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EXECUTIVE SUMMARY

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> MENUS of CHANGE The Business of Healthy, Sustainable, Delicious Food Choices

2018 ANNUAL REPORT





SCHOOL OF PUBLIC HEALTH Department of Nutrition

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To read the full 2018 Menus of Change[®] Annual Report, please visit menusofchange.org

The Menus of Change® (MOC) Annual Report and Annual Leadership Summit are co-presented by The Culinary Institute of America (CIA) and Harvard T.H. Chan School of Public Health, Department of Nutrition. The Menus of Change Scientific and Technical Advisory Council, composed of leading nutrition, environmental, and other scientists and scholars (menusofchange.org/advisorycouncils/stac), together with Harvard Chan School and the CIA, are solely responsible for the nutrition and environmental guidance of the report and conference. The Menus of Change Sustainable Business Leadership Council (menusofchange.org/advisory-councils/sblc) contributes insights to parts of the report and conference designed to help translate this guidance into industry change; highlights case studies in innovation (e.g., menu research and development, product sourcing, supply chain management); and builds industry participation in supporting healthier, more sustainable menus. Project sponsors and other commercial interests are not permitted to influence the editorial independence of the Menus of Change initiative.

I. MENUS OF CHANGE IN 2018

Welcome to the Executive Summary of the 6th Menus of Change[®] Annual Report. The full report provides you and your colleagues with briefings on areas where your decisions about menus, recipes, and ingredient selection can have the greatest impact on our health, our planet, and our businesses. It also documents a remarkable, positive change resulting from the work of so many chefs and foodservice industry professionals to improve what we eat, including focusing more of our creativity to developing new and delicious plant-forward choices for the dining public.

The first five years of the Menus of Change initiative have passed quickly as we have worked to engage, inform, and guide the culinary profession and foodservice industry in the business of serving healthy, sustainable, delicious food. The initiative, a partnership of The Culinary Institute of America and Harvard T.H. Chan School of Public Health, aims to help you successfully navigate a rapidly changing landscape. It does the essential, difficult, and unprecedented work of integrating the latest findings from both nutrition and environmental science into a single set of recommendations to help foodservice and culinary professionals make better choices. Chief among those choices is to re-think the longstanding emphasis of red meat and other animal proteins on our plates and find delicious new ways to elevate the role of plant-based foods.

During the first half-decade, this report and the initiative brought together key findings from both nutrition and environmental science along with new culinary strategies, and helped focus our profession and our industry on rethinking the role of protein on our menus. A few years, flips, and blends later-and with the involvement of many culinary and business leaders-our industry has increasingly embraced the vision and advice put forth by Menus of Change. The efforts of the many chefs and foodservice operators who have taken up the goals of Menus of Change are now beginning to reshape the American diet. In less than a decade, the culinary profession and the foodservice industry have rallied around

a new vision of plant-forward dining. It's now a focus of menu development and culinary innovation in restaurants of all sizes, formats, and price points, from fine dining to student dining, and from full service to quick service.

As you'll read in this year's report, we're now seeing modest but meaningful improvements in what we eat. The report's issue brief on "Diet Quality and Health" and the Harvard Alternative Healthy Eating Index show an uptick in quality, as does our collective utilization of protein. Also, thanks in significant part to the foodservice industry's leadership, last year brought the first reduction in antibiotic use for livestock production, after many years of troubling increases.

Overall, as this year's Menus of Change Dashboard shows, changes made by restaurant and foodservice leaders are heading in the right direction, and they are introducing Americans to better food choices overall. As you'll read, our industry is accomplishing this shift while also wrestling with increasingly complex risks from climate change, water scarcity, lack of visibility into supply chains, and other environmental factors that now make our supply chain more brittle and less predictable.

This annual report is a core part of the Menus of Change mission. It seeks to advance a long-term, practical vision that integrates optimal nutrition, environmental stewardship and restoration, and social responsibility within the foodservice industry. It includes a guide to the key issues that face the foodservice community, as well as recommendations for improving business performance. It also provides the Dashboard to show the progress the industry has made-where it is moving fast and where it needs to make greater efforts. The indicators on the Dashboard can help businesses evaluate their own efforts in the areas that matter most. For culinary professionals, R&D teams, and senior-level strategic marketing managers, there is also a comprehensive set of principles to guide menu development and design.

