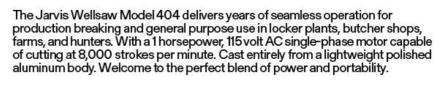
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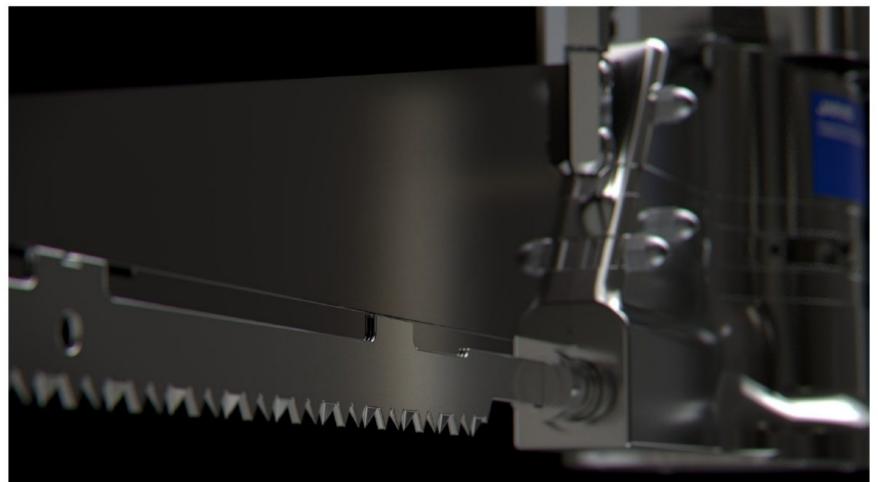


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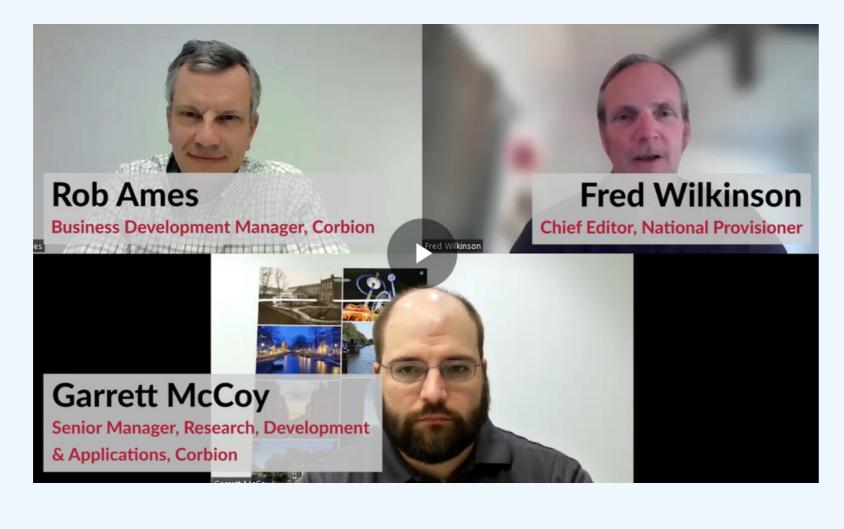
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CLEAN-LABEL MEAT PRODUCTS
Corbion's Robert Ames and Garrett McCoy

discuss approaches for processors to successfully innovate clean label meat and poultry products. Their discussion covers emerging trends in crafting clean-label products, how formulation strategies for clean-label proteins intersect with other food safety interventions, and key considerations for processors looking to roll out a new clean-label meat product.

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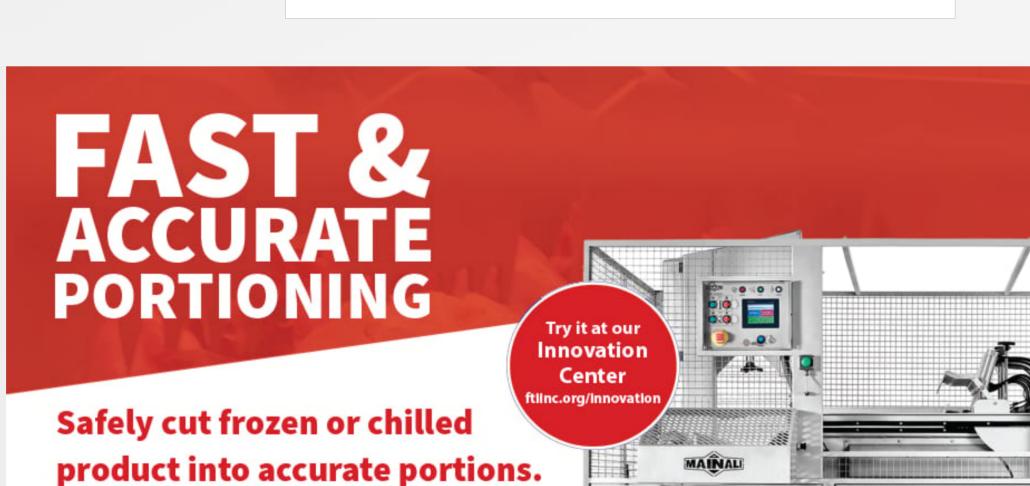
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According to Circana retail sales data analysis, overall fresh seafood prices rose by 3% in December 2024, driven by shellfish, while prices for finfish declined about 1%. Prices for frozen and shelf-stable seafood declined from December 2023. However, the average price per pound in the overall seafood category remained significantly higher than the average price per pound for chicken (\$3.18), pork (\$3.19) and beef (\$6.69).

Fresh seafood averaged \$10.02 and frozen seafood weighed in at \$7.58. Even shelf-stable seafood – at an average of \$5.33 for December 2024 – was pricier than two of the three leading proteins.



FRED WILKINSON

Among Circana's other seafood market finding in December 2024:

- Refrigerated seafood reclaimed some shoppers in 2024, after several years of declines.
- Slightly more consumers purchased shelf-stable seafood in 2024, buying it slightly more often and in larger quantities.

Check our Seafood Report 2025, Value-Added Seafood Products Category Report and Aquaculture Special Report in this edition and learn how meeting consumer expectations for sustainability and traceability remain top of mind for seafood shoppers.

Opening image: Getty Images / DNY59



EMAIL FRED WILKINSON













SEAFOOD INDUSTRY SEES A STRONG 2024, DESPITE ONGOING ECONOMIC PRESSURES.

BY SAMMY BREDAR

ASSOCIATE GROUP EDITOR. THE NATIONAL PROVISIONER

The seafood industry had a strong 2024, despite ongoing economic pressures. Between 2023 and 2024, total seafood sales reached \$19.9 billion, a slight decline from the year before, according to Circana (Total US Multi-Outlet+, \$52 Weeks Ending 10/06/2024). Despite this decline in dollar sales, pounds sold increased slightly. The seafood category reached more than 115 million buyers across the US in that year, achieving an 89.2% total seafood household penetration. As consumer purchasing preferences increasingly align with seafood product attributes, the category is positioned for a strong 2025.

Sustainability and traceability remain top of mind for consumers and producers alike. As consumers increasingly prioritize these attributes in their food products, meat and seafood producers are in a position to grow.

The number of meat eaters is on the rise, and with it, and increasing number of consumers who are interested in seafood as a major protein source, according to Technavio. To gain attention of consumers looking for new seafood products, producers must tap into what attributes matter most to consumers.

Sourcing is of the utmost important to seafood consumers, said Ron Rogness, Genuine Alaska Pollock Producers director, industry relations, partnerships and fishery analysis. "US-origin seafood, particularly from Alaska, is viewed positively, whereas consumers would prefer to avoid seafood from Russian and China," Rogness said.

In fact, 69% of consumers surveyed said they actively avoid or are unlikely to purchase seafood from either Russia or China. GAPP's survey also uncovered increasing consumer awareness and rising positive perception of Wild Alaska Pollock. These insights indicate strong growth potential for US seafood producers.

On-pack claims and consumer education are an effective way to drive seafood category growth. As sustainability remains a priority for a majority of consumers, on-pack sustainability claims can let consumers know how a product aligns with their values.

Rogness noted that, for many seafood consumers, sustainable seafood includes ensuring an abundant supply for generations to come. Concern over the food supply leads to consumers to prioritize claims such as "wild caught," "fishery management" and "safe for the ocean" in the seafood aisle.

