MANUFACTURERS FEED AMERICA

Strengthening Communities, Fueling Innovation, Growing the Economy

February 2026

NATIONAL ASSOCIATION OF Manufacturers

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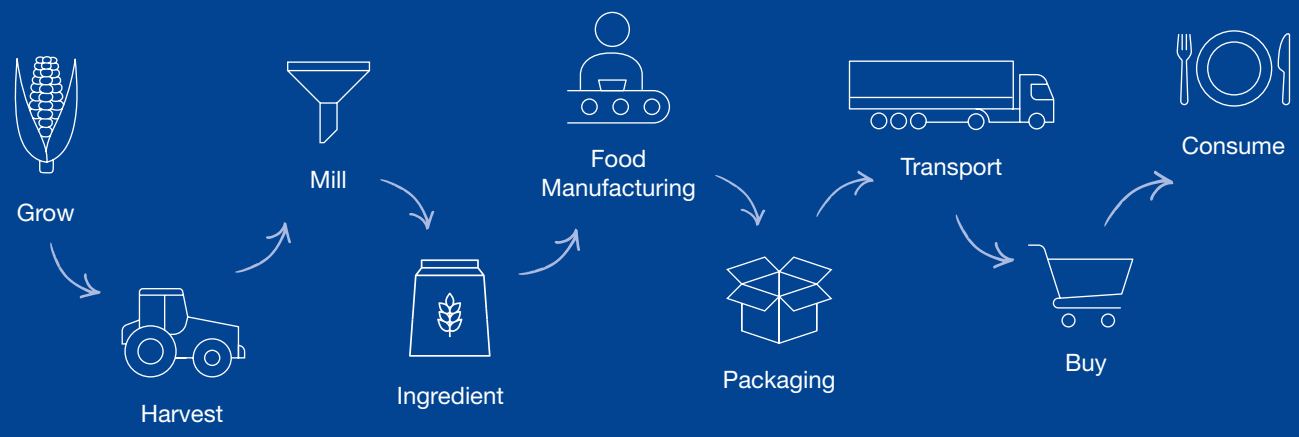
Executive Summary

Manufacturers Feed America

Behind every grocery store shelf is a carefully designed system that ensures American families can count on safe, abundant and affordable food every day. The food and beverage industry is the largest manufacturing sector in the United States, connecting farms to factory floors to family tables. Anchored in world-class science and rigorous safety standards, the U.S. food and beverage supply chain is a global leader—strengthening communities, fueling innovation and growing the economy. This outcome is not accidental. It is because **manufacturers feed America.**

The strength of this system is rooted in decades of sustained investment in science, technology, workforce development and operational excellence by manufacturers in the United States across the food and beverage supply chain. It is built on a federal regulatory system grounded in science and risk-based decision-making, a combination that has enabled America's global leadership to ensure a quality and robust food supply, protect public health and drive innovation. It is a result of nationwide policy consistency, driving the certainty manufacturers depend upon to manage a highly complex supply chain, function efficiently across state lines and deliver safe, affordable, accessible and nutritious food and beverage options to American families every day.

An Interdependent Food and Beverage Manufacturing Supply Chain



Manufacturers are central to this system. From farms and ingredient suppliers to processors, packagers, transporters and retailers, food manufacturing is an interconnected national enterprise. The industry supports more than **47 million jobs, $2.8 trillion in wages** and **$9.5 trillion in economic output,** touching every community in the country.[1] This economic engine drives growth across the nation, and particularly in rural and regional communities where food- and agriculture-related jobs anchor local economies.

1 See 2025 Feeding the Economy study, https://feedingtheeconomy.com (last visited January 2026).

Manufacturing scale, operational efficiency and scientific innovation together ensure that food remains accessible and affordable across the country—especially for communities where fresh or minimally processed foods are limited by geography, infrastructure or cost.

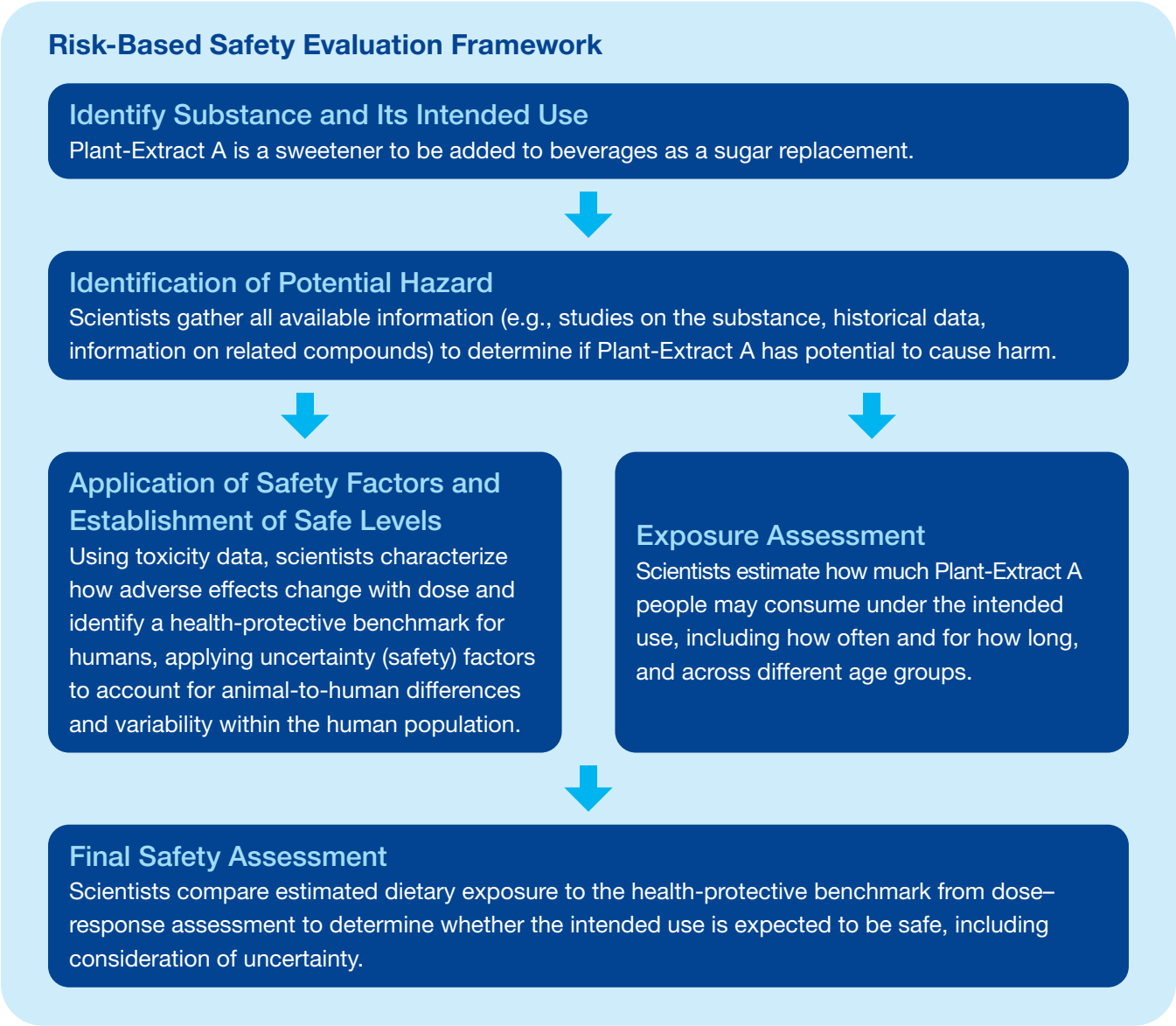
Understanding the history of the U.S. food and beverage regulatory system through the lens of American manufacturing helps explain why it has succeeded and how that success can be put at risk by replacing evidence-based safeguards with ideological approaches. Science-based federal oversight, predictable regulatory pathways and national uniformity have allowed manufacturers to innovate responsibly, improve nutrition, expand consumer choice and respond effectively to supply chain disruptions. Recent legislative and regulatory developments at both the state and federal levels risk undermining the system. These proposals can increase costs, reduce access and slow innovation without improving public health.

Regulation and Innovation

The U.S. is the world's leading market for launching new and innovative foods and technologies—driving globally embraced innovations from farm to factory floor to kitchen table. This outcome did not happen on its own, either. It reflects not only the strength of our food and beverage industry but also the balanced regulatory system that promotes innovation while delivering the quality goods that Americans need.

A critical advantage of both the food and beverage manufacturing industry and the U.S. food regulatory framework is their foundation in scientific evaluation and risk-based assessment.[2] Federal oversight under the Federal Food, Drug, and Cosmetic Act, the primary federal law governing the U.S. food supply, and accompanying regulations promulgated by the United States Food and Drug Administration and United States Department of Agriculture establish a uniform national standard for food safety, ingredient authorization, labeling and manufacturing practices. This framework manages risk through rigorous scientific analysis, exposure assessment and continuous monitoring, rather than through prohibitions and limitations, an approach that encourages regulators and manufacturers to focus resources where they matter most and to adapt as science evolves.

2 See United States Food & Drug Administration, Risk Analysis of Food at FDA, https://www.fda.gov/food/risk-and-safety-assessments-food/risk-analysis-food-fda (November 2017). Risk-based assessment is a set of structured evaluations used to identify potential hazards associated with a substance and to determine the level at which the substance can be safely used in food. This typically entails identifying and characterizing any potential hazards in a substance, calculating the amount a human may come into contact with the substance (e.g., exposure through ingestion, inhalation, dermal exposure), carrying out toxicological studies and determining the level at which the substance may be safely used in food.



For example, using the same safety standard as required in submissions to FDA, the Generally Recognized as Safe regulatory framework allows companies to determine—based on publicly available scientific evidence and review by qualified experts—that a substance is safe for its intended use in food. A GRAS determination requires the same quality and quantity of scientific support as a premarket submission to FDA, including a Food Additive Petition. By allowing qualified experts to evaluate the safety of ingredients under their intended conditions of use, while maintaining FDA oversight and transparency, the system promotes and enables U.S. innovation without compromising safety. Importantly, GRAS conclusions must be based on published, publicly available data, ensuring transparency and allowing any interested party to evaluate the underlying basis for safety.[3]

3 See 21 U.S.C. § 170.30(b) (providing that "general recognition of safety based upon scientific procedures shall require the same quantity and quality of scientific evidence as is required to obtain approval of a food additive. General recognition of safety through scientific procedures shall be based upon the application of generally available and accepted scientific data, information, or methods, which ordinarily are published, as well as the application of scientific principles, and may be corroborated by the application of unpublished scientific data, information, or methods.").