The CIA and Harvard Chan School invite businesses to use this report to measure their progress and to navigate new and complex challenges. Not all culinary professionals and foodservice companies will take the same path forward. But more and more have a similar goal: to be successful in the businesses of serving healthy, sustainable, delicious food.

Onward!





II. EXECUTIVE SUMMARY: A TASTE OF WHAT'S AHEAD

The greatest opportunity in using the Menus of Change Principles of Healthy, Sustainable Menus is that they are comprehensive. Rather than foodservice operators needing to check a dozen sources scattered in different places or wade through conflicting guidance, the Principles offer an integrated roadmap. They work together to help create healthy, sustainable, delicious food choices. Their comprehensive nature also can pose a challenge, though, as so many professionals are striving to make one change at a time. So, when first looking at the principles, the question of where to start can be challenging. There are 24 of them, after all.

From this recognition of the need for prioritizing action, a way of focusing and framing many of the principles in an approachable way, Menus of Change published last year for the first time a formal definition of a term we see as filling the need for that focal point: plant-forward. We define "plant-forward" as: A style of cooking and eating that emphasizes and celebrates, but is not limited to, plant-based foods-including fruits and vegetables (produce); whole grains; beans, other legumes (pulses), and soy foods: nuts and seeds: plant oils: and herbs and spices-and that reflects evidencebased principles of health and sustainability. (Note the distinction from "plant-based," referring to foods and ingredients made entirely from plants, whereas "plant-forward" refers to recipes, menus, and concepts that may contain poultry, fish, dairy, or small amounts of meat.)

Importantly, "plant-forward" is and was always meant to be a B2B term; it's not meant to be the descriptor you list on your menu, or the catchphrase you use to market your new concept. It's an umbrella term—which can include vegetarian and vegan approaches but is far more inclusive and, we hope, better positioned to be adopted broadly by foodservice operators and culinary professionals. It is a way of getting on the same page within the Menus of Change community, for talking to one another as culinary professionals and menu decision-makers about where the GPS is pointed: the future direction we need and want to take our industry as a whole. The shorthand can help you tackle the vast majority of the principles covering healthy, sustainable menus.

Countless chefs, registered dietitians, researchers, educators, executives, and the Menus of Change leadership itself were all heartened to see "plant-based" and "plantforward" dining grace nearly every major trend list of 2018, including both the top trends and hot concepts identified by the National Restaurant Association.

While it's worth celebrating that chefs and operators are increasing their plant-forward offerings, it's important that they not think of vegetable-centric, plant-forward menus as trends, but rather, a new normal. We must all do our part to ensure plant-forward has staying power, so it doesn't fall by the wayside as merely the "hot trend of 2018." Of course, there's sound reasoning behind each and every one of the 24 principles. Not to be overlooked are the ever-important needs to, for instance, continue to lower the use of salt and added sugar, to serve more kinds of seafood more often, and to reduce portions. And if we've learned anything about what it looks like to advance plant-forward menus on the ground, it's that the principle "Lead with Menu Messaging Around Flavor" is perhaps more relevant than ever before. So too is "Leverage Globally Inspired, Plant-Forward Culinary Strategies." So just remember: even the best highways certainly don't cover the entire map.

As the Dashboard reflects, the past year was pivotal in nearly all indicators of progress. Particular strides were seen for (1) food industry investor standards, (2) local and regional food systems, and (3) animal welfare and agriculture, drugs, and chemicals use. (Given how intertwined animal welfare is with agriculture, drugs, and chemicals use, we have now merged the issues in the 2018 scorecard, using the past scores for agriculture, drugs, and chemicals use as the comparison.)