Kady Freeze, marketing manager for Pacific Seafood, said that as sustainability and traceability continue to be a top attribute concern for seafood shoppers, responsibly sourced products and certifications are a priority for them. Consumers want the full origin story behind their seafood purchases.

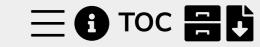
"Pairing these drivers with innovative product offerings and educational campaigns about the benefits of seafood has been instrumental in growing the category," Freeze said.

Freeze noted that as this focus on sustainable seafood rises, chefs, restaurants and seafood producers alike are looking for responsibly sourced seafood options. "This movement offers consumers the opportunity to explore lesser-known species, providing a way to expand their seafood palate and experience new flavors while promoting a more balanced approach to seafood harvesting," Freeze said.

Younger shoppers, particularly Millenial and Gen Z consumers, are more likely than Baby Boomers to seek out sustainable, traceable seafood products. "They want to know where their seafood comes from and how it was sourced, and they're more likely to seek out certifications like MSC or ASC," Freeze said.

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TEXAS BARBECUE

SIGNATURE BEEF SAUSAGE ENDURES AS THE TOP SELLER FOR SOUTHSIDE MARKET & BARBEQUE'S RESTAURANTS AND RETAIL OFFERINGS. BY FRED WILKINSON

CHIEF EDITOR

AUSTIN, Texas – Barbecue has a long and proud history in Texas. It's a key aspect not only of the Lone Star State's cowboy image and

Southside Market & Barbeque was established in 1882 outside Elgin, Texas. For its first four years, meat was sold door to door before the business opened its first storefront in downtown Elgin, offering counter-service sales of fresh meats as well as meat smoked in the back of the building.

While ownership of the business has changed a few times in its 140-plus years, Southside Market & Barbeque's smoked meats are still made using traditional "low and slow" Texas offset smoking, said Southside Market & Barbeque owner Bryan Bracewell.

"The cooking process has remained the same, the wood has remained the same, the style of the pit has evolved a little bit over time," Bracewell said. "The one thing that I have really appreciated about our business is that it's just the typical small-town business that learned how to roll with the punches from the early days. We sold what we had available — animals that were grown in the area. We cooked them with the trees that were grown in the area. It was all with local methods and local ingredients."



heritage, but also a celebrated part of the diverse culinary tradition of the US.

The top-selling item for both the restaurant and retail sides of the business is their signature all-beef Elgin Hot Sausage.



'The one thing that I have really appreciated about our business is that it's just the typical small-town business that learned how to roll with the punches from the early days,' says Southside Market & Barbeque owner Bryan Bracewell.

Bracewell's grandfather, who was a traveling meat salesman for Armour, bought the business – one of his accounts-- in 1968. The transaction included the in-town butcher shop/barbecue joint as well as a harvest plant outside of town.

"My grandfather with his history in meat distribution with Armour started putting trucks on the road and selling sides of beef to a little grocery company called H-E-B," Bracewell said. "Our distribution arm of our business started out as selling swinging beef to the local grocery stores. He added the sausage we made to the trucks simply as a way to get more pounds on the trucks."

As the business of meat distribution evolved, swinging beef sales went away, but the sausage sales remained, evolving away from bulk fresh sales.

"When I got into the business in 1998, 99% of the sausage we sold was fresh, raw, and 5% or less was fully cooked smoked," said Bracewell, who is a Texas A&M University-trained meat scientist. "Now that's totally flipped. The fully cooked, smoked four-link single pack or 12-link family pack is 95% of our sales at the grocery store."

Southside Market & Barbeque's restaurant operation has evolved as well, with locations in Elgin, Bastop, Hutto and Austin. Southside Market & Barbeque's fifth location is currently under construction in LOCATION?. Each location includes a small butcher shop/meat market, with every menu item for sale.

"We used to be the meat market that sold barbecue in the back," Bracewell said. "Our business has evolved into the barbecue restaurant that has fresh meat they sell on the side."



Retail reach

Southside Market & Barbeque's current roster of retailer clients includes H-E-B, Walmart and Kroger, as well as some smaller Austin-area grocers, Bracewell said. While product distribution sometimes extends into neighboring states like Louisiana and Arkansas, the majority of sales remain in Texas. Direct-to-consumer e-commerce sales continue to be a growing sales channel for the business too. "It's been a growing part of our business for the last 15-20 years," Bracewell said. "The heyday of that business was during Covid."

Southside Market & Barbeque products stocked on retailers' shelves are all marketed under the Southside Market & Barbeque label, Bracewell said.

Southside Market & Barbeque's roster of privatelabel clients also has expanded.

Southside Market & Barbeque operates four restaurant locations, with a fifth restaurant under construction.

"We do private-label as well for other small businesses similar to ours," Bracewell said. "It has been a growing part of our business. As the dynamics of dealing with the H-E-Bs and Walmarts has gotten more complicated, some of those legacy brands have chosen to outsource their production. We've also gotten strategic around some partnerships, partnering with other brands."

Those efforts include partnering with brands looking to offer an authentic Texas barbecue product under their own label.

"Snake River Farms is one of our partners," he said. "We smoke American Waygu for them on the same pits that we use for ourselves, with the same process. It's just really simple. The ingredient statements are beautiful — beef brisket, salt, pepper – that's it. That's the trend with all of our barbecue items. Barbecue has kind of turned into a commodity at the retail level. If we are looking for a customer and the first thing they talk about is 'Yes, we want barbecue,' but the next thing they talk about is price, that's not a good fit for us. If they want barbecue and they want to talk quality and authenticity next, that can be a good fit for us."

SIGNATURE SAUSAGE

Bracewell said the top-selling item for both the restaurant and retail sides of the business is their signature all-beef Elgin Hot Sausage. The sausage is course-ground and stuffed in a pork casing. It's sold raw ready to cook and smoked ready to eat.

"Our fresh beef sausage is the reason we're still here today – that's what put us on the map," he said. "We're in Texas, and in Texas people eat beef. It doesn't matter what I put out there -- the beef sausage is going to be our No. 1 seller and brisket is going to be our No. 2 seller."

Southside Market & Barbeque sources Good Stock brand beef for its products from Nolan Ryan Beef. The Texas-raised Angus beef is harvested at a Cargill facility in Fredonia, Texas, Bracewell said. Southside Market & Barbeque sources beef trim for use in its product from the open market.

Products are incentivized to sell in bulk to offer consumers the best deal, he said. "We have the smaller packages as kind of a test pack if they want to try out a new flavor."

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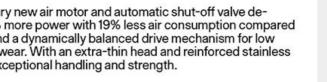




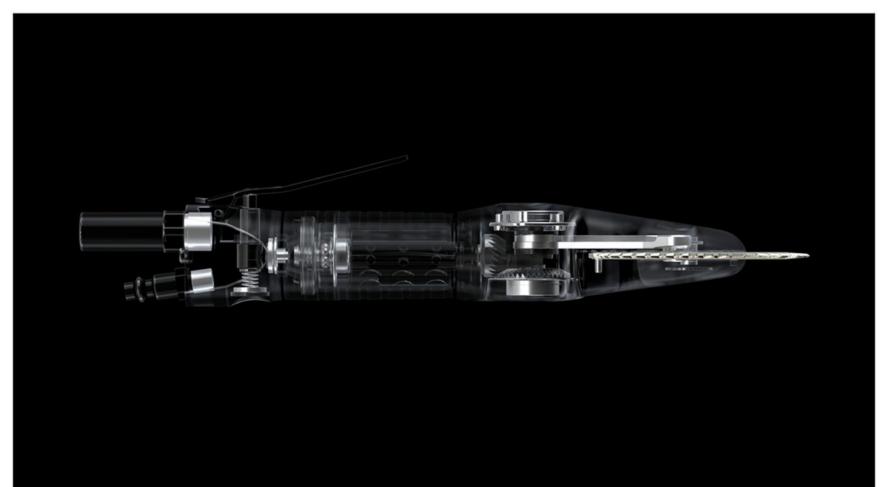
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EFFICIENCIES - AND THEIR INVESTMENT.

BY FRED WILKINSON

CHIEF EDITOR

A M King is a fully integrated design/build services firm that focuses on helping food processors and handlers achieve maximum operational efficiency. The company's services extend from guiding their clients from project conception to start-up, offering services from property consulting, to design and construction, to facility services.

