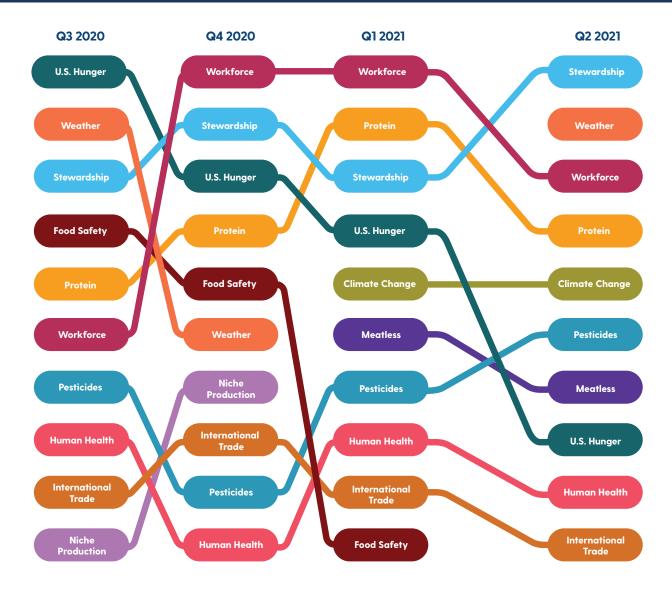
Returning to Abnormal

Top Ten Topics: Q2 2021





As the pandemic's grip on the nation eased slightly this recent quarter, two other topics took prominence in food production discussions: stewardship and weather. The two are often intertwined as stand-ins for climate change's cause and effect, with widespread drought inevitably prompting examinations of water conservation. Following this line of thought, the Biden administration has pursued policies to encourage changes in farming that could offset other industries' carbon emissions.

Overall, supply chain resilience emerged as the overarching theme of the issues we track. The

pandemic's disruptions came to a head during the second quarter, prompting reevaluation of food production practices as shortages interrupted the flow of everything from tapioca pearls to chicken wings. A cyberattack against JBS Foods shuttered 20% of the nation's beef-processing capacity for two days. Meanwhile, Congress and beef producers raised concerns about meatpacker consolidation.

Resilience brought a new layer to sourcing decisions, which often hinge on notions of what makes products "good." In the attached piece, "Defining Good," on Page 6, we examine food brands' shifting sourcing priorities over time.

1. Stewardship

Environmental management of the land, water and air quality on and around farms and ranches



On-farm stewardship practices took the spotlight in the second quarter, boosted by policy commitments not only from the Biden administration but also major consumer-facing brands.

Leading up to Earth Day (April 22), companies from

all along the supply chain updated sourcing policies. PepsiCo announced its Positive Agriculture agenda. General Mills Inc. completed "its goal of sustainably sourcing 100% of its top 10 priority ingredients." The U.S. Roundtable for Sustainable Poultry & Eggs published its sustainability reporting framework. Mars, Inc., McCormick Company and PepsiCo partnered to trace sustainability practices in supply chains.

On May 6, the Biden administration <u>published</u> the report "Conserving and Restoring America the Beautiful," including a plan to conserve at least 30% of U.S. lands and waters by 2030." Given that farmland covers roughly 45% of the nation, agriculturalist groups initially <u>worried</u> about a federal "land grab" (Farm Journal). The groups later <u>thanked</u> the administration when it opted to instead use the existing Conservation Reserve Program,

which pays farmers to voluntarily leave land uncultivated (DTN/The Progressive Farmer).

Water use grew in importance as the quarter progressed, particularly as drought pinched water supplies across the West (see Weather section below). However, the biggest spike in conversations came in response to EPA Administrator Michael Regan revisiting the definition of "waters of the United States" (WOTUS) under the Clean Water Act on June 9. American Farm Bureau Federation objected to the move for its potential to duplicate the "overreaching regulation" of ephemeral waterways under a 2015 attempt to update WOTUS.