- Food Industry Investor Standards 1. The past year brought a wave of unprecedented changes and challenges to the U.S. food and agriculture sectors, and these effects translated to new approaches to investment in food and beverages. Much of the country's agriculture, energy, and distribution industries were buffeted by extreme weather, wildfires, and labor and farmworker disruptions. The Trump administration ushered in deregulation and a reversal of many policies long pursued by the U.S. Environmental Protection Agency (EPA), U.S. Department of Agriculture (USDA), and other key agencies for the food industry, and began dismantling some Obama-era investment rules. Newly energized social movements, strong state and local governments committed to climate change goals, and corporations aligning with the United Nations' Sustainable Development Goals (SDGs) redoubled efforts to advance sustainability. Finally, tech innovations like robo-investing, alternative proteins, and blockchain-which allows for massive amounts of information to be stored, dated, and easily searched-brought new possibilities for investors and food companies alike.
- 2. Local and Regional Food Systems Restaurants and foodservice leaders play an important role in enabling local and regional farms to scale up and be profitable. And many of the newest restaurant concepts are focused on doing just that. According to the National Restaurant Association, the top concepts for this year included a host of variations on local sourcing: hyperlocal, locally sourced meats, locally sourced seafood, farm-branded items, and the continued emphasis on local fruits and vegetables. Now part of the mainstream thinking, local is beginning to show up in more concepts that reach beyond full-service dining to more types of eating occasions.
- 3. Animal Welfare and Agriculture, Drugs, and Chemicals Use As noted in the 2017 Menus of Change Annual Report, most of the largest U.S. restaurant, hospitality, and foodservice companies have taken on the challenge of antibiotic resistance in response to consumer demand. Well

over half of these companies now have in place commitments to reduce or eliminate antibiotic use in their supply chains in the next few years. Most of these commitments are in the poultry sector, which continues to respond to consumer demand more robustly than the swine and dairy industries, where the ongoing use of low-dose antibiotics for prophylaxis is a problem.

In any industry, in any point in time, change is to be expected. But never before has the pace of change in the foodservice industry been so rapid. Consumer demands for transparency and traceability are becoming more and more granular, and the time for food companies to respond is becoming shorter and shorter. So, the outcropping of innovation. from business models to protein sources, and the many rigorous sourcing, menuing, operational, and investor initiatives, are all commendable. And yet, we would not want to mistake these many positive improvements-or the pace of these improvements-for a false sense of the adequacy of our efforts. There remain critical areas where the foodservice industry must act much. much faster.

Given the complexities of change in order to benefit the triple bottom line of people, planet, and profit, the Menus of Change report is designed to give foodservice and culinary professionals the insights and the tools to make informed decisions about difficult issues. The report sifts through culinary trends and innovations to shed light on some of the most intriguing companies and projects happening around the country, all in the name of healthier, more sustainable food. The Menus of Change initiative also importantly provides comprehensive advice and strategies for menu design that support the triple bottom line with the 24 principles. These guidelines outline culinary strategies, such as new focuses on portion size, calorie quality, and plant-based foods, which are needed to increase the success of new business models.

The centerpiece of the Menus of Change report is a concise analysis of 12 issues at the intersection of public health, the environment, and the business of food. These issue briefs synthesize the latest health and environmental data to provide a clear picture of the industry's challenges and opportunities, as well as practical next steps for foodservice operations. The report assigns each issue an annual score



that rates the industry's efforts in these critical areas. Among these 12 issues are two that merit particular attention, as in years past:

Water Sustainability

This past year, the United Nations Food and Agriculture Organization called global attention to the link between sustainable management of water resources, food production, and the food industry. With the price and availability of food so dependent on water resources, jobs in the foodservice industry are as well. There is no one-size-fitsall solution for crafting menus that strongly support water sustainability. Plant-forward menus and recipes, attention to water and environmental conditions in regions that grow food, and engagement with growers and food suppliers on sustainable water practices are all important steps toward finding more specific long-term solutions.

Climate Change

Climate change remains worthy of more urgent and substantive attention throughout the restaurant and foodservice industry. This past fall, a book was published called Drawdown: The Most Comprehensive Plan Ever Proposed to Reverse Global Warming. A New York Times bestseller, and edited by Paul Hawken, the book has generated buzz for many reasons, but in the restaurant and foodservice world, what's especially attention-grabbing is the fact that eight of the top 20 solutions proposed relate to food-from regenerative agriculture to converting annual to perennial staple trees in the tropics. Out of 100 possible solutions. from wind turbines and rooftop solar panels to bioplastics and electric bikes, "plant-rich diet" comes in at #4. The international momentum being generated by *Drawdown* only adds fuel to the fire behind efforts like the Menus of Change Protein Flip and emphasis on plantforward menu innovation to help make a measurable dent in finally bending the global emissions curve.