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In this audio interview, A M King's David Sawicki shares insights on some best practices that meat and poultry processors should keep in mind as they weigh upgrading and/or expanding their production facilities.





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MANY IN THE MEAT AND POULTRY INDUSTRY REMAIN OPTIMISTIC ABOUT THE POTENTIAL CHANGES THAT COULD IMPACT USDA'S FSIS POLICY AND PRIORITIES.

BY SHAWN K. STEVENS

FOOD INDUSTRY COUNSEL LLC

As I write this article, the new US president just finished taking the presidential Oath of Office. With the inauguration of the 47th president now behind us, and as the Administration begins implementing its agenda, many in the meat and poultry production sector are optimistic about the potential changes that could impact USDA's FSIS policy, regulations and rules.

Indeed, it is well-known that current regulations, while essential for ensuring product safety, often come with significant compliance costs. The administration's announced push for greater "efficiency," however, may present opportunities for streamlining processes and reducing regulatory burdens, which could benefit the overall meat and poultry industries without compromising safety.

A key initiative of the administration is the establishment of the Department of Government Efficiency, which aims to recommend budgetary and personnel cuts across federal agencies, including USDA. For the meat and poultry industries, these reductions could mean a leaner regulatory framework, streamlined policies, refinements to onerous inspection mandates, fewer FSIS inspection personnel, and potentially faster regulatory approvals.

In turn, companies that have invested, or will soon invest, in advanced safety systems and robust internal protocols may find themselves well-positioned to maintain high safety standards, even with reduced FSIS oversight. Indeed, FSIS's inspection programs, which require inspectors to physically examine carcasses, monitor plant hygiene, and verify compliance with Hazard Analysis and Critical Control Point (HACCP) systems, are integral to food safety. However, many facilities have already adopted cutting-edge technologies and rigorous self-auditing practices that complement federal inspections. These advancements could mitigate the impact of personnel reductions, allowing the industry to uphold safety while continuing to realize operational efficiencies.

Budgetary adjustments might also encourage industry to take greater initiative in adopting innovative food safety technologies. Over the past decade, companies have increasingly relied on data-driven methods to predict and prevent contamination, such as advanced sanitation protocols and pathogen detection systems. These investments not only enhance safety but also reduce dependence on federal oversight, aligning with the administration's vision of efficiency.

From an industry perspective, reduced oversight could lower compliance costs and streamline operations, enabling faster throughput and greater competitiveness. While some consumer advocates express concerns about potential risks, the industry's track record suggests it is absolutely capable of maintaining high safety standards independently. Businesses understand that consumer trust is paramount, and the reputational and financial consequences of foodborne illness outbreaks are strong incentives to prioritize safety.

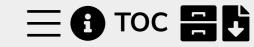
The Administration's regulatory reform agenda, including executive orders to reduce the overall number of regulations, may also provide opportunities to modernize outdated rules. Streamlining requirements without compromising core safety principles could foster innovation and improve operational efficiency across the sector.

As the Department of Government Efficiency finalizes its recommendations, the meat and poultry industry is poised to adapt and thrive. By leveraging technology and best practices, companies can balance the dual priorities of economic viability and product safety, ensuring continued consumer confidence in their products. Like you, we very much look forward to what may be on this new horizon.

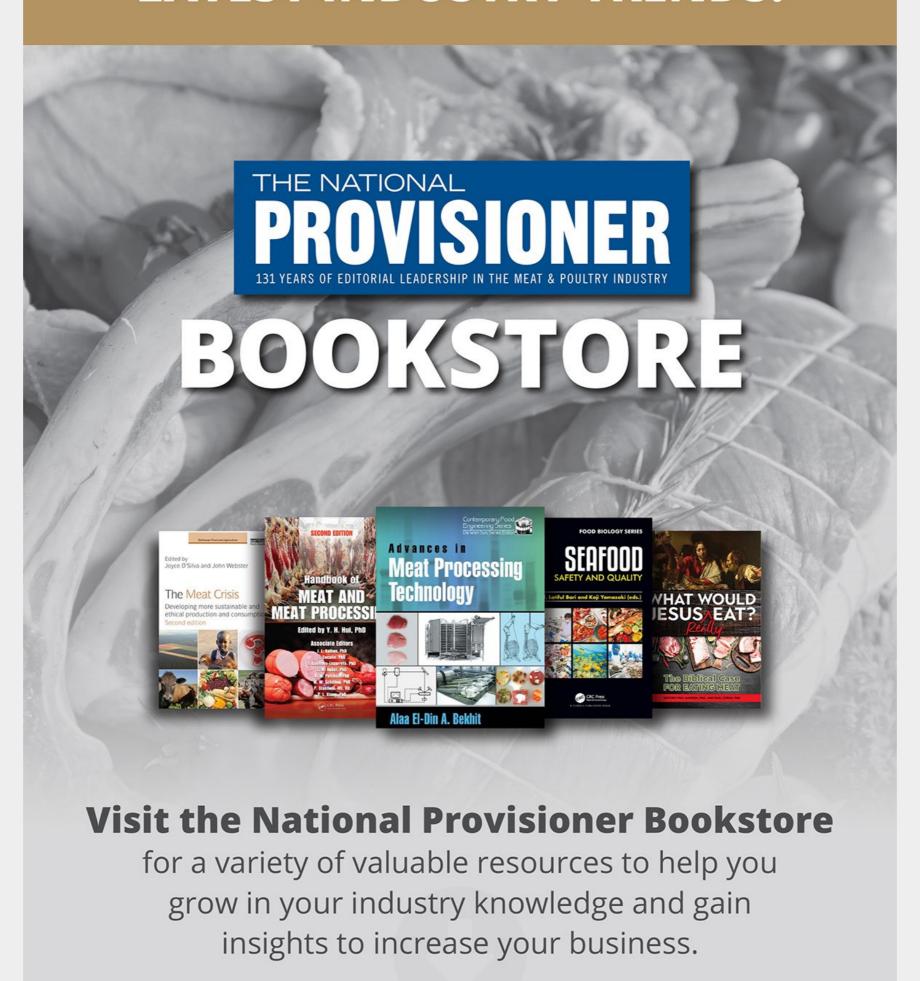
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2024 STUDY SHOWS THE POULTRY INDUSTRY PROVIDES MORE THAN 2 MILLION JOBS, \$54 BILLION IN GOVERNMENT REVENUE AND \$663.6 BILLION IN ECONOMIC ACTIVITY.

BY GWEN VENABLE

Many years ago, we had a discussion with other poultry organizations about the need to quantify the impact the poultry industry has on the US economy. We realized that local, state and governmental officials really did not understand the role that the poultry industry plays in the US economy. So, we began working with a group called John Dunham & Associates to conduct an economic impact study on the poultry industry. The first study, in 2012, revealed that 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 US economy.

Since that time, we have seen the industry grow. The study is conducted every other year, and the 2024 study results show the poultry industry providing 2.01 million jobs, \$132.7 billion in wages, \$54 billion in government revenue, and \$663.6 billion in economic activity. Those are some pretty large numbers!

The study's 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 the study has been divided into four areas -- the entire poultry industry and then chicken, turkey and eggs separately. This information is available for viewing on the following websites:

- PoultryFeedsAmerica.org
- ChickenFeedsAmerica.org
- TurkeyFeedsAmerica.org
- EggsFeedAmerica.org

The information provides a snapshot of the poultry industry's impact on the economy, based on historical data. For the 2024 study, we first sought feedback from state poultry associations and our national partner organizations. After incorporating their input, we shared the initial data set for review. Dunham & Associates then ran the models, making necessary corrections and adjustments, before finalizing the information for distribution.

We recognize that there is always room to improve how we communicate the positive contributions of the poultry industry, and the poultry economic impact study helps with this effort. The industry's economic contributions are rather eye opening, and when you also consider the annual donations of food, money and other resources—along with the often-overlooked volunteer efforts of its employees—the overall impact becomes even more impressive!

The poultry economic impact model was developed by Dunham & Associates using data from Infogroup, the U.S. Department of Agriculture, numerous national and state poultry trade associations, and various state agriculture departments. This analysis employs the Minnesota IMPLAN Group's tools to measure the poultry industry's economic impact on the U.S. economy. The model uses an accounting framework to calculate the relationships between various inputs and outputs across industries and sectors. Additional details about the report's methodology are available on any of the poultry economic impact websites.