This flexibility is critical to the development of new ingredients, improved processing methods that often result in safer, more nutritious and more stable foods and safer packaging technologies that enhance shelf life, reduce food waste and support nutrition. It also has made the United States the preferred market for launching new foods and technologies, attracting domestic and foreign investment and reinforcing American leadership in food science and manufacturing excellence.

Innovation in the food sector is not limited to headline breakthroughs. It often consists of incremental improvements that collectively deliver significant public health benefits. Advances in pathogen detection, sanitation systems, quality control software and genomic monitoring allow manufacturers to identify and address potential risks earlier in the production process. Packaging innovations, such as modified atmosphere packaging and aseptic processing, protect food safety while reducing reliance on refrigeration and extending shelf life. Innovative ingredients enable the production of foods that meet diverse dietary needs, including gluten-free ingredients, reduced-sugar formulations and nutrient-fortified foods.

Manufacturers in the U.S. are leading the world in these life-enhancing innovations, making America the best place to invest, create jobs and grow communities.

Predictability: The Base of the (Food) Pyramid

These beneficial innovations are possible because manufacturers operate within a predictable regulatory environment that accounts for prior safety evaluations and allows responsible iteration. A stable and predictable environment supports long-term investment, business planning and job creation through the efficiencies of a single set of market regulations for the country.

For example, when manufacturers consider reformulating a product, adjusting a process or responding to supply disruptions, they rely on established scientific assessments and risk management principles rather than starting from scratch with each change. This proportional approach is essential for maintaining continuity of supply and affordability at a national scale.

Recent global disruptions underscore the importance of this system. During the COVID-19 pandemic, manufacturers adapted rapidly by adjusting production schedules, implementing enhanced sanitation protocols and leveraging digital tools to maintain oversight across supply chains. During natural disasters and infrastructure disruptions, shelf-stable and packaged foods provide critical nutrition when refrigeration and transportation are compromised. That reliability extends beyond emergencies. Shelf-stable and packaged foods play an essential role in everyday nutrition by delivering safe, affordable, and accessible food year-round. These advances in safety and innovation were made possible in large part because manufacturers could act within a flexible yet consistent and uniform science-based regulatory framework.

Challenges to a Strong, Affordable and Reliable Food System

Despite this record of success, the foundation of the United States food system is under increasing strain at both the state and federal levels. A growing number of state laws seek to ban ingredients, impose warning labels or mandate disclosures based on hazard-focused explanations rather than risk-based science. More than 100 state food and beverage measures were proposed or enacted in 2024 and 2025 alone. These measures often conflict with federal safety determinations and create a patchwork of requirements that the national food supply chain was not designed to accommodate. Manufacturers cannot realistically produce multiple versions of the same product to satisfy differing state rules without incurring substantial costs, sacrificing quality or disrupting supply chains and distribution systems. These limitations risk inhibiting economic growth and could lead to withdrawing food and beverage options from certain markets altogether.

The consequences of this fragmentation extend beyond manufacturers. Consumers will face higher prices, reduced choice and confusing or conflicting messages about food safety. Workers and suppliers will experience uncertainty that affects investment and employment decisions. Small and medium-sized manufacturers are particularly vulnerable, in part because they operate on tight margins and are often still building the resources to manage complex compliance regimes. Policies that purport to protect consumers, but that are not grounded in science or an understanding of what makes regulations effective, can reduce access to affordable food and undermine trust in the food system, all without improving public health.

At the federal level, proposals to overhaul long-standing regulatory programs without careful consideration of their real-world function pose similar risks. Abrupt changes to established pathways for ingredient evaluation, packaging authorization or manufacturing flexibility could slow innovation, drive research and development activity out of the United States and weaken the country's competitive position globally. In contrast to the U.S., other jurisdictions rely on precautionary or more-opaque regulatory models, which often delay public access to the same products cleared in the U.S. while at the same time increasing costs and uncertainty for manufacturers.

Regulation That Feeds Our Future

The U.S. food system has succeeded precisely because it integrates safety, innovation and scale within a coherent national framework. Manufacturers are active partners in implementing public health objectives, investing in continuous improvement and responding to evolving scientific understanding and consumer needs. Such a partnership depends on policies that are grounded in evidence, applied consistently and informed by how food is actually produced, distributed and consumed.

As policymakers consider the future of food regulation, manufacturers urge a clear focus on what has worked. Preserving science-based decision-making, maintaining federal leadership and national uniformity and supporting predictable pathways for innovation are not abstract principles. These principles are practical necessities for ensuring that food remains safe, affordable and accessible for all Americans. Strengthening collaboration among regulators, manufacturers and consumers will better position the United States to meet emerging challenges while sustaining its leadership in food production and manufacturing.

Manufacturers across the food and beverage supply chain, from small, family-owned businesses to some of the world's most well-known brands, are uniquely positioned to advocate for the protection—and where appropriate, modernization—of a well-regulated industry that enables innovation while delivering safe, nutritious and affordable food and beverage options to American families every day. The industry welcomes policymakers' interest in improving public health, and manufacturers share the goals of science-based innovation, responsible production and continuous improvement.

Policymakers are hard at work advancing a pro-growth agenda for U.S. manufacturing by promoting a competitive tax code, reducing unnecessary regulatory burdens, accelerating the adoption of modern technologies in advanced manufacturing and supply chain optimization and pursuing policies that support U.S. energy dominance. Manufacturers urge policymakers to apply these principles that work to support the food and beverage sector as well. That comes through regulations that support—rather than constrain—innovation, economic growth, job creation and strong communities.

Manufacturers across the food and beverage supply chain stand ready to partner with policymakers, as they have done successfully for more than a century. With thoughtful policy choices that respect science and operational realities, the United States will deliver an even stronger food system that supports public health, economic growth and global competitiveness—bolstering America as the best place in the world to make things and empowering manufacturers' efforts to nourish the American people for generations to come.

I. Manufacturers Keep Americans Safe, Fed and Employed

The Foundation of a Safe and Abundant Food Supply

The United States food supply is widely recognized as one of the safest and most abundant in the world. This outcome is a result of decades of sustained investment by manufacturers across the U.S. food and beverage supply chain. In particular, manufacturers have lasting and effective investments in the research and development of food ingredients, processing technologies, food safety systems, packaging and transportation innovations, workforce training and operational excellence across a highly complex and efficient supply chain. The foundation for America's status as the center of innovation for safe, affordable and accessible food was built through decades of cooperation between industry, academia and government. The U.S.'s science- and risk-based approach to the regulation of food and beverage production and distribution (i.e., rigorous scientific evaluations of an ingredient's chemical characteristics and real-world human exposure to establish a safe-use level for the ingredient) allows for predictable market-entry planning, as well as manufacturing flexibility and efficiencies—and it is a critical factor for the safety and success of the U.S. food supply.

Science, over time, evolves. That is a good thing. And it is through this proven, collaborative process among industry, academia and government that this new evidence has been incorporated into our supply chain—not through abrupt policy shifts that presume past guidance was coercive or grounded in the wrong intent. The U.S. food system has long been built on transparent, evidence-based decision-making, and that foundation has been essential to protecting trust, affordability and access. This stable approach to nutrition policy has allowed manufacturers to continuously improve products while reliably feeding American families and supporting a globally competitive system.

Federal policy decisions and ingenuity across the industry have helped drive food production and manufacturing growth in the U.S., resulting in a robust supply chain that feeds American families, supports a strong economy through high-quality jobs and fosters innovation. However, current legal and policy trends threaten America's safe and abundant food supply, global leadership in safe and nutritious food production and innovation across food technologies; in turn, if unaddressed, these trends can increase costs for consumers and the manufacturing sector alike. The policy developments that may undermine the availability of safe, abundant food and the broader food economy are numerous:

- A proliferation of state laws that directly conflict with or differ from uniform federal regulation of food products and manufacturing threatens added costs, disrupted supply chains, legal liability and consumer confusion and mistrust.
- Rushed legislative and regulatory changes to the laws and regulations governing core aspects of innovation such as the Food Additives Amendments and the GRAS framework, which have enabled the development of ingredients and food products while establishing the U.S. as a global leader in food technology and safety, may result in increased food costs, loss of jobs and relocation of manufacturing research and development abroad.
- Abandonment of deliberative, science-based and risk-focused policy development creates market uncertainty that hinders short- and long-term business planning and threatens increased manufacturing and distribution costs. This includes, for example, rapid alterations to long-standing federal authorization for critical ingredients—such as preservatives and packaging—that manufacturers rely on to keep food safe and affordable.

Collectively, these rapidly shifting policies, laws and regulations at both the state and federal levels threaten to impose costs and disruption on the production and manufacturing of food that feeds every American. These changes also undermine the larger economic benefits from the broader supply chain that grows, harvests, transports, processes, packages and delivers food to consumers.

Origins of the U.S. Food Regulatory Framework

The development of the modern U.S. food system traces back to an agrarian era, gradually evolving as population growth and urbanization drove demand for regulated markets and safer food. Throughout the 19th century, industrialization and the shift toward commercially manufactured foods heightened public awareness of widespread food safety risks such as contaminated milk that spoiled during long transport and ground coffee diluted with fillers like bone, lead or charred seeds.

Without a federal system governing domestic food safety, states adopted a patchwork of inconsistent laws, fueling calls for national uniformity. Momentum increased after the National Board of Trade's 1879 model food contamination law influenced state statutes and helped solidify the case for a federal framework, a movement that eventually culminated in the Pure Food and Drugs Act of 1906.[4] This landmark federal law established the first nationwide protections against contaminated, unsafe and mislabeled food introduced in interstate commerce and empowered the Bureau of Chemistry—the precursor to the FDA—to enforce these requirements, laying the foundation for modern federal food safety oversight.[5]

While this was an improvement in oversight and inspections, the law lacked clear food standards and flexibility, prompting calls for further reform. The FDCA of 1938 addressed these gaps, establishing definitions and standards for food, safe additive tolerances, labeling requirements and stronger enforcement tools. The FDCA became the foundation of modern food regulation and has been amended numerous times to keep pace with modern food safety risks and technological innovations.[6] Most recently, the Food Safety Modernization Act of 2011 shifted FDA's focus to prevention, granting mandatory recall authority and strengthening oversight of imports.