Overall, the industry is making substantial gains in the right direction: 11 of 12 issues received a score of four (making good progress) or three (holding steady). This year, scores for all of the following issues increased for the first time in several years: climate change, fruit and vegetable consumption and production, protein consumption and production, and portion size and caloric intake. Unfortunately, the lack of substantive action in the industry to address water scarcity has kept that issue stalled at a score of two. All in all, though, the average score across all 12 issues was 3.4. Looking at this big picture, this improvement compared to the 2017 average of 2.8 represents an inspiring step forward for the industry as a whole.

III. STATE OF THE PLATE

How are we doing? Sometimes it's hard to tell. The Menus of Change Dashboard on the next page provides a snapshot of the foodservice industry's progress to improve nutrition, sustainability, and profitability. Its scores on critical issues that affect the foodservice industry are updated annually to show where progress is being made. It also creates a set of standards that are designed to be used by businesses to judge their own efforts on health and sustainability.

Dashboard Score Key

The score assigned to each issue indicates progress or lack thereof in the foodservice industry and/or culinary profession over the last 12 months, as follows:

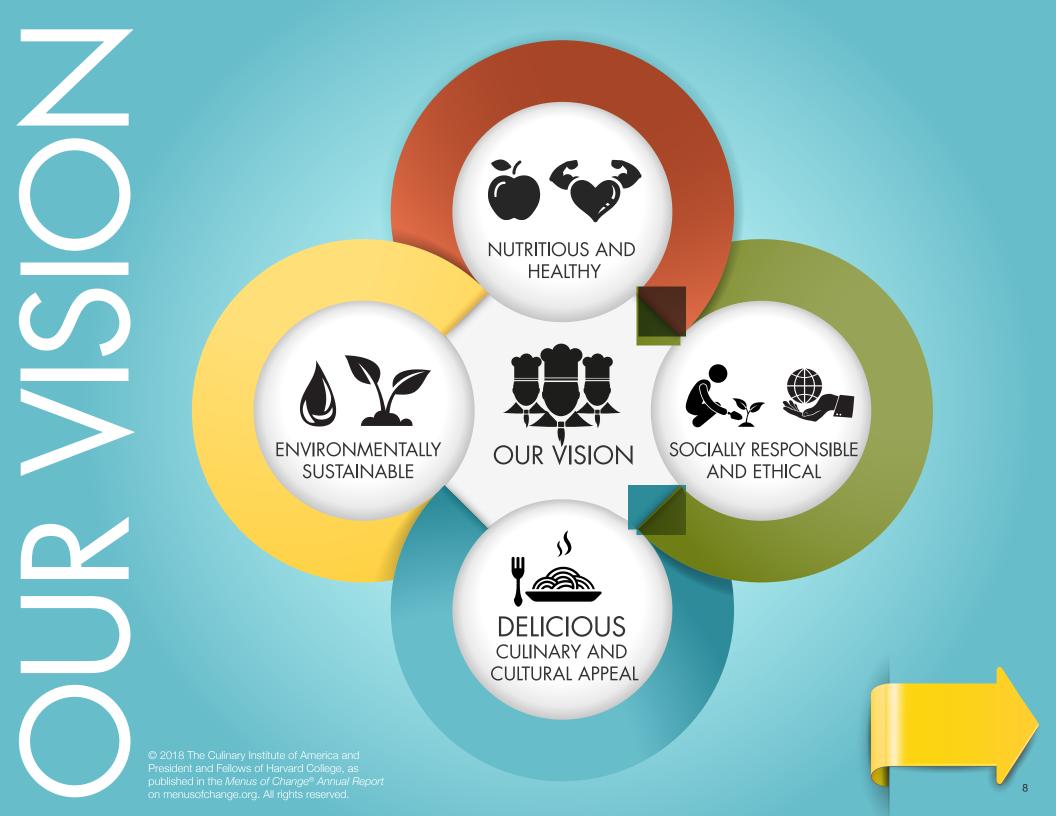


METHODOLOGY

The scores were developed based on the expert opinions of the members of the Menus of Change Scientific and Technical Advisory Council, who considered new research findings and trend data as well as innovations and changes in business practices and policies. The information was then reviewed by members of the Menus of Change Sustainable Business Leadership Council to ensure it reflected new industry initiatives and practices.