Gwen Venable is executive vice president, expo & communication services, for USPOULTRY.

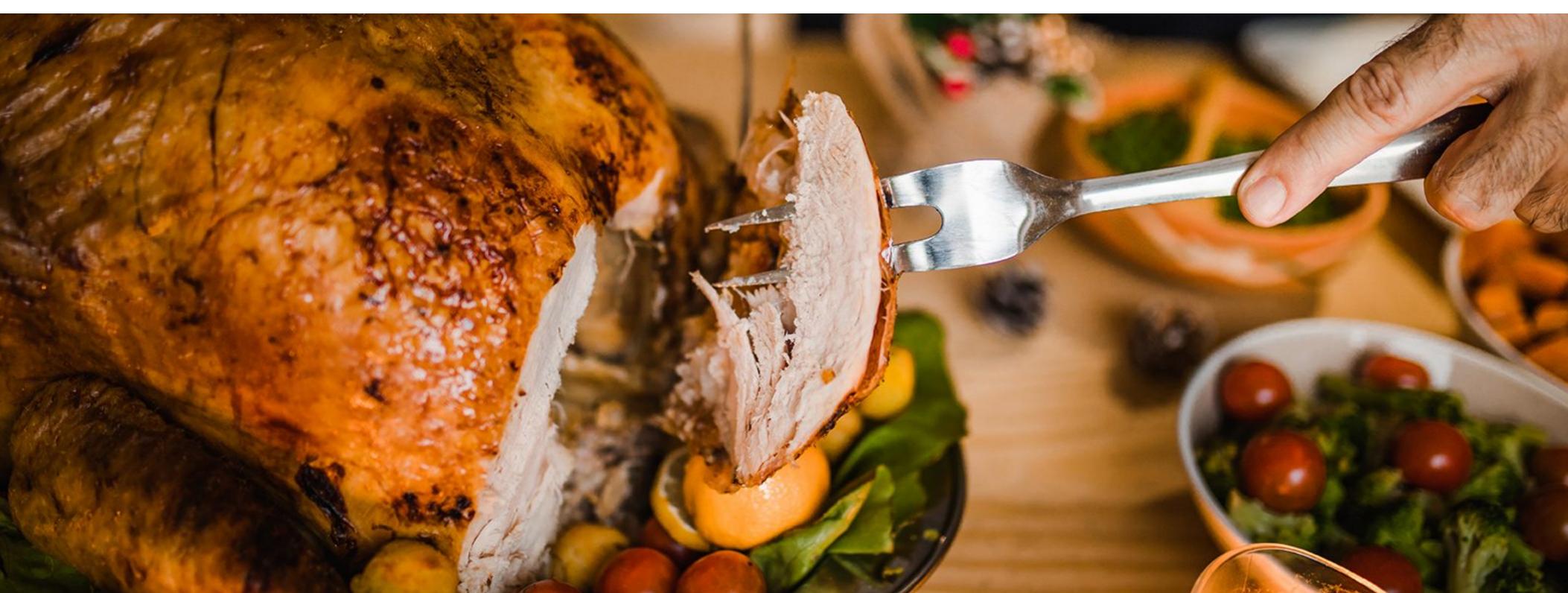
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COMMENTARY - AMSA







ENVIRONMENTAL ENRICHMENT MINIMALLY IMPACTS MEAT QUALITY OF FRESH AND **PROCESSED TURKEY**

ENVIRONMENTAL ENRICHMENT PROVIDES A POSSIBLE SOLUTION TO MITIGATE NEGATIVE IMPACTS OF INTENSIVE HOUSING AND IMPROVE ANIMAL WELFARE.

Over the past several years, intensive housing and selective breeding have made it possible to produce heavier poultry in a shorter period of time (Clark et al., 2019; Remigon, 2004). However, this rapid rate in growth sometimes comes at the cost of losing the ability to perform natural behaviors and may have led to various muscle abnormalities (Zampiga et al., 2020; Zampiga, et al., 2019). As a result, consumers have been increasingly concerned about animal welfare, the number of animal welfare certification programs has increased, and more turkeys are being produced for niche markets (Troy and Kerry, 2010; Erasmus, 2018).

Environmental enrichment (EE) is a possible solution to address the negative impacts of intensive housing and improve animal welfare. Sherwin et al. (1999) discovered that access to enrichments, such plywood boards with chains attached or supplemental ultraviolet radiation, can reduce the incidence of injuries caused by wing or tail pecking among male turkeys. Martrenchar et al. (2001) confirmed that access to bales of straw, metal objects, and wood perches resulted in turkeys that displayed fewer peckingrelated injuries.

Although the effects of EE on animal welfare have been studied within various avian species, there is very limited information about the effects of EE on fresh or processed meat quality, particularly in turkey. This study attempted to fill the knowledge gap by examining the effect of EE on fresh and processed meat quality of turkeys, with the hypothesis being that EE would positively impact animal welfare to the point of improving fresh and processed meat quality attributes.

This study used commercial turkeys (n=420) randomly assigned to six EE treatments (control [C], pecking block [PB], platform [P], platform + straw bale [PSB], straw bale [SB], and tunnel [T]) across 24 pens (16 to 18 turkeys / pen). PB pens had one rectangular pecking block (0.23 m \times 0.23 m \times 0.18 m), with blocks replaced as they were destroyed. P pens had one wooden platform (0.99 m \times $0.61 \, \text{m}$) with two ramps ($1.22 \, \text{m} \times 0.61 \, \text{m}$) that were 30-degree angle relative to the ground, with wooden strips 6 cm apart. SB pens had one straw bale $(1.02 \text{ m} \times 0.51 \text{ m} \times 0.30 \text{ m})$, with bails replaced when the top collapsed and turkeys were no longer able to stand. PSB pens had one platform identical to P pens and one straw bale identical to SB pens. T pens had one tunnel (0.61 m × 0.61 m × 0.58 m) made of corrugated plastic sheets attached to a wooden frame. Example images of each treatment were published in Dong et al., 2023.

At 19 weeks, turkeys were weighed (LW), and six birds per pen were harvested, a subset (n = 96 carcasses) fabricated into wings, drumsticks, and boneless breasts and thighs. From the breast and thigh, samples were taken for pH and drip loss. From the breast, samples were taken for instrumental color and shear force, with remaining breast portions further processed into boneless turkey breast logs. From each turkey log, slices were taken for packaged purge loss, expressed moisture loss, instrumental color, and texture.





The only live and fresh meat differences were found in the live weight, dressing percentage, and fresh thigh b* (yellowness) values, with all other parameters not significantly impactful. For live weight, SB turkeys were 3.4% lighter than C turkeys, and PB turkeys were 3.2% heavier than C turkeys, with all other EE treatments the same as C turkeys. However, the dressing percentage for PB turkeys was 1.7% less than C turkeys. Therefore, the difference in PB turkey live weight may have been due to feathers that contained a greater amount of dirt or manure, resulting in the greatest live weight and least dressing percentage. A greater amount of dirt or manure accumulated on feathers could also indicate reduced locomotion.

It was expected that thigh color would be impacted more than breast color due to muscle location. The breast muscle has more of a supportive role compared to the thigh muscle, which is used for locomotion, and therefore, could be more heavily influenced by differences in physical activity among the EE treatments. PSB thighs displayed the highest b* values and PB thighs displayed the lowest, meaning that PSB thighs were yellower in color. Other studies have shown comparable results with perching increasing yellowness and redness values of broiler breast meat potentially due to myoglobin content and/or the increased physical activity of the birds with perches (Fletcher, 2002; Akşit et al., 2017). Therefore, it was anticipated that EE treatment would also impact thigh a*, but that was not observed in this study.

Finally, for processed meat characteristics, only L* (lightness) and expressed moisture loss measurements showed impacts due to EE treatments. Control and PB turkeys had a darker color, while all other treatments were lighter. The P turkeys also had a greatest expressed moisture, indicating greater processed water retention. However, no other measurements of water holding showed differences between EE treatments.