FSMA mandated the implementation of mandatory food safety plan systems based on the principles of Hazard Analysis and Critical Control Points, which was originally developed by Pillsbury (now part of General Mills) in the 1960s for NASA and the U.S. space program. HACCP is the global standard for food safety systems—U.S. innovation that changed the way the world produces safe foods.

Beyond the legislative efforts aimed at strengthening and securing the nation's food and beverage supply, the United States has also led the way in adapting and innovating its regulation of food to meet global challenges. During World War II, after a range of malnutrition issues were found in American citizens being recruited to

4 See Peter Barton Hutt et al., *Food and Drug Law* (5th ed., 2022).

5 See id.

6 Although not an exhaustive list, key amendments to the FDCA include:

- Food Additives Amendments (1958)—Required premarket safety review for new additives and introduced the Delaney Clause banning carcinogenic substances.
- Color Additives Amendment (1960)—Extended similar safety requirements in the 1958 amendments to colorants.
- Nutrition Labeling and Education Act (1990)—Standardized nutrition labeling.
- Food Safety Modernization Act (2011)—Shifted FDA's focus to prevention, granting recall authority and strengthening oversight of imports.

support the war effort, the United States made a concerted effort to modernize food production to meet the needs of a growing population, including the signing of the National School Lunch Act by President Truman, to help ensure that American youth were being provided with the essential nutrition for healthy growth and development.

Manufacturers played a central role in building the supply chains, manufacturing capacity and transportation systems that could reliably deliver safe food at scale, while also advancing food production techniques and advancements in packaging to preserve and deliver nutritious food across the U.S. Over time, these efforts contributed to a regulatory and manufacturing environment that emphasized prevention, risk management and continuous improvement.

The continued success of this federal framework provided a uniform and predictable regulatory environment for the food industry, resulting in the growth of total food sales at food-service and grocery stores from $80 billion in the early 1960s to $2.58 trillion in 2024.[7] Today's food system operates across thousands of facilities, millions of employees and countless points of distribution. It is a robust, interconnected supply chain that relies on unrestricted interstate commerce and a reliable, predictable regulatory environment, and it has provided American consumers with a robust supply of nutritious food and beverages that meets the highest safety standards while remaining affordable and accessible. Understanding how this system developed, and the role manufacturers in America play within it, is essential to informed discussions about food policy.

Food Flows Between Counties in the United States

Map depicts total food flows (tons) for the county scale.[8]

7 United States Department of Agriculture Economic Research Service, Food Service Industry—Market Segments, https://www.ers.usda.gov/topics/food-markets-prices/food-service-industry/market-segments (September 2025).

8 See Xiaowen Lin et al 2019 Environ. Res. Lett. 14 084011. Food flows between counties in the United States. https://iopscience.iop.org/article/10.1088/1748-9326/ab29ae/pdf

An Innovative U.S. Food and Beverage Supply Chain as the Cornerstone of Food Safety and Economic Growth

Innovation is a defining characteristic of the American food manufacturing industry and a core driver of food safety and economic growth. Manufacturers perform 51.8% of all private-sector R&D in the United States, driving more innovation than any other sector.[9] Across the food and beverage supply chain, manufacturers continually refine and develop new ingredients, processing techniques and quality control systems to reduce risk and improve food quality, nutrition and taste.

> **"A clear, consistent, and science-based regulatory framework gives small and mid-sized manufacturers the ability to focus on innovating and expanding our business instead of navigating uncertainty. This helps us bring new products to market, reach customers in new regions, and create good jobs in our community."**
> — Lakeside Foods

Advances in processing technology, for instance, have improved the ability to detect and control potential hazards early in production—including rapid testing solutions for pathogens and allergens developed by innovators like Lansing, Michigan-based Neogen Corporation®, which was formed to commercialize innovations developed at Michigan State University.[10] Others include enhanced sanitation practices using food-safe disinfectants and rapid detection methods for pathogens and improved monitoring systems, such as rapid next-generation sequencing of bacterial genomes, from San Diego-based Illumina Inc.©, as well as data-driven quality control tools from companies such as InstantGMP™ and MasterControl™, all of which allow manufacturers to identify issues before products reach consumers. These are just a few examples of innovation being driven by manufacturers in the food and beverage supply chain. These systems are supported by ongoing research and collaboration with scientific experts, ensuring that safety measures evolve alongside emerging risks.

The Joint Institute for Food Safety and Applied Nutrition, established between the FDA and the University of Maryland in April 1996, provides an example of a successful government and academic collaboration that actively engages with industry to advance food safety. JIFSAN is the foundation for public and private partnerships that provides the scientific basis for ensuring a safe, wholesome food supply as well as the infrastructure for contributions to national food safety programs and international food standards. JIFSAN provides technical support for a range of food safety applications and software, including Foodrisk.org and PhyloPlus for phylogeny of bacteria, and the organization hosts regular meetings and conferences where scientific and operational advances are collaboratively shared by government, academics and industry. Collaborative efforts such as this, grounded in science, have driven American food production forward for decades.

9 According to the U.S. Bureau of Economic Analysis, R&D in the manufacturing sector has risen from $132.3 billion in 2003 to a record $412.8 billion in 2024. R&D in the aerospace industry has also soared, increasing from $8.4 billion in 2003 to $19.7 billion in 2024. See Bureau of Economic Analysis, National Data, Table 5.6.5. Private Fixed Investment in Intellectual Property Products by Type, https://apps.bea.gov/iTable/?reqid=19&step=3&isuri=1&nipa_table_list=331&categories=survey&_gl=1*xna939*_ga*MTA5NzYwMzE0My4xNzY5NzkzNTU2*_ga_J4698JNNFT*czE3Njk3OTM1NTUkbzEkZzAkdDE3Njk3OTM1NTUkajYwJGwwJGgw (last visited January 2026).

10 See Neogen®, Neogen® solutions can be found at every step of the food chain, https://www.neogen.com/en/about/?srsltid=AfmBOoqN7cYZixKIcufCdjtKxb3z-4tqK-qcdJ9Ls1WjuKIo1zZ55i9r.

[USDA] ERS research found that TFP [Total Factor Productivity] growth [in the food sector] has been driven by a continuing series of biological, chemical, mechanical, and organizational innovations, which have themselves been the result of investments in public and private agricultural research. Successful innovations have spread rapidly across the farm sector, aided by a system of public extension and private service providers who deliver information and expertise to farmers.[11]

Innovation also allows manufacturers to respond quickly when new challenges arise. Whether addressing supply disruptions, responding to public health concerns or adapting to changes in consumer demand, manufacturers rely on flexible and science-based approaches to maintain safety and continuity. For example, during the COVID-19 pandemic, industry was able to adapt and implement remote inspection and audits of suppliers, leveraging advancements in video conferencing, virtual presence, data analytics and risk management tools. These tools and enhanced verification practices enabled the continued production of critical food supplies, and many have been adopted into standard operating practices following the pandemic. The ability to innovate responsibly is inseparable from the industry's strong safety record.

Importantly, the U.S. is the preferred market for launching new and innovative food and beverage options and new technologies. A core driver for this enviable position is the predictable, risk-based statutory and regulatory framework that governs the domestic production and distribution of food.

At its core, the U.S. federal regulatory framework for food provides a science-driven, risk-based approach to food regulation under the predictable framework of the FDCA, as well as the Meat, Poultry and Egg Inspection Acts.[12] These statutory and regulatory frameworks provide robust oversight as well as flexibility for manufacturing and product innovations under programs such as the FDA's GRAS[13] and Biotechnology Consultation programs.

The U.S. food and beverage regulatory structure is grounded in three primary factors that support fostering innovation:

1. Predictable, risk-based, science-driven laws and regulations
2. A legal framework that provides flexibility for R&D and manufacturing innovation
3. A predictable path and timeline to market

This combination, along with a strong consumer market and regulatory agencies that work with industry to support innovation, has created the conditions that have enabled the U.S. to become the primary launching ground for food innovation.

Additionally, a defining strength of the U.S. food regulatory system is its commitment to transparency and stakeholder participation. Proposed rules, guidance documents and major policy changes are published in the Federal Register and opened for public comment, allowing for input from industry, consumer groups, academics,

11 See USDA Economic Research Service. Agriculture Research and Productivity. https://www.ers.usda.gov/topics/farm-economy/agricultural-research-and-productivity (updated 5/8/2025)

12 Federal Food, Drug, and Cosmetic Act, 21 U.S.C. Chapter §§ 301-374; Meat, Poultry and Egg Inspection Acts, 21 U.S.C. Chapter 10, § § 601 et seq.

13 As noted previously, GRAS determinations adhere to the same safety standard and require the same quantity and quality of scientific support as mandatory Food Additive Petitions.

state agencies and the general public. This process ensures that regulations are not only science-based but also practical and informed by real-world experience.

Public workshops, listening sessions and advisory committees further enhance dialogue, enabling regulators to gather technical insights and address concerns before finalizing rules. U.S. regulators at FDA and USDA's Food Safety and Inspection Service meet regularly with industry on a wide range of matters, including product review and authorization, developments in food safety technology and management and response to foodborne illness outbreaks. This collaborative approach reduces uncertainty, builds trust and strengthens compliance by aligning regulatory requirements with both scientific evidence and operational realities.

The strength and credibility of U.S. food regulation influence global markets and enable industry growth. Many food, beverage and packaging products are launched in the U.S. because of the predictable, efficient path to market—the FDA is often the first regulatory agency to review and authorize products. Because of the transparency in the process, including GRAS notifications published on FDA's website, global regulators often review and consider FDA's approvals and authorizations as part of their own process. For example, to approve food-contact substances in China, approvals from other jurisdictions serve as prerequisites, with industry members often choosing the United States as its first jurisdiction from which to seek an appropriate compliance status. FDA authorization under this system signals safety and quality, attracting foreign investment and supporting exports.

Similarly, flavors that have achieved United States Flavor Extract Manufacturers Association Expert Panel GRAS status are written into regulations concerning flavorings worldwide, leading to approval in more than 100 countries globally. Both Mexico and Australia update their regulations with the publication of each FEMA GRAS list, which is also submitted to the FDA along with the underlying safety data, and included on FDA's public Substances Added to Food Database. In short, the U.S. regulatory model delivers a food supply that is not only safe and reliable but also conducive to innovation, reinforcing America's leadership in food science and technology.

At the other end of the spectrum, the EU's embrace of the precautionary principle focused on hazard-based evaluation and complex regulatory bureaucracy has made the development and launching of new products unpredictable and challenging for industry to navigate and develop commercial plans.