		SCORES				
ISSUE	2018	2017	2016	2015	2014	JUSTIFICATION
SUPPLY CHAIN RESILIENCY AND TRANSPARENCY					0	Food supply chains remain especially vulnerable to fraud and contamination. Advances in technology should help track food from source to consumer and more quickly manage foodborne illnesses as they arise. Making more information available to consumers about food and its sourcing, processing, and treatment is more important than ever.
CHANGE IN FOOD INDUSTRY INVESTMENT STANDARDS		Ø	\bigotimes	\bigotimes	0	As uncertainty increases in the U.S. and abroad, investors seek businesses that incorporate sound sustainability and risk management stragegies. Food and restaurant businesses are expected to be responsive to and aware of key concerns such as transparency, climate risk, and workplace diversity.
LOCAL AND REGIONAL FOOD SYSTEMS						Chefs ignited the local food movement, and restaurant companies are now creating new concepts to bring local to the mainstream. However, established players still look to commodity markets to fill out most of the plate, missing an opportunity to support local communities, a more resilient farm sector, and biodiversity.
LAND USE AND FARMING PRACTICES		2	NA	NA	NA	There has been little change in how we use, or manage, farmland and ranch lands as well as soil resources in the U.S.
AGRICULTURE, DRUGS, CHEMICALS USE & ANIMAL WELFARE						Antibiotic use may finally be declining after many years of continued increase as commitments made by major restaurant and foodservice companies have influenced the livestock industry. Species-specific data for 2018 and 2019 should confirm whether the decline is a true trend.
DIET QUALITY AND HEALTH		•			0	While public policy and nutrition promotion efforts have stalled, leading restaurant companies are making significant moves to reduce beef consumption, offer innovative and healthier sides, spark new customer and media interest in plant-forward flavors, and introduce new beverage choices.
PORTION SIZE AND CALORIC INTAKE					\bigotimes	Progress is being made on improving calorie quality. Efforts to also reduce serving size while serving higher-quality food have now entered the pilot phase.
PROTEIN CONSUMPTION AND PRODUCTION					\bigotimes	Motivation aside, eating out more and eating meat less are correlated, as many in the restaurant industry continue to find ways to help diners eat less meat, a move that also addresses climate imperatives.
FRUIT AND VEGETABLE CONSUMPTION AND PRODUCTION			•		NA	Americans are shifting to healthier diets, with many chefs and operators elevating the role of produce on menus. While upticks in actual produce usage are still modest, aspiration is clearly growing on the part of much of the dining public.
FISH, SEAFOOD, AND OCEANS		0	()			Americans eat most of our fish and seafood away from home but only half as much as we should. The restaurant industry can help Americans eat more fish and do so responsibly. There's much work ahead and new approaches are needed, although recent federal action may reduce illegal fishing.
WATER SUSTAINABILITY	(0	0	0	(The U.S. foodservice industry is beginning to pay attention to water issues as drought and groundwater depletion have weighed heavily on profits in recent years.
CLIMATE CHANGE		•	•	•	•	The restaurant industry and culinary profession are driving an important trend in reducing red meat consumption, which has the largest GHG footprint or contribution to climate change, and highlighting plant-forward menu innovation, but efforts to promote other, more sustainable animal proteins or source from producers who use far superior growing practices remain sporadic.