This study provided several benchmarks about EE on fresh and processed turkey meat quality. Although some differences were observed for individual quality traits due to EE treatments, the impact of specific EE treatments was not consistent across all meat quality traits. Since this research area is so new, further research needs to be conducted to see if these results change when tested on female or mixed gender turkey groups, as well as different breeds of turkeys. Muscle fiber typing and proximate analysis can be conducted to evaluate specific biochemical or structural differences among the treatment groups. Additionally, further work would need to evaluate these EE treatments in larger commercial facilities in larger scale operations. Though the differences in this study were limited, it is clear EE treatments did not negatively impact fresh or processed meat quality traits, and are still viable methods for producers to improve animal welfare without concerns to end-product quality attributes.

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IT'S IMPERATIVE THAT THOSE WORKING WITH INDUSTRIAL FREEZERS ARE ABLE TO RECOGNIZE, TREAT, AND MOST IMPORTANT PREVENT, COLD STRESS AND ITS POTENTIAL HEALTH IMPACTS.

BY TREVOR CRIVELLO

Working in refrigerated environments is difficult. To cope, many workers adopt a posture of bravado that might be risky in the long run. Mind over matter — more precisely, if you don't mind, it doesn't matter — works only so long when exposed to extreme cold.

After that, workers run the risk of cold stress, which is essentially a drop in core temperature occurring when the body loses heat faster than producing it. Consequences range from poor work performance to serious, long-lasting health implications and even death.

That's why it's imperative that those working with industrial freezers are able to recognize, treat, and most important prevent cold stress and its potential health impacts.

RISK FACTORS IN REFRIGERATED ENVIRONMENTS

The likelihood of cold stress is increased when certain risk factors are present. These include:

- improper clothing
- dampness
- physical exhaustion, generally poor physical condition, or preexisting health issues such as hypertension, hyperthyroidism or diabetes

COLD STRESS-INDUCED MALADIES TO WATCH

The most common cold stress related health issues are hypothermia, frostbite, trench foot, and chilblains. Here are their symptoms and treatment strategies:

Hypothermia — Though typically occurring at extremely cold temperatures, hypothermia, wherein body temperature drops below 95 degrees Fahrenheit, can occur at temperatures above 40 F if a person is chilled from sweat or other moisture. Mild symptoms include shivering, but in severe cases shivering will stop and the afflicted may lose coordination, become disoriented, or lose consciousness. Potentially fatal, steps to treat hypothermia include:

- Move the person to a warm room.
- Replace wet clothes with dry clothes and cover the body with blankets.
- Place warm water bottles or hot backs around the person's core (in armpits, at the sides or the chest, and around the groin).
- If the person is unconscious, call 911.
- If the person isn't breathing, perform CPR until they respond or medical assistance arrives.

Frostbite — Freezing of the skin and the tissues beneath, frostbite typically impacts fingers, toes, hands, and feet. Amputation can result from severe cases. Symptoms include numbness, tingling, and waxy or blistered skin. To treat, follow the steps for hypothermia. Don't rub, massage, or otherwise directly contact the impacted skin as this may cause more damage to the frozen tissue.

Trench foot — Also known as immersion foot, trench foot results from the constriction of blood vessels to the feet as a reaction to prolonged exposure to wet and cold conditions. Symptoms include cramping, swelling, numbing, blistering, or redness. Treatment options include:

- Remove wet shoes and socks.
- Gently dry the feet.
- Call 911.

If possible, do not walk on afflicted feet to avoid further damage.

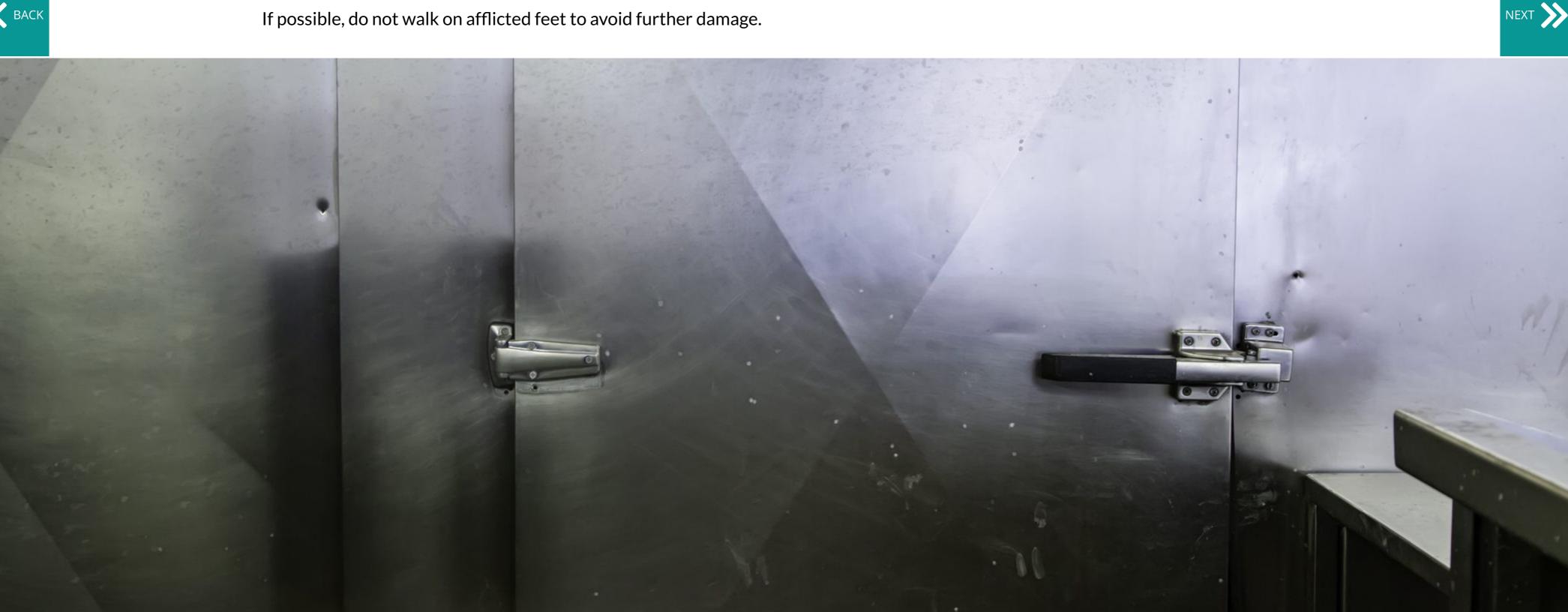


Image credit: Getty Images / Sergi Nunez

Chilblains — Repeated exposure to temperatures just above freezing can cause the painful inflammation of small blood vessels in the skin known as chilblains. Chilblains typically presents as inflamed swelling or blisters on the hands and feet, which sometimes appear hours after being in the cold. To ease the symptoms, keep the skin warm and dry. Typically not resulting in permanent injury, chilblains usually resolves in two to three weeks.

PREVENTION IS THE KEY

Common sense measures are the best way to avoid cold stress.

Foremost is employee training and education. Employees must be informed on the dangers of cold stress, its signs, and remedies. Employers should underscore that the company prioritizes safe practices by making scheduling, staffing, and equipment maintenance decisions that reflect as much.

Employers must encourage safe work practices. Working in cold environments can cause dehydration, so warm, sweetened liquids and the time to consume them should be provided. Frequent breaks in warm areas should be scheduled or at the very least encouraged. Rotating workers and assigning work in teams wherever possible allows coworkers to keep an eye on each other. New workers and those coming back after an absence should be allowed to build up a tolerance to the environment by easing into the work with shorter stints at first.

Dressing for the job is essential. Layering with loose-fitting clothing is recommended. Moisture-wicking material (wool, silk, and synthetics) next to the body, an insulation layer, and a ventilated but moisture resistant outer later are recommended. Hats or hoods stop heat from escaping through the scalp. A knit mask or gator to cover the face to the nose, insulated and water-resistant gloves, and insulated, nonskid boots should all be considered.

WARM UP TO SAFETY

A warm jacket and a tough attitude are not enough to ward off cold stress in highly refrigerated work environments. An approach that encompasses education, awareness, and planning will keep workers safe and employers better able to show compliance and avoid liability. A healthy workforce is a more productive one.

Trevor Crivello is the founder and president of Iron Mountain Refrigeration and has a decade of experience in commercial refrigeration. Iron Mountain Refrigeration supplies commercial refrigeration equipment to fast-casual restaurants ranging from small operations to large national chains. Crivello leads Iron Mountain Refrigeration with a passion for quality and a devotion to providing the highest level of customer service.

