded by Agriculture and Food Research Initiative Grant 2017-67017-26475 from the USDA National Institute of Food and Agriculture.

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