2014-2018 MENUS OF CHANGE DASHBOARD





HEALTHY, SUSTAINABLE, AND DELICIOUS

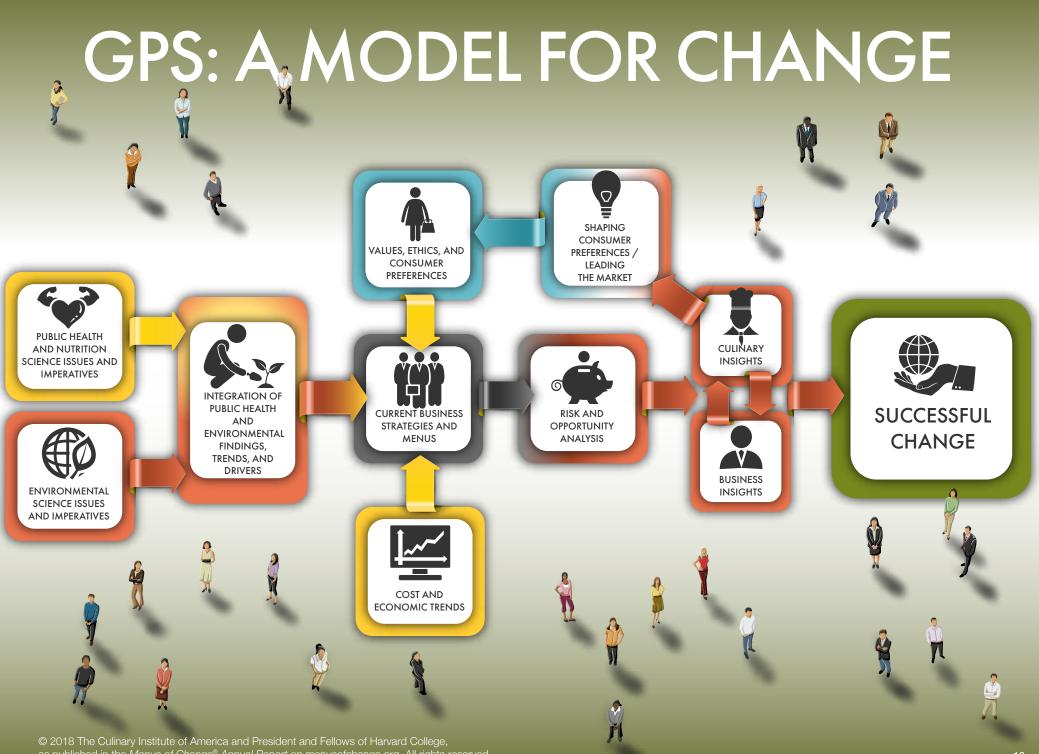
BUSINESS MODELS AND STRATEGIES

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MENUS of CHANGE[®] The Business of Healthy, Sustainable, Delicious Food Choices

THE FUTURE OF FOOD

INTEGRATED GUIDANCE FOR BUSINESS AND CULINARY LEADERS



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WHAT'S IN A NAME?

To help communicate with your industry colleagues, the media, and, as needed, your customers about the distinctions between different menu strategies that leverage vegetables, fruits, nuts, legumes, whole grains, and plant proteins in leading roles, we've settled on some naming protocols. Let us know what you think.

Se **Plant-Forward**: Please see definition on the right. "Plant-forward" is a bigtent concept for dietary and food system transformation that includes a whole range of healthier, more sustainable culinary approaches—from those that contain poultry, fish, dairy, and/or small amounts of meat to vegetarian and vegan offerings.

Se Plant-Based: Used to refer to ingredients and foods themselves, i.e., fruits and vegetables (produce); whole grains; beans, other legumes (pulses), and soy foods; nuts and seeds; plant oils; and herbs and spices. Different from "plant-forward," which refers to the style of cooking and eating that emphasizes and celebrates these foods, but is not limited to them. So Vegetarian: Dishes or dietary patterns that do not contain meat, poultry, or fish but may, or may not, contain dairy, eggs, and/or honey, and individuals who do not eat meat, poultry, or fish but may, or may not, eat dairy, eggs, and/ or honey.

Vegan: Dishes or dietary patterns that do not contain any ingredients that came from animals, and individuals who do not eat any ingredients that came from animals.

Sec Flexitarian: Dietary patterns that are more focused on plant-sourced foods and much less reliant on meat—often following, for some or many meals, a vegetarian model—but that may occasionally include meat, as well as some poultry, fish, or dairy foods.