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WELCH'S

STAPLE IN THE

STOP & SHOP

NORTHWEST INDIANA

ESTABLISHES ITSELF AS A



in 1953.

meat cutting from his father and butchers on staff. Welch said he could not have had a better education in meat cutting. Welch then became the shop's sausage maker for a long while, conceptualizing and creating the different sausages. Welch's father was diagnosed with colon cancer around 2008. At this point, Ed began to take over the family business, guided by his father's

direction. For about three years, Welch's father oversaw Ed's work, and he was able to learn the business side of the meat market.

Since taking the reins, Welch has not only sustained the business his grandfather and father built, but propelled it into an era of growth and innovation.

Welch's sons Griffin and Bennett joined the family business from a young age, learning the ins and outs of the meat market. Now, the entire Welch family has dove headfirst into the business, embracing a businessbuilding mentality and a strong drive to support their family's legacy. Welch's wife Jen and daughter Jillian man the helm at their local test kitchen, while Welch's youngest son, Bram, has started working at the shop.

The Welch family has been able to propel their business to new heights. Within the last few years, the business has expanded into the catering sector. Welch's used to take around 100 catering orders per year, but intentionally slowed that order intake in 2024 to focus on providing the highest quality services and products possible.



Meat Snacks

Butcher Shop Counter

Welch's sets itself apart by focusing on quality. "We're only going to do what we know we can do the best at," Welch said. "We're not going to salvage quality to put quantity out there." Quality doesn't stop at the products—for Welch's, having a high quality meat market means having the best service, too.

Located in the growing community of Saint John, Ind., Welch's is situated near a hub of bustling grocery stores. A Jewel Osco is slated to open in the building directly next door to Welch's Stop & Shop, but that does not concern the Welch family. In fact, Welch's prefers operating near large grocers. When customers stop at both the large grocer and Welch's, it affirms Welch's dedication to quality.

"It shows that we're good enough that they made two stops," Welch said. "They could have bought everything at a one-stop shop ... We were good enough that they would come to our store also."

Welch's recently expanded within the Northwest Indiana community, taking over the kitchen at a former local eatery. By adding a test kitchen, Welch's is able to make more homemade products for its customer base, appealing to the local food movement.

"About 90% of all the salads we make are all from scratch at that kitchen," Welch said. The meat market also sells various to-go offerings made from its test kitchen, appealing to the increasing consumer demand for convenience foods.

Customer demand has changed greatly since Welch's was first founded. As recipe innovation becomes more accessible to consumers, Welch's sees that the market for meat products is changing.

"What people are looking for has changed," Griffin Welch said. "Ten years ago, when I was waiting on people, they wanted rump roasts and ribeyes, and they still want those cuts, but people want specialty items more from us."

Demand for innovative, value-added products is propelling the meat side of the Welch's business at a fast pace. "Our meat business is in such high demand right now," Welch said. "Even things like TikTok have changed the market."

Though cooking shows used to drive at-home cooking innovation, social media has taken over, driving both recipe innovation and strong interest in supporting local food production.

"People are looking for local suppliers of meat, and they don't want to go to the big chain grocers anymore to get their meat," Welch said. "They're tired of the packaged stuff. They want to be able to go out and pick out which ribeye looks best to them. They want to see the marbling on all the steaks and be able pick out which one they want."

Keeping its pulse on the rapidly changing food industry and evolving meat consumer trends, Welch's is now embarking on their busiest, strongest year yet.



Frozen Brats

Photos courtesy of Welch's Stop & Shop



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VALUE-ADDED SEAFOOD SPURS CATEGORY GROWTH IN THE US

BY SAMMY BREDAR

ASSOCIATE GROUP EDITOR

CONSUMER TRENDS DRIVE DEMAND FOR VALUE-ADDED SEAFOOD PRODUCTS.

Global seafood consumption is steadily on the rise, as the global seafood market is expected to grow by \$150.04 billion from 2024-2028 according to Technavio. The market is estimated to grow at a CAGR of 13.55% during this period.

Rasmus Soerensen, chief commercial officer for raw materials supplier American Seafoods, anticipates US seafood consumption will soon increase, following the category growth in other parts of the world. "We expect that America is going to realize the immense potential that seafood offers and catch up quickly," he said.

The already strong seafood category has a few key growth drivers. "The biggest growth driver in the seafood category is increased focus in value products, healthy seafood offerings, convenience, and importantly, products with leading sustainability credentials," Soerensen said.

Value-added seafood products offer a clear path for seafood producers to capitalize on the growing seafood market, catering to consumer trends and purchasing preferences.



Crew with salmon

K BACK

Despite continued economic pressures, American consumers are willing to pay premiums for product attributes they truly care about. "While inflation may encourage cost-conscious shopping, seafood's versatility and perceived value remain compelling, especially when tied to meal solutions and easy preparation techniques," Megan Rider, domestic marketing director for the Alaska Seafood Marketing Institute, said.

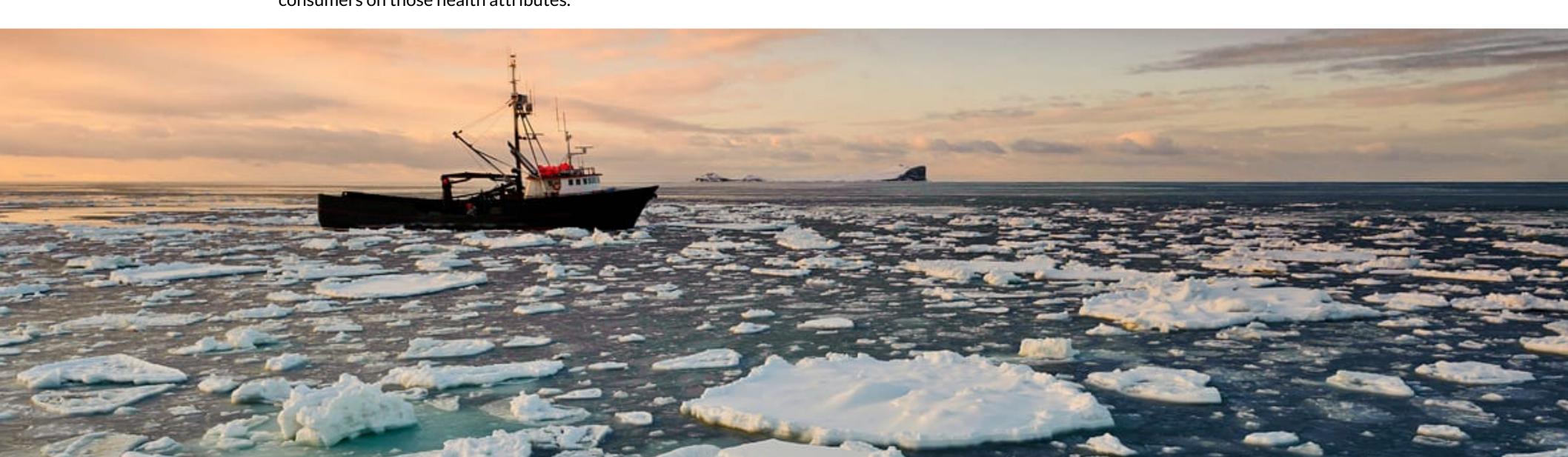
To accommodate for persisting economic pressures, more Americans are cooking at home. "Products like marinated filets, seafood cakes, and pre-seasoned portions are helping to lower barriers to entry for home cooks, especially younger shoppers," Rider said.

Despite a clear rise in at-home cooking, consumers still crave convenient protein products. Kady Freeze, Pacific Seafood marketing manager, said consumers are shopping for easy-to-prepare offerings, such as pre-seasoned fillets, ready-to-cook meals or other time-saving solutions.

"Focus on innovation that centers on value-added options like pre-portioned and clean-label products to meet the growing demand for variety of healthier protein and easy prep options," said Freeze.

The health and wellness trend is currently booming; this trend is influencing every segment of the food industry. As more Americans become health focused and increasingly divert from processed and ultraprocessed foods, the seafood industry has an opportunity to call out product value that is already there—nutritional benefits.

Soerensen noted that seafood is generally a very healthy food source, and the industry has clear growth potential by educating consumers on those health attributes.



Ice breakup

Rider said that seafood's strong nutritional profile sets it apart in the protein category. "Rich in high-quality protein, vitamins, minerals, and omega-3 fatty acids, seafood resonates strongly with health-conscious shoppers," she said.