The European Union has in recent years woken up to the challenging regulatory and business environment it has created for the food industry and, seeing the turbulence created by the recent patchwork of food policy and regulation in the United States, has launched several legislative and policy initiatives to attempt to make up the gap and provide incentive to supplant the U.S. as the world's food innovation hub.

The EU's precautionary principle and hazard-based evaluation focuses on inherent properties of a substance, including food and beverage ingredients, to cause harm regardless of the actual exposure or likelihood that any harm will occur.[14] As such, the European Union often regulates food and beverage ingredients based on the presence of a hazard alone even if actual exposure is significantly low or scientific evidence of harm at real-world

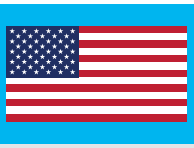
14 See European Union, Communication from the Commission on the precautionary principle, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52000DC0001 (February 2000); see also European Food Safety Authority (EFSA), Ensuring Safe Food and Animal Feed in the EU, https://eur-lex.europa.eu/EN/legal-content/summary/european-food-safety-authority-efsa-ensuring-safe-food-and-animal-feed-in-the-eu.html (last visited January 2026).

levels is not evident. As opposed to the U.S. risk-based model which requires clear, measurable indications of harm before imposing restrictions, the EU model constricts the food and beverage industry from exploring safe and innovative food and beverage technologies.

Given this dichotomy between regulatory approaches, EU-based food companies and innovators have invested in U.S.-based manufacturing and R&D since the 1970s and continue to launch new products in the U.S., often years before those same foods are available to consumers in the European Union. For example, Novonesis, headquartered in Denmark, established its U.S. manufacturing hub in Franklinton, North Carolina, in 1979. The facility has since evolved into a major center for the research, development and production of microbial enzymes used across a wide range of food processing applications and a significant local employer while contributing to the growth of the Research Triangle in the state. Novonesis has grown to operate more than 15 sites across the U.S. and employ more than 2,100 manufacturing workers, and it has invested more than $860 million expanding its U.S. operations.

Despite misreporting that the European Union uses significantly fewer ingredients and inputs to make the same foods available in the U.S., a vast majority of ingredients available for the production of food in the U.S. are also authorized for use in the European Union.[15] However, the time to market for those same ingredients is longer and less predictable in the European Union as compared to the U.S. The popular sweetener stevia provides an illustrative example. The same ingredient, produced by the same company, took four years to gain market authorization in the European Union versus one year in the U.S. No new pivotal safety data was generated for the EU authorization process. Rather, the opaque, precautionary bureaucracy delayed market entry without providing clear expectations to the sponsor that would allow for business planning.

Approvals in the EU and North America[16]

			
Synthetic Dyes Approved for Use	9	10	15
Colors with Warnings	0	0	6

It is commonly reported that the EU has banned many of the food colors authorized for use in the U.S. This is false.

The EU permits nearly all the colors authorized in the U.S. and also permits almost twice as many synthetic colors for use as compared with the U.S.

Of the six food colors that require a “warning” in Europe, only three are approved in the U.S. Quinoline Yellow (E104), Ponceau 4R (E124), and Carmoisine (E122) have never been approved or used in the U.S.

15 See Association for Sustainable Food Safety, Debunking the U.S.–EU “Additive” Divide: 10,000 Falsehoods, https://asfs.org/wp-content/uploads/2025/12/Debunking-Food-Additives-ASFS_Level-3.pdf (2025).

16 See id.

II. Innovation Expands Choice, Improves Nutrition and Grows the Economy

Innovation—enabled by a strong, science-based regulatory framework intentionally designed by policymakers—has not only made our food safer, but it also has resulted in more nutrient-rich foods, expanded consumer choice and improved access to options that meet diverse nutritional and dietary needs. Manufacturers in the U.S. work every day to enhance the healthfulness of foods and beverages for American families through this world-leading innovation. Manufacturers develop new ingredients and formulations to support specific health goals, accommodate allergies and sensitivities and respond to evolving preferences.

For example, ingredients have been developed that enhance shelf life, such as xylanase used in bread making to maintain softness and freshness over time. Other ingredients reduce unwanted byproducts of cooking; for example, the enzyme asparaginase reduces acrylamide formation, a potential human carcinogen, during frying of carbohydrate-rich foods. Others address food allergies, such as xanthan gum, which acts as a binder and thickener to replace gluten in baked goods tailored for individuals with celiac disease. U.S.-based Martek Biosciences (now part of Royal DSM©) developed the first algal-based Omega-3 DHA/EPA oils derived from microalgae, providing a reliable and efficient production method for nutrients that are vital for brain, heart and eye health. These ingredients were all brought to the market through FDA's voluntary GRAS Program in 2001[17] and 2004, establishing precedent for these ingredients that are now available around the world and used to fortify infant formula.

Without the ability to innovate within a predictable regulatory framework, many of these safe and nutritionally important products would take years longer to reach the market, reducing consumer choice and limiting growth of the broader supply chain. Regulatory certainty enables manufacturers to invest in research, facilities and workforce development with confidence, turning innovation into a driver of productivity, competitiveness and long-term economic growth.

Packaging and Process Innovation that Protects Consumers

Packaging and manufacturing process innovations play a critical role in protecting food safety and reducing waste. Modern packaging technologies help preserve freshness, prevent contamination and extend shelf life, all of which contribute to safer food and beverage options and more efficient distribution.

For example, use of Modified Atmosphere Packaging can extend the shelf life of fruits and vegetables by 50% to 200%, depending on the commodity and storage conditions.[18] Other technologies, such as aseptic packaging, allow for the packing and storage of essential nutritious products without refrigeration—including diary and egg options—keeping them shelf stable and safe for months post-processing.[19] These innovations are important for

17 European Union authorization for the same ingredient came in 2003. See Official Journal of the European Union, Commission Decision of 5 June 2003 authorising the placing on the market of oil rich in DHA (docosahexaenoic acid) from the microalgae Schizochytrium sp. as a novel food ingredient under Regulation (EC) No 258/97 of the European Parliament and of the Council, https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:144:0013:0014:EN:PDF.

18 See Journal of Stored Products Research, Advancing sustainability through modified atmospheric packaging (MAP) for fresh food preservation: A critical review, https://www.sciencedirect.com/science/article/abs/pii/S0022474X2500116X?via%3Dihub (May 2025).

19 See American Dairy Association, What is Aseptic Milk?, https://www.americandairy.com/dairy-diary/what-is-aseptic-milk/ (last visited January 2026).

communities that rely on shipped goods to maintain consistent access to food and beverages, including rural and remote communities in the U.S.[20]

Process improvements within manufacturing facilities further enhance efficiency, including advanced tools like X-ray inspection or AI-enabled vision systems for the detection of contaminant materials, allowing manufacturers to produce safe food using fewer resources while maintaining high standards.

These advancements demonstrate how innovation, safety and affordability are interconnected. By lowering production costs, reducing waste and increasing throughput, manufacturing innovation strengthens domestic supply chains and supports job creation and economic growth. Policies that support responsible innovation help ensure that these benefits continue to reach consumers across the country.

> **"Innovations in food packaging are essential to food safety and waste reduction by extending shelf life and minimizing spoilage, while advancing sustainable packaging. A predictable U.S. regulatory framework ensures product and material safety along with supporting timely commercialization, long-term investment, and economic growth."**
> — ProAmpac

III. Food and Beverage Manufacturing as an Economic Engine

The food industry is the largest manufacturing sector in the United States and a major contributor to national and local economies. While food manufacturing alone directly employs nearly 1.8 million individuals in the U.S., the food and agriculture industry more broadly supports 47 million jobs across a wide range of occupations, from production and engineering to logistics, quality assurance and retail/foodservice.[21] These jobs support families and communities in every region of the country. Furthermore, this interconnected national enterprise supports $2.8 trillion in wages and more than $9.5 trillion in output across the economy.[22] Every part of the supply chain plays a crucial role. For example, bread and bakery product manufacturing alone contributes $82 billion to this economy, just a small piece of this broader food and beverage supply chain.[23] By utilizing the inputs of food and beverage manufacturers, trillions of dollars are contributed to upstream and downstream industries. Food and beverage manufacturers contribute more than $6 billion indirectly to the restaurant industry, a more than trillion-dollar industry.[24]

20 See Rural Health Information Hub, Rural Hunger and Access to Healthy Food, https://www.ruralhealthinfo.org/topics/food-and-hunger#:~:text=Agricultural%20production%20abounds%20in%20rural,which%20disproportionately%20affect%20rural%20populations (last updated January 2025).

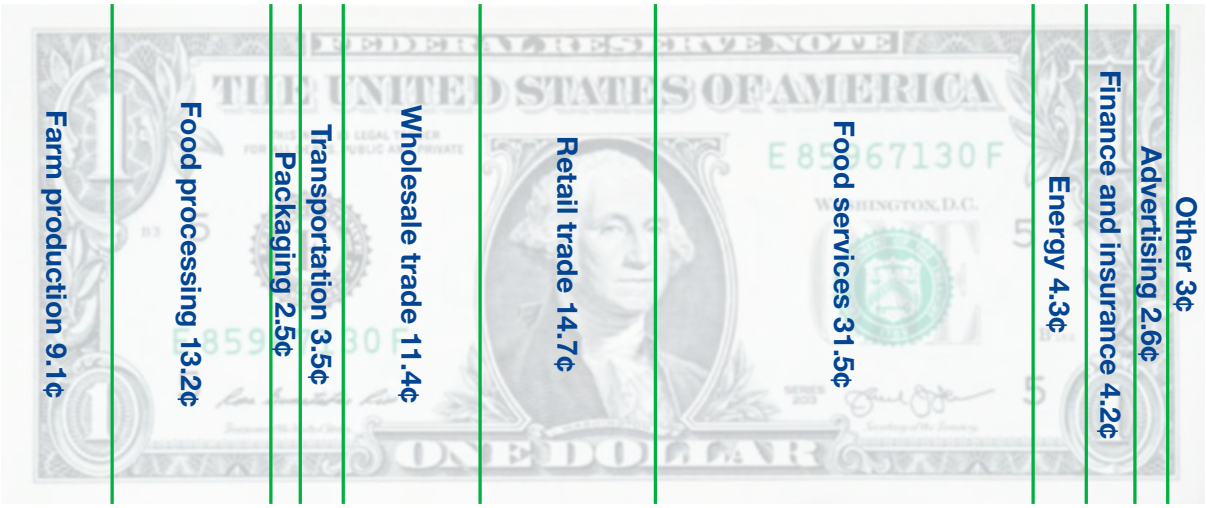
21 See 2025 Feeding the Economy study, https://feedingtheeconomy.com (last visited January 2026).