VII. DEFINING PLANT-FORWARD: GUIDANCE FOR OUR INDUSTRY

PLANT-FORWARD

A style of cooking and eating that *emphasizes and celebrates*, but is not limited to, plant-based foods including fruits and vegetables (produce); whole grains; beans, other legumes (pulses), and soy foods; nuts and seeds; plant oils; and herbs and spices—and that reflects evidence-based principles of health and sustainability.

HEALTHY, SUSTAINABLE, PLANT-FORWARD FOOD CHOICES

This distilled guidance about the future of our food choices, for individuals and professionals, is an outgrowth of multiple, joint leadership initiatives of The Culinary Institute of America and the Department of Nutrition at Harvard T.H. Chan School of Public Health, including Menus of Change; Healthy Kitchens, Healthy Lives®; Teaching Kitchen Collaborative; and Worlds of Healthy Flavors. It reflects the best current scientific evidence supporting optimal, healthy, and sustainable dietary patterns while addressing vital imperatives to achieve short- and long-term global food security.

Healthy, sustainable, plant-forward food choices—when informed by culinary insight—can transform palates and spur next-generation innovation, as is evident in the success of new menu, restaurant, and retail product concepts thriving in the marketplace. In short, this is a practical, achievable vision for a delicious future. For more information, please read the Principles of Healthy, Sustainable Menus at menusofchange.org.

Plant-forward is primarily envisioned as a B2B term, not a way to describe dishes on menus. For that, operators are encouraged to lead with descriptors that convey flavor, quality, deliciousness, sense of place, ties with local producers, seasonality, culinary adventure, cultural contexts or heritage, fun, and/or innovation or invention—according to their distinct restaurant or foodservice concept.

HEALTHY, SUSTAINABLE, PLANT-FORWARD FOOD CHOICES ARE THOSE THAT:

Se Feature minimally processed, slowmetabolizing plant-based foods: fruits and vegetables (produce); whole grains; beans, other legumes (pulses,) and soy foods; nuts and seeds; healthy plant oils; and herbs and spices.

Se Place animal-based foods in a reduced or optional role, with a special emphasis on decreasing purchases of red meat and minimizing foods sourced from animals raised with the routine, non-therapeutic use of antibiotics. These choices prioritize fish and poultry among animal-based proteins, with dairy options and eggs playing a supporting role (if desired).

Se Might include vegetarian and vegan choices.

Sp. Highlight the value of fresh, seasonal, locally produced foods; minimize sugary beverages and added sugars and sweeteners; and reduce sodium and unhealthy additives. S Emphasize healthy dietary patterns and a rich diversity of whole foods versus an undue focus on specific nutrients and percentages; avoid excess quantities of calories but first ensure calorie quality.

So Celebrate cultural diversity, personal needs and preferences, and the unapologetic elevation of deliciousness, including room in our diets for foods of special occasions.

Segin with transparent ingredient sourcing that supports sustainable farming methods and fisheries.

So Through food purchasing patterns, encourage innovation and sustainable practices in retail food and restaurant concepts and business models to advance public health, social well-being, and our food system.

To read the full 2018 Menus of Change[®] Annual Report, please visit menusofchange.org





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TH IMPROVE INNOVATION INTEGRATION KNOWLEDGE LEADERSHIP MODEL MOVEMENT AL RESPONSIBILITY RISK SCIENCE SOLUTION STRATEGY SUSTAINABLE TOMORROW MMUNITY CONVERGE CULINARY DELICIOUS ENGAGEMENT ENVIRONMENT RSHIP MODEL MOVEMENT NAVIGATE NUTRITIOUS OPPORTUNITY PARTNER BLE TOMORROW VISION BUSINESS CHALLENGE CHANGE CHORE ROMMENT FLAVOR FOOD HEALTH MARROVE DEMOVATION DILABORATION COMMUNITY CONVERSE SUSTAINABLE TOMORROW VISION SUSTAINABLE TOMORROW VISI

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For more information, visit

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We invite you to read case studies, issue briefs, and other insights in the full 2018 *Menus of Change® Annual Report* at menusofchange.org.