Several groups also took steps to minimize water pollution: National Dairy Council <u>shared</u> one farmer's use of worms to filter wastewater, Soil Science Society of America <u>highlighted</u> research on bioreactors that remove nitrogen from runoff and Tyson Foods, Inc., <u>certified</u> its Finney County processing plant under Alliance for Water Stewardship.

2. Weather

Weather conditions and their effect on farming

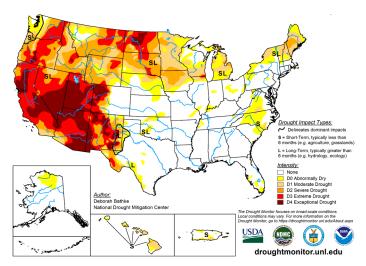


Prolonged drought and extreme temperatures drove weather to the second position as influential voices discussed implications on the nation's food supply. Domestically, the U.S. Drought Monitor visualized the extent of drought in the western United

States, including all of California, Oregon, Nevada, Arizona, Utah and New Mexico.

Bloomberg explored the potential for food price inflation due to drought in California, where 69,000 farms provide approximately one-third of the nation's vegetables, two-thirds of its fruit and 80% of global almond supply. University of Missouri's Scott Brown told Brownfield Ag News that grazing land for cattle was unlikely to recover in the upper Midwest, even with rainfall, given the status of the growing season. Modern Farmer outlined difficult decisions farmers have made to cancel community-supported agriculture (CSA) programs, drop fruit from young trees and skip planting altogether. In an opinion piece published in The Hill, Western Growers CEO Dave Puglia pushed Congress to finalize an infrastructure bill that it claims would help mitigate the water shortage in the West.

Amid triple-digit temperatures, Civil Eats <u>escalated</u> calls for farmworker protections to address "longstanding injustices compromising farmworkers' health." The Counter <u>warned</u>



Drought conditions cover the West (U.S. Drought Monitor)

the heatwave could significantly damage apple and cherry crops in Washington. Even restaurants were not immune: Eater <u>addressed</u> restaurant closures in Seattle (just a year after wildfire smoke ruined air quality) and <u>highlighted</u> creative ways food carts are working around the heat to drum up business.

Finally, historic flooding damaged rice, cotton, corn and soybean crops across the Mid-south. Mississippi State University <u>estimated</u> damage at \$617 million in Mississippi alone.

3. Workforce

Pay, benefits and safety of workers



Although climate-related topics surged this quarter, ongoing effects of the pandemic continued to bolster discussions of the workforce. As restrictions expired and businesses looked to resume normal operation, every link in the supply chain faced short supply

of workers. After an April jobs report <u>revealed</u> a meager 266,000 new hires — compared with 8 million unemployed workers — National Grocers Association <u>blamed</u> "the broken unemployment insurance program" for encouraging workers to stay home. Eater Dallas editor Amy McCarthy <u>argued</u> that wages in foodservice are too low, even without competition from unemployment benefits. A Wall Street Journal investigation <u>found</u> that concerns about working conditions, risk of COVID-19 infection and lack of childcare options also factored into workers' decisions.

Worker safety remained a hot topic as the pandemic

persisted. On May 16, the CDC <u>updated</u> its guidelines to allow fully vaccinated people to "resume activities without wearing a mask or physically distancing." The United Food & Commercial Workers International Union <u>worried</u> that the change could spark conflicts where states or companies opted for more strict policies.

Separate from the pandemic, several worker concerns surfaced in high-profile court cases. The U.S. Supreme Court <u>ruled</u> on June 17 that Nestlé SA and Cargill, Inc., cannot be held responsible for child slavery practiced by coca suppliers in foreign countries. On June 23, the Supreme Court <u>ruled</u> that unions cannot enter privately owned farms to recruit workers. In May, Meatingplace reported that several pork processors <u>challenged</u> a March 31 ruling that <u>vacated</u> the lifting of line speed limits under the New Swine Inspection System. The U.S. District judge ruled that the USDA failed to adequately consider worker safety, but former USDA Under Secretary Mindy Brashears <u>wrote</u> that OSHA data showed no added risks.