22 See id.

23 NAM calculations using 2024 IMPLAN data.

24 See id.

Breakdown of Food Dollar Across Food and Beverage Supply Chain[25]



The economic impact of the food and beverage industry extends well beyond consumer product production facilities, retail food service and restaurants. The broader supply chain includes farms, crop inputs and storage, ingredient suppliers, packaging manufacturers, transportation and logistics providers, cold storage operators, equipment makers and recycling services. Together, these sectors form an interdependent network that enables food to move efficiently from farm to factory floor to family table.

Because of this interdependence, policies affecting one segment of the supply chain can have far-reaching consequences. Regulatory uncertainty, ingredient restrictions or disparate labeling requirements add complexity to the supply chain, increasing compliance costs for manufacturers that affect employment and investment decisions across multiple sectors.

In 2024 alone, states including California (AB 418, AB 2316), Illinois (SB 2637), Missouri (HB 2474) and others proposed or enacted bans on ingredients at the state level. By 2025, legislators across the country introduced more than 100 bills ranging from outright prohibitions to mandatory warning labels and QR code disclosures. West Virginia HB 2354, signed into law in March 2025, bans seven FDA-approved food colors; but when the state legislature learned that an immediate ban would lead to empty store shelves, it extended the compliance date to 2028.[26] Texas SB 25 requires on-pack warnings for products containing any of 44 listed substances, referencing foreign regulatory positions rather than U.S. FDA safety determinations. Louisiana SB 14 mandates QR codes linking consumers to ingredient disclosures and FDA safety pages, while other bills target seed oils or require reporting of GRAS determinations to state authorities. Several states have also banned cell-cultured meat entirely, despite authorizations from both FDA and USDA.

25 See USDA Economic Research Service. Food Dollar Series - Food Dollar Application. 2023 Food dollar: Industry group (nominal). https://data.ers.usda.gov/reports.aspx?ID=4045 (updated January 05, 2025)

26 We note that of the food colors banned under the West Virginia law, all are permitted and in use in the European Union with the exception of FD&C Green #3. See European Food Safety Authority, Food colours database, https://www.efsa.europa.eu/en/topics/topic/food-colours (last visited January 2026); see also European Union, Regulation (EC) No 1333/2008 of the European Parliament and the Council of 16 December 2008 on food additives, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02008R1333-20231029.

State Laws Signed in 2025	
Arizona	HB 2164
Arkansas	SB 9
Delaware	SB 69
Louisiana	HR 3
Louisiana	HR 4
Louisiana	SB 14
Tennessee	HB 134
Texas	SB 314
Texas	SB 25
Utah	HB 402
Virginia	SB 1289
West Virginia	HB 2354

What Else Is Brewing

- 100+ Bills Introduced in 2025
- Types of Bills
  - Bills prohibiting substances in schools
  - Bills prohibiting substances in foods
  - Bills requiring warnings on food labels or in restaurants

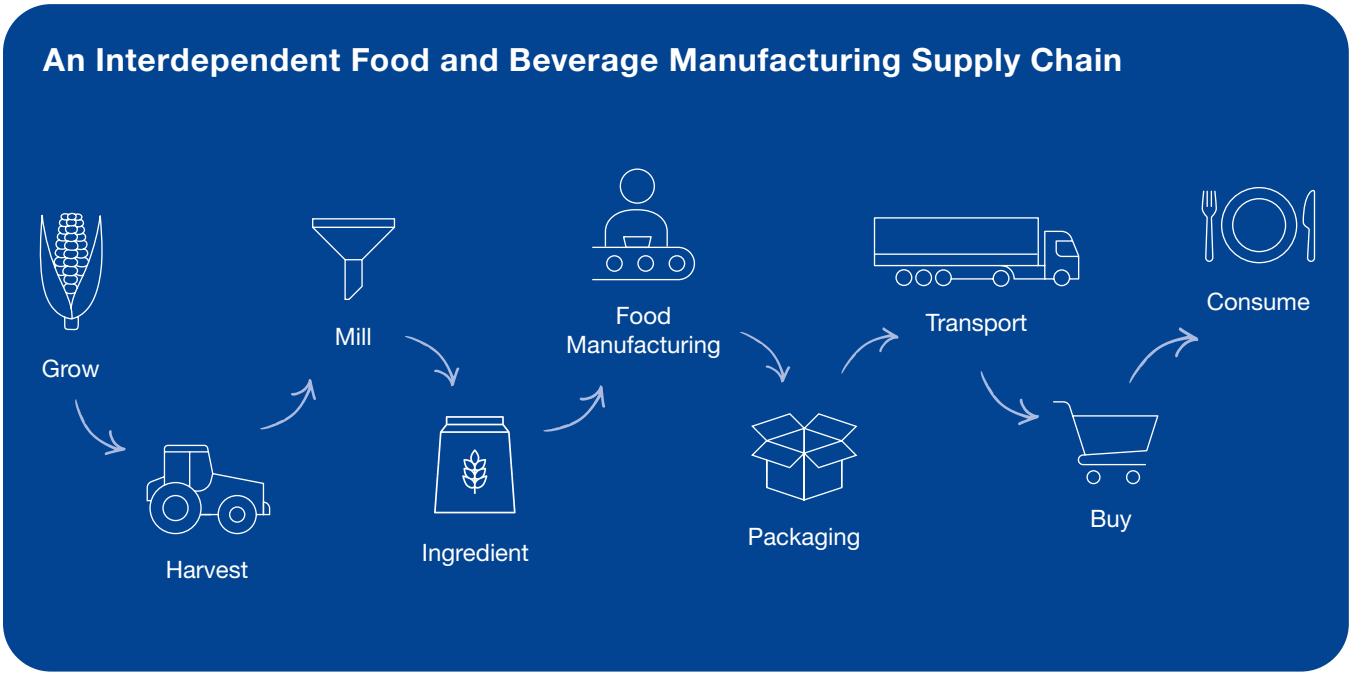
Unlike the federal system, which uses quantitative risk analysis to set tolerances and evaluate safety, many state proposals rely on hazard-based logic—treating the mere presence of a substance as grounds for prohibition, regardless of exposure level or scientific consensus. This can stigmatize safe FDA-approved ingredients and disrupt the complex U.S. food supply chain. These poorly defined and quickly enacted laws also leave significant implementation questions unanswered, including whether any quantity of a listed substance, such as *de minimis* presence from incidental inclusion during processing, would trigger bans or labeling requirements. State laws that conflict with federal laws and regulations create operating uncertainty and introduce supply chain risk by fracturing the free flow of food and beverage options across the 50 states.

Furthermore, the state laws often include potential financial penalties and fines that could result from product mistakenly entering a state through the U.S. supply chain that was not built for a state-by-state system of food regulation. Producers cannot reasonably create multiple variations of the same food solely to satisfy differing state rules. When labeling or ingredient requirements diverge, consumers receive mixed and conflicting signals about safety and nutrition, which erode confidence in the broader food system.

> **"A consistent national regulatory structure is essential to the ability of the food and beverage industry to continue to deliver on the needs of consumers while supporting all those who depend on it for their livelihood. A fragmented, state-by-state approach would complicate the supply chain creating significant challenges resulting in confusion and inconsistency in product availability, ultimately negatively impacting manufacturers, suppliers, retailers, and consumers."**
> — The J.M. Smucker Company

Congress has long affirmed the importance of national consistency in food policy, including nutrition labeling, menu labeling, bioengineered food labeling, organic food labeling and food safety regulations. State laws that conflict with federal law and executive agency determinations destabilize this framework creating instability in the marketplace.

A stable and predictable environment, by contrast, supports long-term investment, business planning and job creation through the efficiencies of a single set of market regulations for the country. Companies throughout the food and beverage sector consistently support strong federal leadership and warn that a patchwork of state-by-state regulations creates consumer confusion and drives up food costs. Maintaining strong federal oversight and preserving national uniformity helps ensure that food remains safe, prices remain stable and consumers across the U.S. receive reliable information regardless of where they live.



IV. Manufacturing Scale and Food Security

Manufacturing scale is a core component of food security and affordability. By producing nutrient-dense food at scale, manufacturers leverage efficiencies that help maintain lower prices and greater availability. This is especially important in communities where access to fresh or minimally processed foods is limited by geography, infrastructure or economics. Even with increased resources to eliminate these food deserts, scale is a necessary component of affordability to communities most in need.

The flexibility afforded under federal food regulations enables manufacturers to grow operations and scale production efficiently and safely. This includes the ability to assess manufacturing changes under the FDA's GRAS Program—allowing safe, efficient improvements under a clear framework and defined standards without waiting for government review—as well as to reassess and update food safety plans and programs as operations evolve. Similarly, interstate commerce, unrestricted by conflicting state-by-state regulations that would require differing formulations and labeling across the U.S., encourages manufacturers to locate manufacturing and distribution sites based on economic and logistic efficiency, factors that often contribute to decreased complexity and lower costs.

The ability of manufacturers to efficiently and steadily produce shelf-stable and packaged foods at scale provides nutritious, reliable and safe options that help bridge gaps in access. During periods of disruption, such as natural disasters or public health emergencies, these products play a critical role in ensuring continuity of supply. For instance, aseptically packaged dairy and egg products as well as freeze-dried packaged foods can be transported and stored without refrigeration to regions following natural disasters. For example, parts of western North Carolina had to contend with extended loss of power after Tropical Storm Helene in 2024.[27] The ability to provide shelf-stable foods and Meals, Ready-to-Eat were essential in providing relief to the region.

Understanding the role of manufacturing scale helps explain why policies that disrupt production or distribution can have unintended consequences for food security and affordability. Protecting the ability of manufacturers to operate efficiently and innovate responsibly is, therefore, closely tied to broader public health goals as well as economic growth.

V. Lessons from Recent Disruptions About Industry–Government Collaboration

Recent global events and disruptions to global trading patterns have underscored the importance of a resilient food manufacturing system. Supply chain disruptions highlighted the value of flexibility, coordination and science-based decision-making in maintaining access to food under challenging conditions.