Seafood purchasing preferences reflect the growing health and wellness trend, as well as demand for high protein products. "Salmon remains the top-consumed seafood species in U.S. retail markets¹, reflecting its strong association with heart and brain health benefits," Rider said. "Additionally, Alaska's shelf-stable salmon and surimi show a higher index among younger generations¹, underscoring the appeal of convenient, nutrient-rich options for busy lifestyles.

While older generations prefer traditional seafood flavors and formats, retailers have an opportunity to market value-added products to younger seafood shoppers. "They ... tend to experiment with new flavors and cooking styles, so they're open to trying value-added products like marinated fillets or pre-seasoned options," Freeze said.

ASMI recommends seafood producers engage Millenial and Gen Z consumers through digital campaigns, social media content and meal kit partnerships that highlight convenience and nutrition in seafood.

Despite younger-consumer purchasing preferences aligning with larger category trends, Rider noted that Baby Boomers remain the top volume drivers across seafood categories, according to Circana for ASMI, November 2024. This highlights the importance of understanding generational variations in seafood purchasing preferences, and the relevance of traditional seafood products amid the rise of value-added products.

¹ Circana for ASMI, November 2024

Photos courtesy of American Seafoods





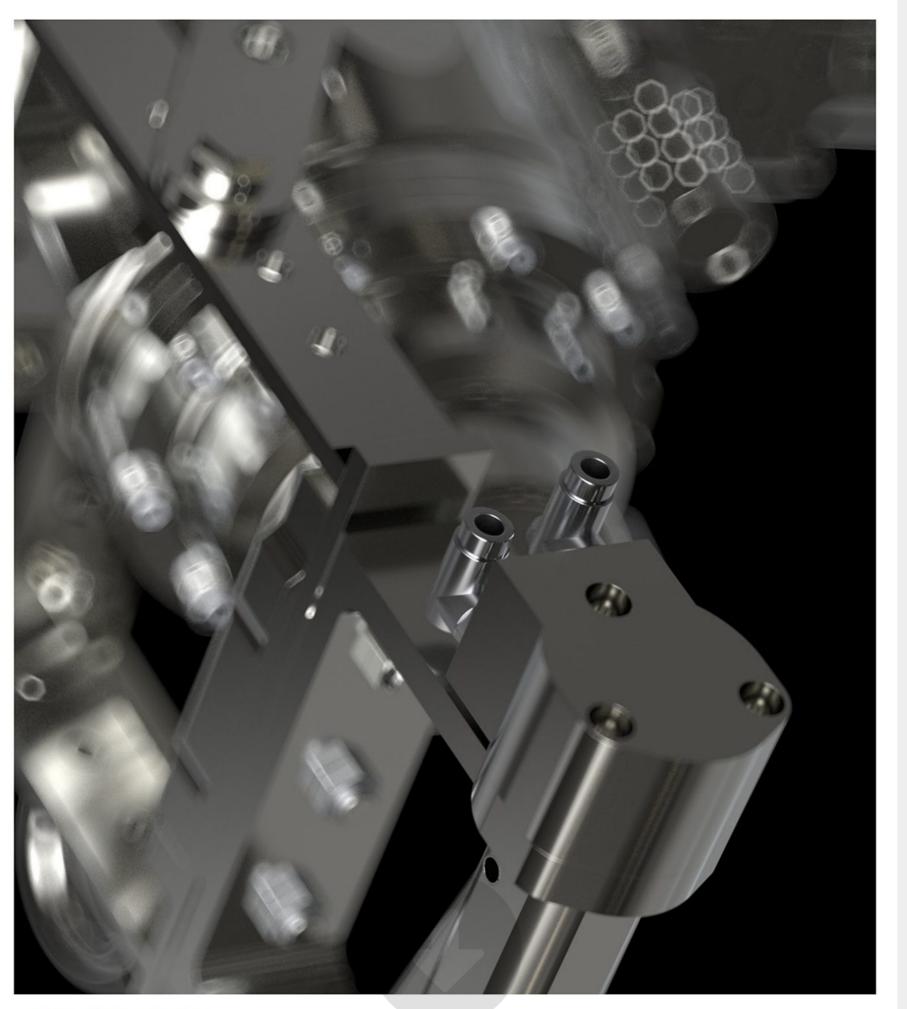






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A RABOBANK REPORT FORECASTS IMPROVEMENT IN THE PRODUCTION **GROWTH OF KEY AQUACULTURE SPECIES.**

BY FRED WILKINSON **CHIEF EDITOR**

According to a recent Rabobank aquaculture market outlook report, 2025 is forecast to bring an improvement in the production growth of key aquaculture species.

Conducted in cooperation with the Global Seafood Alliance, RaboResearch's annual aquaculture survey on finfish and shrimp production suggests freshwater species pangasius (up 7% year over year) and tilapia (up 5% year over year) are predicted to lead growth.

The survey found respondents noting concern about market prices, feed costs and market access through 2025 – with the fear of increasing tariffs and trade restrictions impacting the industry, which is highly dependent on exports.

Sustainability ranks as a primary production and marketing focus for aquaculture companies. With that in mind, club store giant Costco has expanded its relationship with the Aquaculture Stewardship Council. Nearly three-quarters of the retailer's farmed seafood is now ASC-certified, with the Costco-ASC collaboration prioritizing projects that promote ASC-labeled products and advance responsible aquaculture.

On the regulatory front, in December 2024 the US released an updated National Aquaculture Development Plan, the first such update since 1983. The effort aims to shore up US commitment to food security and climate resilience while protecting threatened and endangered marine and freshwater species. In addition to providing a sustainable source of US-raised seafood, aquaculture has helped more than 70 endangered or threatened species, including Pacific salmon, white abalone and queen conch.

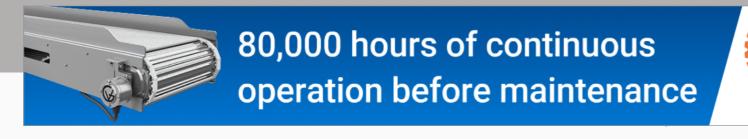


The National Oceanic and Atmospheric Administration is working to identify Aquaculture Opportunity Areas, which are evaluated for their potential environmental, economic and social suitability to support commercial aquaculture. NOAA recently rolled out Programmatic Environmental Impact Statements for Southern California and the Gulf of Mexico to identify Aquaculture Opportunity Areas. NOAA identified up to 10 proposed Aquaculture Opportunity Areas in Southern California: eight proposed Aquaculture Opportunity Areas in the Santa Barbara Channel and two in Santa Monica Bay, ranging in size from 500 to 2,000 acres each and totaling 16,500 acres in federal waters that are potentially suitable to support aquaculture.

Proposed Aquaculture Opportunity Areas in the Gulf of Mexico include an area off the coast of Louisiana and three areas off the coast of Texas, ranging in size from 500 to 2,000 acres each and totaling 6,500 acres.

On the state level, Washington has adopted a rule banning commercial net-pen aquaculture, a form of fish farming adopted in the state for nearly four decades. Commercial net-pen aquaculture — already banned in California and Alaska — may still proceed on bodies of water in Washington not leased by the state.