4. Protein

Protein as a nutrient and its role in human diets



Protein reprised its role as the trendiest macronutrient, once again outstripping fat and carbohydrates. Meat consumption rose sharply during the early phases of the pandemic and continued to climb throughout the quarter (Meatingplace). The

trend prompted Mother Jones writer Tom Philpott to <u>quip</u>: "Despite all the fake meat, Americans are still gobbling up the real stuff." Bloomberg's Leslie Patton and Deena Shanker <u>broke news</u> in April that the popularity of chicken wings and fried chicken sandwiches resulted in shortages across the restaurant industry. The supply chain difficulties prompted Wingstop to <u>launch</u> a new line of products under the brand of Thighstop beginning on June 21.

Additionally, innovation in the protein sector stirred substantial attention. In late June, Food Dive reporter Megan Poinski <a href="https://doi.org/10.2016/nc.2016/

5. Climate Change

Current and predicted effects of climate change on food production



The multifaceted nature of climate change means that it overlaps with other topics in the top ten, often serving as a motivation for policy changes. At the opening of an April 22-23 climate summit, President Biden pledged to cut U.S. greenhouse gas (GHG) emissions by

50% by 2030. Agriculture Secretary Tom Vilsack announced more than \$500 million of funds for "climate-smart" <u>research</u>, <u>infrastructure</u> and <u>conservation</u> projects.

An April 22 Daily Mail article provoked political backlash to the Biden administration's climate plan after the tabloid speculated it could mean a 90% reduction in red meat consumption. Secretary Vilsack clarified that the report was false (Politico). Separately, recipe website Epicurious

<u>announced</u> on April 26 that it will no longer publish recipes containing beef in an effort to "not [give] airtime to one of the world's worst climate offenders."

On April 20, Sens. Mike Braun (R-Ind.) and Debbie Stabenow (D-Mich.) <u>introduced</u> the Growing Climate Solutions Act to establish carbon markets and offer incentives for certain farm practices. Agriculturalists, such as the National Milk Producers Federation, <u>lauded</u> the bill as a bipartisan solution. Environmental Defense Fund <u>examined</u> how the USDA might implement such policies, <u>reinforcing</u> recommendations from the Food and Agriculture Climate Alliance. In contrast, Friends of the Earth <u>rejected</u> the measure in favor of "absolute reductions [of GHG emissions] without any possibility of offsets" for other industries. The U.S. Senate approved the bill on June 24.

6. Pesticides

Herbicides, fungicides, insecticides and other forms of pest management



Pesticides continue to command a presence in our list, even after peak-level discussions involving GMO crops and lawsuits have subsided. Much of the attention stems from environmentalist groups continuing to push for change.

Pollinators, and their relationship with pesticides, became prevalent throughout the planting season. On April 13, Walmart <u>committed</u> "to source 100% of the fresh produce and floral we sell in our in-store produce department from suppliers that adopt IPM [integrated pest management] practices, as verified by a third-party, by 2025." In response, Farmer's Daughter blogger Amanda Zaluckyj

accused the world's largest retailer of "telling farmers how to farm." After activist groups <u>pressured</u> The Kroger Co., the grocer <u>updated</u> its pollinator policy in June; Friends of the Earth <u>cheered</u> the announcement, but also called it "non-binding and vague."

Dicamba, which has been the subject of regulatory and legal battles since 2016, returned to the spotlight this quarter. Effective April 13, pure-play agriculture company Corteva Agriscience decided to exit the present and future dicamba market (CropLife). On May 24, the EPA's Office of Inspector General concluded the agency did not perform the proper procedures when permitting the extended use of three dicamba products in 2016 and 2018. On June 8, Progressive Farmer detailed state-by-state restrictions and relevant dates.