Manufacturers adapted to supply chain disruptions by adjusting sourcing, modifying production schedules and working closely with regulators and supply chain partners. For example, when the supply of sunflower and wheat derivatives were disrupted by the conflict in Ukraine, manufacturers were able to source alternate ingredients, and the U.S. FDA, working in trusted collaboration with industry, provided labeling flexibility to address minor formulation changes necessitated by the disruption. During the COVID-19 pandemic, large manufacturing operations were able to continue producing critical food supplies by implementing enhanced employee hygienic procedures, altering production schedules and employee shift changes and deploying enhanced sanitation and product-handling practices. Eggs intended for food service were allowed to be sold on store shelves. These efforts helped mitigate shortages and stabilize availability, demonstrating the strength of the existing system and the importance of maintaining its core features, particularly trust in manufacturers whose purpose and mission are to provide safe, nutritious food and beverage options to American families. A system that supports innovation, predictability and collaboration is better equipped to respond to both routine demands and unexpected challenges.

27 The North Carolina National Guard supplied 48 pallets of Meals, Ready-to-Eat (freeze-dried) and 24 pallets of water to the Asheville region following Tropical Storm Helene, and the Federal Emergency Management Agency provided more than 600,000 meals. See Air Force, North Carolina Guard delivers food, water to hurricane victims, https://www.af.mil/News/Article-Display/Article/3924004/north-carolina-guard-delivers-food-water-to-hurricane-victims/#:~:text=The%20North%20Carolina%20Air%20National%20Guard%20(NCANG),Charlotte%2DDouglas%20International%20Airport%20to%20Asheville%20Regional%20Airport; see also North Carolina Department of Public Safety, An Unprecedented Response: State, Local and Federal Partners Surge Resources into Western NC Following Historic Damage from Hurricane Helene, https://www.ncdps.gov/news/press-releases/2024/09/30/unprecedented-response-state-local-and-federal-partners-surge-resources-western-nc-following#:~:text=Yes%2C%20the%20federal%20government%20has%20provided%20immediate,able%20to%20help%20with:%20*%20Serious%20needs.

The U.S. food system has achieved strong safety, affordability and abundance outcomes through a combination of innovation, scale and science-based oversight. Manufacturers across the food and beverage supply chain have been central to this success and continue to invest in improvements that benefit consumers and the broader economy.

Any discussion of changes to food policy should begin with a clear understanding of what has worked and why and the importance of good-faith partnerships between government and industry. Preserving the foundational elements of the current system is essential to maintaining the benefits Americans rely on every day.

VI. Demystifying FDA's Current Science-Based Approach to Food Safety

Through its evolution, the U.S. food regulatory system that manufacturers rely on today is rooted in rigorous scientific evaluation and a risk-based approach to regulation of food. The FDA uses both premarket and post-market measures to ensure that foods entering the supply chain are safe, as well as to verify the safety of foods currently or historically available on the market. The safety assessment of food and food ingredients requires evaluation of multiple factors, including the chemical structure, the amount of ingredient being consumed and the toxicological data under a risk-based framework. This foundation has enabled the growth and world-leading success across the supply chain and is a primary reason that the United States is the best place to do business for a food and beverage manufacturer.

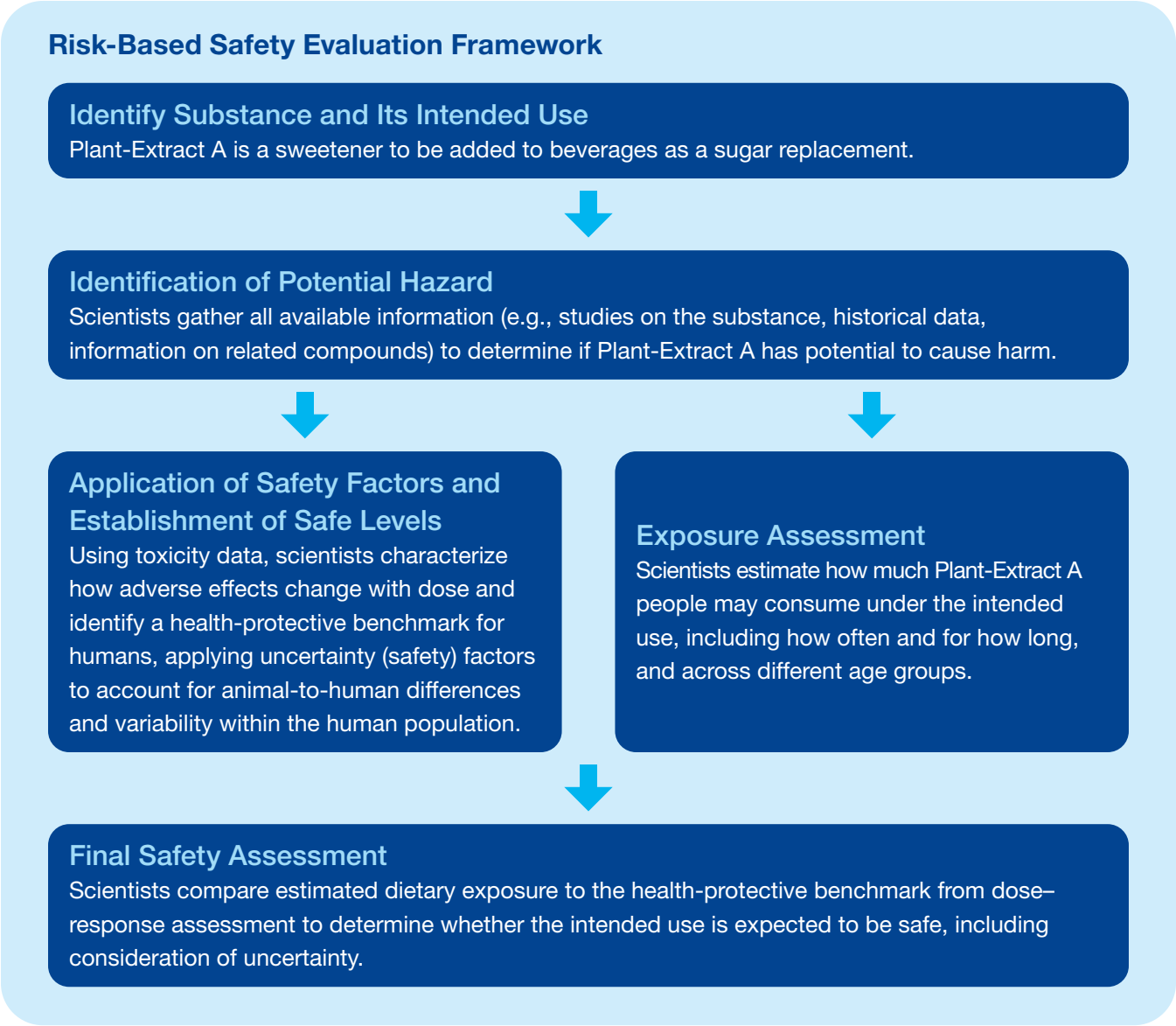
Scientific Approach: Risk-Based Assessment

Risk-based assessment is a set of structured scientific processes used to identify potential hazards associated with a substance and to determine the levels at which it can be safely used in food. This assessment is typically accomplished by identifying and characterizing any health concerns associated with a substance, estimating how much of the substance humans may be exposed to and calculating the amount that can be used safely in food. Of note, under the core toxicological principle that "the dose makes the poison," even the consumption of too much water too rapidly can result in death.[28] The FDA relies in part on toxicological studies, exposure assessments and risk modeling to determine safety thresholds for ingredients, additives, packaging materials and contaminants.[29]

28 See United States Food & Drug Administration, Guidance for Industry and Other Stakeholders: Toxicological Principles for the Safety Assessment of Food Ingredients, https://www.fda.gov/files/food/published/Toxicological-Principles-for-the-Safety-Assessment-of-Food-Ingredients.pdf (July 2007); see also Cleveland Clinic, Water Intoxication, https://my.clevelandclinic.org/health/diseases/water-intoxication (September 2024).

29 See United States Food & Drug Administration, Science and Research (Food), https://www.fda.gov/food/science-research-food (October 2024); see also United States Food & Drug Administration, Laboratory Methods (Food), https://www.fda.gov/food/science-research-food/laboratory-methods-food (September 2021).

Scientific Approach: Risk-Based Assessment	
FDA's Safety Standard	Under FDA's regulations, a food ingredient or contact substance is considered safe if there is a reasonable certainty that the substance is not harmful under the intended conditions of use. Safety is generally determined by considering the potential cumulative effect of the substance in consumers and the probable consumption of the substance in the diet. The potential cumulative effects are determined by the outcome of toxicity studies and knowledge of compounds and their structures.
Toxicological Studies	Scientific studies test whether consuming a substance will have a harmful effect, what those potential harmful effects are and at what level of exposure harm may occur. These tests typically can include: • Single-dose study (effects resulting from one dose of a substance) • Repeated-dose study (effects from continued exposure typically between 30 and 90 days) • Reproductive and developmental studies (evaluating sensitive windows of development) • Genetic testing (which evaluates whether a substance can damage DNA or chromosomes)
Toxicity Thresholds	The amount of an ingredient or substance humans can be exposed to before an adverse health effect may occur.
Safety Factors	Safety factors are extra safety cushions built into risk limits to account for uncertainty—such as differences between animals and humans, and adults and children.
Exposure Assessments	Exposure assessments measure how much, how often and how long people are exposed to a particular substance. Various factors are considered, including the route of exposure (e.g., ingestion or skin contact), quantity, frequency and duration of exposure. Exposure assessments assist FDA and industry in determining how much a human is exposed to certain substances in the food supply.
Risk Modeling	Scientists combine the results of toxicity studies and exposure assessments to determine the highest amount of an ingredient or substance which humans can be safely exposed to. The result of risk modeling does not equate to the real-life exposure to an ingredient or substance. In many cases, real-life exposure levels are far below the threshold value produced from risk modeling.



FDA's Premarket and Post-Market Review

FDA implements both pre- and post-market safety review systems of food ingredients and additives to ensure a safe food supply. Premarket approval processes involve the submission of comprehensive data demonstrating safety, while post-market surveillance and continuous research ensure standards evolve with scientific advancements. This evidence-driven approach not only protects public health but also provides predictability for industry, enabling innovation under clear, science-based rules.