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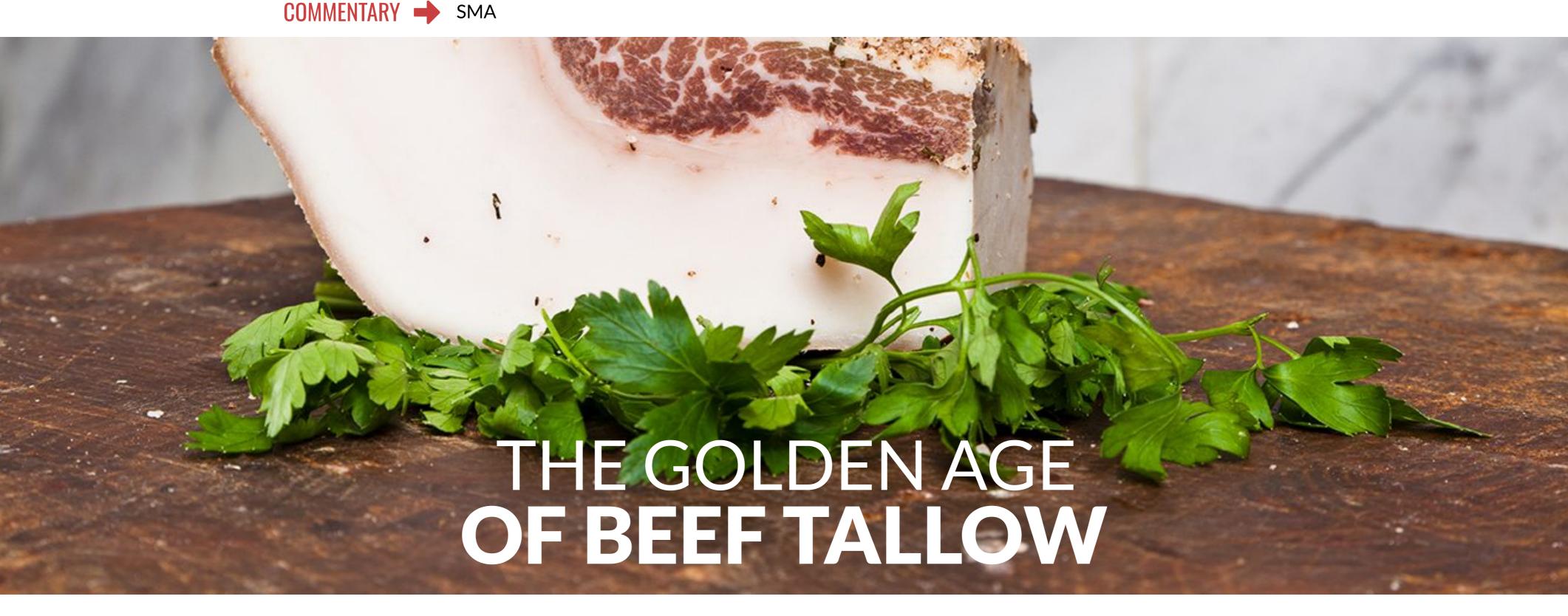






K BACK





RENDERING RECLAIMS, RESTORES AND REUSES THE INEDIBLE COMPONENTS OF AN ANIMAL INTO USEABLE PRODUCTS.

BY LACY BATES

The Make America Healthy Again campaign and Robert F. Kennedy Jr. are making beef tallow cool again. Americans are championing for a return to traditional wholesome food practices in the US, leading to a renewed interest in tallow and a diversion from seed oils (corn, soybean, canola, cottonseed, sunflower, etc.).

Beef tallow is solidified, rendered cattle fat that is further processed to remove impurities. Tallow can be classified into three categories, according to the US Department of Agriculture:

Inedible tallow — A cattle by-product produced by rendering down all the inedible waste, used in the manufacturing of soap and formerly incorporated into animal feeds.

Inedible packer bleachable tallow — Packer bleachable tallow is inedible all-beef tallow. It is produced from beef fractions or bones. These inedible fractions may be collected from small packing plants, butchers or retail stores and processed without USDA supervision. It may be referred to as "soap grade" tallow. It is used in the soap, cosmetic, chemical and animal feeds industries.

Edible tallow — Derived from cooking down fatty tissue from edible portions of the beef carcasses under supervision of USDA Meat Inspection. It is further refined by running the product through separators and filters to remove all traces of solids and moisture. The main use of edible tallow is as shortening in a wide variety of baked goods and frying oil.

When beef tallow is refined it retains its natural properties and rich content of essential fatty acids and vitamins A, D, E, K, and B12. Many American modern diets are deficit in these nutrients.

Tallow is praised for its versatility in the kitchen. With tallow's high smoke point and rich buttery flavor, restaurants and food manufacturers are beginning to transition from seed oils to beef tallow.

Some can remember the mouth-watering taste of McDonald's french fries from the 1980's when the fries were submerged and fried in 93% beef tallow and 7% canola oil.

Today, Buffalo Wild Wings prepares their numerous varieties of wings and fries in beef tallow, according to the allergen and preparation guide on the Buffalo Wild Wings website. On January 17, 2025, Steak 'n Shake officially announced the company will be cooking their shoestring fries in 100% beef tallow. Chief Supply Chain Officer Chris Ward said, "Our fries will now be cooked in an authentic way, 100% beef tallow, in order to achieve the highest quality and best taste."

Other ways beef tallow is finding its popularity:

Health-conscious consumers partaking in the keto, carnivore and animal-based diets. Beef tallow fits well into diets prioritizing high fat and low carbohydrate consumption. The fatty acid profile in beef tallow is more nutrient dense and helps support sustained energy and overall health in comparison to seed oils.

Cooking sustainably encompasses the eating from nose-to-tail philosophy. This can contribute to reducing waste, improving the flavor profile in the kitchen, and promote a more sustainable food industry.

The cosmetic industry is also finding beef tallow to be very chic. Some are calling it the skincare 'superfood'. Beef tallows hydrating properties help alleviate dryness and boost skin elasticity.

Exchanging seed oils for beef tallow not only supports the health-conscious community but also offers significant benefits to the rendering industry. Rendering is a fundamental method within the meat industry. Today, nearly 50% of an animal is inedible. Rendering reclaims, restores and reuses the inedible components of an animal into useable products, such as oil, diesel, and fatbased products for humans and animals. This sustainably removes the inedible components of the carcass from entering the landfills.

With that, the beef tallow mark is strong and continues to grow. In 2024, the global beef tallow market was approximately \$14.2 billion and is expected to grow at a 5% rate each year.

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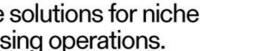




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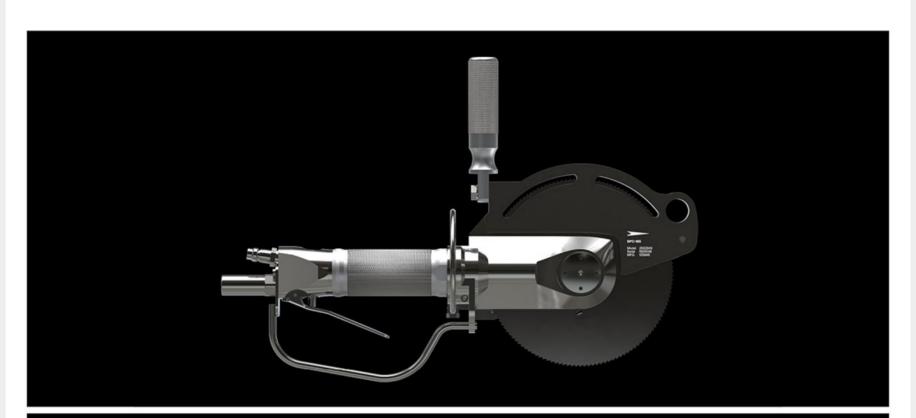
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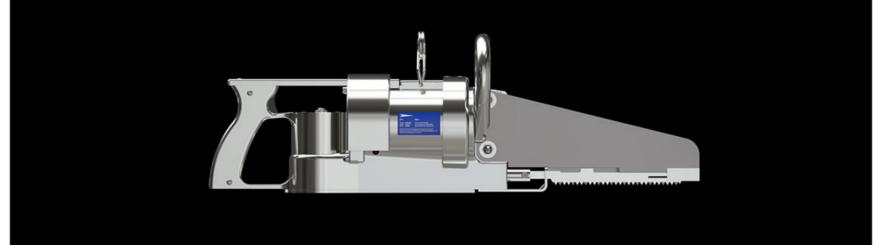
















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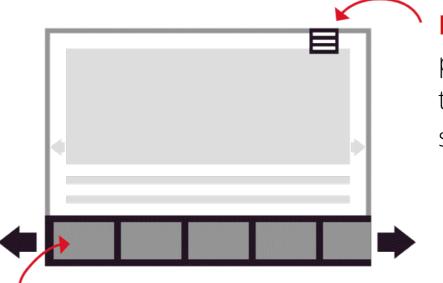
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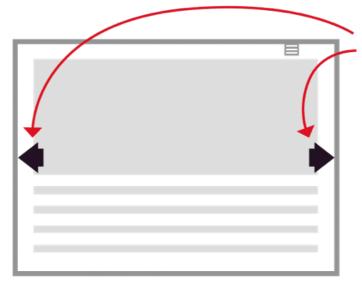
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