Premarket Review

For premarket submissions to FDA, generally all new food ingredients must be petitioned by the manufacturer for premarket review and approval by FDA, unless the substance is generally recognized, among qualified experts, as having been adequately shown to be safe under the conditions of its intended use—in other words, Generally

Recognized as Safe.[30] Manufacturers supply the FDA with evidence that establishes each ingredient or food chemical is safe at its intended level of use before it may be added to foods. In the case of food additives and color additives, manufacturers submit data and information to the FDA as a petition requesting approval of the ingredient for a specific intended use. The FDA evaluates the petition and other existing data and information to determine if the data available demonstrates that the chemical is safe under the proposed conditions of use. If the FDA determines that the intended use of the additive is safe, the FDA publishes a regulation authorizing its use as a food additive or color additive. That authorization can be relied on by any manufacturer for that intended use.

The evidence required in premarket submission to FDA for food ingredients and food contact substances typically includes:

- Detailed description of the substance, including chemical identity, composition and physical, chemical and biological properties
- Specifications for the minimum content of the desired substance
- Information on the manufacturing processes, analytical controls and details on any reaction byproduct or impurities
- Comprehensive toxicological profile of the substance which summarizes all available toxicological information pertinent to the safety evaluation of the substance, including genetic toxicity tests and subchronic toxicity studies
- Description of the minimum level of safety testing generally considered appropriate at various exposures to the substance
- Environmental needs assessment[31]

The FDA's GRAS program has been particularly important to fostering innovation and growth in the food industry. In enacting the 1958 Food Additives Amendment to the FDCA, Congress excluded substances that are generally recognized by qualified experts to be safe under the conditions of use from the lengthy Food Additive Petition process. It is the GRAS provision to the statute that provides flexibility for manufacturers to improve and innovate production methods and evaluate new uses for ingredients without the delays of government review while adhering to the same safety requirements as mandatory submissions to the FDA. The agency, nonetheless, established a voluntary GRAS Notification program that allows manufacturers to consult with the agency and submit a notification for a new ingredient or use for review by FDA scientists.

The FDA's GRAS program has been a model of efficiency, predictable regulatory science and safety since its inception in 1997. Through the voluntary GRAS program, FDA has reviewed and evaluated more than a thousand ingredients over the last three decades, with average review times of 12 to 16 months—all while maintaining an impeccable safety record.[32]

The FDA's premarket review requirements, grounded in science and risk-based methodologies, play a central role in ensuring that only safe substances enter the food supply. These premarket programs also provide a structured and predictable pathway for innovation, allowing new technologies and manufacturing approaches to advance, while ensuring that they result in food that meets rigorous safety standards.

30 The GRAS pathway employs the same safety standard and requires the same quality and quantity of scientific support as mandatory Food Additive Petitions.

31 See United States Food & Drug Administration, Food Chemical Safety, https://www.fda.gov/food/food-ingredients-packaging/food-chemical-safety#PreMarket (September 2025).

32 See United States Food & Drug Administration, GRAS Notices database, https://hfpappexternal.fda.gov/scripts/fdcc/index.cfm?set=GRASNotices (last visited January 30, 2026).

Post-Market Review

As to post-market actions of the FDA, the agency conducts a range of ongoing post-market activities to help ensure that exposure to chemicals used as food ingredients and in food-contact materials remains safe. The agency works to limit exposure to potentially unsafe contaminants by monitoring the food supply, supporting research to improve detection methods and collaborating with manufacturers on implementing controls to prevent or reduce contaminants before products reach the market. These activities include:

- **Continued Evaluation of Safety Information for Authorized Substances**
  The FDA reviews emerging scientific data related to authorized uses of ingredients and food contact substances to confirm that these uses remain safe. The agency also evaluates petitions or notifications submitted by industry and other stakeholders when a previously authorized use requires reassessment. In addition, FDA scientists may initiate reassessments when new information raises questions about a substance's safety profile. These FDA-initiated reviews are typically conducted on a case-by-case basis and focus on substances that present the most significant public health concerns. The FDA has recently developed a program for the systematic process for post-market assessment of food chemicals.[33] At the core of this process, and critical to the stability of the market, is the use of a systematic, risk-based approach utilizing the most current science for thorough and reliable evaluation of food ingredients and chemicals to prevent arbitrary and unwarranted disruptions to the ingredient supply chain.

- **Monitoring the Food Supply for Contaminants**
  The FDA reviews new scientific findings on contaminants that may enter the food supply through growing or processing conditions. The agency monitors contaminant levels in food, establishes regulations where appropriate and provides guidance to manufacturers on meeting their legal obligations under current good manufacturing practices and preventative controls to minimize or avoid hazards in foods and food-contact materials. The FDA also collaborates with domestic and international regulatory partners on contaminant monitoring and oversight.

  Under the Closer to Zero initiative, the FDA is working with growers to reduce levels of lead, arsenic, cadmium and mercury in commodities used in foods for infants and young children.[34] The agency monitors the food supply by testing domestic and imported foods under several programs, including compliance programs for toxic elements and mycotoxins. The FDA's Total Diet Study also assesses foods for both nutrients and contaminants and serves as an important tool for prioritizing food safety and nutrition efforts.

  The FDA has established tolerances, action levels and guidance levels for certain contaminants in food. A consolidated list of contaminant levels is provided through the Chemical Contaminants Transparency Tool.

- **Enforcing Compliance with Pesticide Tolerances**
  Pesticides are used to protect crops from pests such as insects, fungi and weeds. The U.S. Environmental Protection Agency evaluates the safety of pesticide chemicals and sets tolerances specifying the maximum residue levels permitted in human and animal foods. The FDA enforces these EPA-established tolerances for foods in interstate commerce and for imported foods, with the exception of meat, poultry, catfish and certain egg products, which fall under the USDA's Food Safety and Inspection Service.

33 See United States Food & Drug Administration, FDA Update on Post-market Assessment of Chemicals in the Food Supply, https://www.fda.gov/food/hfp-constituent-updates/fda-update-post-market-assessment-chemicals-food-supply-0 (August 2025).

34 See United States Food & Drug Administration, Closer to Zero: Reducing Childhood Exposure to Contaminants from Foods, https://www.fda.gov/food/environmental-contaminants-food/closer-zero-reducing-childhood-exposure-contaminants-foods (January 2025).

- **Research and Method Development**
  The FDA conducts research aimed at addressing chemical contaminants in the food supply. For example, the agency studies how process contaminants form and develops analytical methods to measure them, enabling surveillance of contaminant levels and identification of steps to reduce or eliminate exposure. The FDA also works to improve testing methods to better estimate consumer exposure and identify ways to prevent or minimize contamination. As part of technical assistance to states, the agency is supporting research into how per- and polyfluoroalkyl substances are taken up by plants and how concentrations vary among plant types and tissues. This research may support significant reductions in PFAS exposure from food.

- **International Scientific Activities**
  FDA regularly meets and coordinates with its international counterparts to help shape global policies and approaches to the regulation of food and beverage ingredients. By collaborating with organizations such as the Codex Alimentarius Commission, the agency contributes to the development of science-based international food safety standards and guidelines.

- **Oversight Activities to Address Safety Concerns**
  When new evidence indicates that a chemical may be unsafe, the FDA takes action to protect public health. These actions may include revoking authorizations or approvals, working with industry on voluntary market phaseouts or recalls, issuing consumer alerts and engaging manufacturers on implementing controls for potential hazards. The agency also monitors industry compliance with the requirements of the Current Good Manufacturing Practice and Hazard Analysis and Risk-Based Preventive Controls for Human Food rule.[35]

A rigorous, risk-based regulatory framework ensures that safe ingredients enter the market, while providing flexibility for innovation. Once products are in use, ongoing monitoring and scientific research help ensure that regulatory standards keep pace with new knowledge. This reliance on evidence not only safeguards public health but also gives industry a predictable framework in which to innovate. A uniform federal standard—as was recognized more than 100 years ago—creates stability and predictability in the market, enables complex, multistate supply chains, promotes clear consumer understanding, reduces the likelihood of fraud and waste and provides manufacturers with the certainty needed to invest, innovate and scale production efficiently to grow the economy, create jobs and serve American families.

Food-Contact Materials and Food Packaging

In addition to food ingredients, “food-contact substances” are also regulated in the United States. Food-contact substances include all materials and substances that come into contact with food, such as food packaging (e.g., water bottles, takeout containers, paperboard cereal boxes, bagel bags and gum wrappers), food processing equipment (e.g., conveyor belts or meat processors), transportation systems (e.g., coatings in train cars used to carry produce) and other materials that may contact food. The U.S. has the most comprehensive regulatory rubric for food packaging and food contact materials. However, because of its efficient, risk-based structure, the regulatory framework still allows for innovation and a predictable, timely path to market.

FDA utilizes a risk-based strategy for evaluating the safety of food-contact materials focusing on realistic exposure levels of the components used to manufacture food-contact materials. Premarket evaluation by FDA of food-contact materials can be accomplished through a Food Contact Notification or Food Additive Petition submission to the agency. The FDA reviews information submitted in the FCN and considers other relevant

35 See United States Food & Drug Administration, Food Chemical Safety, https://www.fda.gov/food/food-ingredients-packaging/food-chemical-safety#PreMarket (September 2025).

information available to the FDA to ensure that the intended use is safe. This process includes analyzing testing data that demonstrates the amount of migration of a food contact substance to food because of its intended use and toxicological data to ensure that the consumer exposure resulting from this migration is safe.

Where materials show negligible migration, such as negligible transfer of packaging into the food and low toxicity through exposure-drive assessment, or are generally recognized by scientific experts as being safe, a formal submission to the FDA is not required. The FDA also employs post-market surveillance of the food supply under which it may reevaluate a food or food packaging substance to ensure its safety in the U.S. food supply.

Through this model of regulation—risk-based methodology prioritizing low-risk materials for expedited review, applying advanced scientific assessment and maintaining vigilant post-market monitoring—the FDA encourages packaging innovation while maintaining high safety standards. This regulatory ecosystem ensures that innovative packaging solutions can evolve and reach consumers swiftly while promoting and ensuring safe and robust food supply for the U.S.

> **“Packaging manufacturers work together with their food and beverage customers to design food packaging that balances safety, performance, and affordability. Federal regulatory certainty is especially important for small manufacturers as they invest in innovations that help keep everyday food and beverage costs in check for American families.”**
> — Phoenix Closures, Inc.

VII. Manufacturers Drive American Innovation

Manufacturers across the U.S. food and beverage supply chain have driven globally embraced innovations that enhance safety, reduce costs and improve nutritional profiles. These developments reflect a combination of scientific progress and regulatory compatibility with innovation and consumer safety.

- The U.S. food industry (Pillsbury) developed HACCP food safety systems for the U.S. space program in the 1960s, which dramatically reduced risk of contamination and controlling hazards for foodborne illness. This approach became the global standard underpinning modern food regulatory frameworks, thereby reducing risks of contamination and foodborne illness worldwide.
- Military R&D on dehydration and shelf-life extension enabled development of lightweight, nutrient-retaining rations such as freeze-dried foods and anti-staling processes. These innovations later translated into civilian food applications, improving stability, reducing waste and expanding access to safe, portable nutrition, particularly in emergencies and remote supply chains. For example, breakthroughs in dehydrating and powdering cheese for stable, transportable rations catalyzed a new class of shelf-stable foods—which ultimately led to well-known products like Cheetos.
- Stevia, monk-fruit extract, erythritol and other low- or no-calorie sweeteners were brought to market and produced at scale through process innovation and microbial fermentation. Fermentation-enabled production

at scale provides sweetener alternatives that help reduce added-sugar intake and glycemic load, supporting weight and cardiometabolic risk management while ensuring ingredient purity and consistent supply.

- Broad commercialization of high-pressure pasteurization helped extend shelf-life and reduce food waste because it inactivates pathogens like Listeria, E. coli and Salmonella while preserving flavor, texture and nutrients.
- Protein innovation—including plant-based proteins, such as pea protein isolate and corn protein isolate, mycelium-based proteins and whey protein commercialization, as well as a world-leading animal genetics industry for food-producing animals—provided diversified, efficient protein sources that improve protein availability in the U.S. and globally while offering allergen-friendly options.
- Carnation Foods—known for its condensed milk and now part of Nestle—developed instant breakfasts and meal replacements, as well as fortification of milk with Vitamin D. Fortified nutrition shakes help close micronutrient gaps in vitamin D, calcium, iron and protein for children, teens, adults and elderly populations to support growth and development, bone health and overall dietary adequacy.
- Development of biodegradable food packaging as well as biodegradable single-use utensils provided the food supply chain with a broad selection of packaging materials to more efficiently transport and deliver food and beverages to consumers while also meeting evolving sustainability initiatives in the U.S. and around the world.
- Gatorade, developed at the University of Florida in 1965, launching the global sports drink industry now valued at roughly $8.5 billion annually, provides evidence-based electrolyte-carbohydrate rehydration, helping to address electrolyte deficiency and imbalance.
- Polyethylene terephthalate bottles developed by Owens-Illinois in the 1970s provided lightweight, strong and shatter-resistant packaging, thus lowering the carbon-transport costs of food products, improving product protection and consumer safety and facilitating highly recyclable materials.
- Aseptic packaging technologies, which involve sterilization of both the product and its container separately to ensure a contamination-free environment, enabled development of broad ranges of shelf-stable products, expanding food access to consumers and enhancing emergency readiness.

Gluten-free innovation has also surged, fueled by medical necessity, lifestyle choices and FDA regulation. Brands such as Canyon Bakehouse, Schär and Bob's Red Mill have developed breads, pastas and baking mixes that replicate the texture and taste of traditional wheat-based products using functional ingredients like xanthan gum, psyllium husk and alternative flours. The U.S. gluten-free market reached $2.27 billion in 2024 and is expected to grow at nearly 10% annually through 2030.[36] North America dominates this segment, with strong growth in chickpea and lentil-based snacks, reflecting consumer demand for clean-label, plant-based options.

36 See Grand View Research, U.S. Gluten-free Products Market (2025–2030), https://www.grandviewresearch.com/industry-analysis/us-gluten-free-products-market-report.

VIII. Lessons for Policymakers

When policy decisions are driven by perception rather than evidence, the consequences can undermine the goods manufacturers produce for American families. Food policy and regulation must be grounded in the best available science and a risk-based evaluation of all relevant evidence, drawing from peer-reviewed scientific publications, global regulatory actions and publicly available data, including adverse event reports received by federal and state regulators. This evidence-based approach is essential to maintaining predictability, supply chain security and consumer trust.

It is critically important that misguided policy changes are not implemented under the influence of the online global information environment. While some sources reflect sound science and risk assessment by authoritative bodies, others—such as general news reports, social media or unverified claims—lack scientific accuracy and peer review. These sources must be carefully evaluated for legitimacy and should not drive policy decisions based on volume or visibility rather than evidence. Once food policy diverges from scientific consensus, uncertainty increases and the stability of the food supply chain is put at risk.

The operational consequences of uncertainty are significant. Manufacturers may be required to reformulate or relabel products in ways that do not meaningfully improve safety but do increase complexity and cost or reduce availability for consumers. Resources that could otherwise be directed toward genuine risk reduction or nutritional improvements, innovation, research and development, jobs and economic growth are instead diverted to managing regulatory ambiguity and compliance risk.

These effects are amplified when policies fragment across jurisdictions. A food system built on interstate commerce depends on uniform national standards to function efficiently. It is neither practical nor economically feasible for manufacturers to produce multiple versions of the same food and beverage options to comply with differing state requirements. When standards vary, manufacturers must choose between creating duplicative products, limiting distribution or exiting certain markets altogether—each option carrying downstream costs throughout the U.S. supply chain from farmers and ranchers to consumers and American families.

For consumers, fragmentation can result in higher prices, reduced choice, inconsistent availability and confusion created by conflicting labeling or warning statements on identical products. State labeling laws that conflict with expert, science-based federal safety evaluations undermine trust in the U.S. food supply by presenting consumers with inconsistent and contradictory information. Recent state laws enacted in Louisiana and Texas illustrate this risk where shipments sent mistakenly to those states could expose manufacturers, distributors and workers to penalties while increasing operational complexity.

The U.S. food system has achieved strong safety, access and affordability outcomes through science-based oversight, innovation and national consistency. Manufacturers have been central to that success—not as passive recipients of regulation, but as active implementers of public health objectives within complex, real-world systems.

Policymakers considering changes to food policy have an opportunity to work collaboratively with manufacturers to modernize the system by building on its proven strengths, reinforcing what works while avoiding unnecessary uncertainty that could undermine innovation, access and affordability. Experience shows that policies grounded in evidence, applied consistently and informed by operational realities are more likely to deliver durable public health and economic benefits.

Preserving federal leadership in food safety and labeling, recognizing established safety evaluations and maintaining predictable regulatory pathways that allow for flexibility and innovation are practical tools for achieving public health goals and creating a world-class, pro-growth food and beverage manufacturing industry. Continued collaboration among regulators, policymakers and manufacturers is essential to align policymaker intent with effective implementation and sustaining a food system that works for consumers, workers and communities nationwide.

IX. Food and Beverage Manufacturers, Long-Term Partners in Public Health

Manufacturers across the food and beverage supply chain occupy an indispensable position in the American food system. Manufacturers operate at the intersection of public health objectives, scientific advancement, consumer expectations and operational reality. Manufacturers must translate abstract goals, including ones set through policymakers' choices, into concrete decisions that affect millions of products moving through the complex, national supply chain every day. That responsibility shapes how safety, nutrition, access and affordability are delivered in practice.

When public health priorities evolve, manufacturers are often the first actors required to respond. Whether addressing nutrient reduction, such as sodium or added sugars, improving labeling clarity for consumers with allergies or sensitivities or adapting to supply chain disruptions like those experienced during COVID-19, manufacturers must implement changes without compromising safety, affordability or availability. Achieving these outcomes depends on uniform national policies and labeling of food and beverage options so consumers receive clear, consistent information and manufacturers are not forced to navigate state-by-state variation in labeling requirements that are increasingly moving through state legislatures. Risk-based evaluation of foods, such as the addition of sesame to the list of allergens that must be labeled under federal law, likewise requires national uniformity to prevent confusion and potential harm to consumers. Submitting safety determinations that have been evaluated by the FDA to state health departments that lack the resources to review them creates uncertainty, cost and inefficiencies without providing public health benefit.

Managing change and mitigating risk within the food and beverage supply chain require complex planning and forecasting, as well as careful evaluation of ingredients, manufacturing processes, equipment capabilities and distribution logistics, often across multiple facilities and product lines. Maintaining a predictable national regulatory environment grounded in science and risk-based decision-making is critical to the success of the U.S. food supply chain by establishing and maintaining uniform rules under which these complex systems operate, enabling manufacturers to invest, innovate and continuously improve at scale.

This operational reality underscores why manufacturers cannot rely on static compliance approaches. Continuous improvement is foundational to food safety and public trust. Frameworks such as HACCP and its derivatives, developed in the U.S. and embraced globally, are built on continuous improvement in food safety systems through iterative steps and constant reevaluation. Manufacturers invest in quality systems, scientific expertise and workforce training because public health goals must be embedded into daily operations, not treated as afterthoughts. It is the flexibility in the U.S. food safety framework that allows manufacturers to innovate and improve without unnecessary delays. By contrast, state laws that selectively ban ingredients or hastily implement changes to the FDA's GRAS program risk creating additional burdens in the evaluation

and enhancement of core food safety programs, forcing redundant processes, slowing the adoption of new technologies and manufacturing improvements and undermining innovation without improving safety.

Manufacturers share the goal of improving public health outcomes and recognize their responsibility as stewards of a system that millions of Americans rely on every day. That responsibility is reflected in sustained investment, continuous improvement and a willingness to adapt as science and consumer needs and preferences evolve.

The strength of the U.S. food system lies in its ability to integrate safety, innovation, access and affordability. Manufacturers remain committed to being part of that solution. Policies that respect science, maintain consistency and support responsible innovation will help ensure that this system continues to serve consumers effectively, now and in the future. From small, family-owned businesses to some of the world's leading brands, manufacturers feed America and are uniquely positioned to support the protection—and where appropriate, modernization—of a well-regulated industry that delivers safe, nutritious and affordable food and beverages.

Policymakers are advancing a pro-growth agenda for U.S. manufacturing by promoting a competitive tax code, reducing unnecessary regulatory burdens, accelerating adoption of advanced manufacturing and supply chain technologies and supporting U.S. energy dominance. Extending these principles fully to the food and beverage sector through policies that respect science, maintain national consistency and support responsible innovation will strengthen economic growth, job creation and communities nationwide.

Manufacturers stand ready to partner with policymakers, as they have done successfully for more than a century. The U.S. food supply chain is at a critical juncture. Food policies at the federal and state levels can be enhanced in a thoughtful, systematic manner that will support the growth and well-being of the American family, economic growth and global competitiveness—keeping America the best place to do business and nourishing its people for generations to come.

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