7. Meatless

Vegetarianism, veganism and substitutes for animal products



Despite rising demand for meat (see Protein section above), meatless foods generated a substantial volume of conversation. On May 3, chef Daniel Humm <u>announced</u> that his Eleven Madison Park restaurant will no longer serve meat or other animal-derived products (The

New York Times). Eater <u>noted</u> that the restaurant, which previously earned the title of "best in the world," is the first with three Michelin stars to host a vegan menu.

On the opposite end of the restaurant spectrum, quickservice chains reevaluated meatless protein options. Taco Bell <u>expanded</u> its vegetarian options and on April 21 tested chickpea-based grounds developed by Beyond Meat (VegNews). In contrast, Dunkin' removed the Beyond Meat breakfast sandwich from its menu by June 23 (Fox Business). The Wendy's Company launched a black bean burger in test markets beginning on June 28.

A steady stream of investment news also fueled conversations. Both Atlast Food Co. and Hooray Foods pulled in funding for development of imitation bacon products. Gathered Foods drew investment from Louis Dreyfus for plant-based seafood. Motif FoodWorks raised \$226 million to bolster its plant-based ingredient solutions. Meat giant JBS bought Vivera for \$400 million to expand its "global plant-based products platform." Beverage maker Oatly Group AB reached a valuation of \$10 billion in its May 19 IPO.

8. U.S. Hunger

Food-related welfare policy and food insecurity in the United States



After the topic of hunger occupied the top spot of our Top Ten Topics list for half of 2020, the prominence of the topic subsided. Discussions by the most influential voices in food production have changed course, but the problem persists domestically and worsens globally.

At the end of March, Feeding America <u>released</u> its latest assessment of hunger in America, noting that more than 42 million people, including 13 million children, may have experienced food insecurity. Worldwide, the pandemic's

NUTRITION AND FOOD SECURITY MUST GO TOGETHER. THERE HAS BECOME AN ARTIFICIAL DICHOTOMY, AND WE HAVE TO GET RID OF THAT.

 DARIUSH MOZAFFARIAN, NUTRITION PROFESSOR, TUFTS UNIVERSITY (<u>THE WASHINGTON POST</u>) impact on hunger is grim. The UN's Food and Agricultural Organization <u>found</u> that "Some 155 million people across 55 countries — more than the population of Russia — suffered from issues ranging from a food crisis to famine."

On June 4, the USDA <u>announced</u> an investment of \$1 billion for The Emergency Food Assistance Program (TEFAP) to stock food banks and to prepare for future needs. Food Research & Action Center <u>reported</u> that participation in Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) rose 2.1% during the first year of the pandemic, whereas other programs grew by as much as 14%.

The notion of "nutrition security" became a prevalent term to describe the simultaneous abundance of food, obesity and hunger. The Bipartisan Policy Center tapped influential figures to lead its Food and Nutrition Security Task Force, including chef-philanthropist José Andrés, FMI President and CEO Leslie Sarasin and former Agriculture Secretaries Dan Glickman and Ann Veneman.

9. Human Health

Diet-related health conditions, including obesity, diabetes and hypertension



The pandemic shaped conversations on health and wellness, highlighting often-overlooked topics. Mental Health Awareness Month drove discussions in May. The New York Times <u>credited</u> nutritional psychiatry for informing how food may improve an individual's mood.

Health & Nutrition <u>posted</u> findings that suggest people with major depression disorder eat fewer healthful foods than those without the disorder. Researchers in Baton Rouge, Louisiana, <u>hypothesized</u> that a rise in the rate and severity of Type 2 diabetes among children during the pandemic

could be linked to "weight gain during lockdowns" (Food Management). In The Wall Street Journal, Boston Children's Hospital eating disorder program director Tracy Richmond explained research showing that hospitalizations among adolescents diagnosed with an eating disorder doubled during the pandemic.

Food as medicine continued to pop up in conversations as a means of pandemic mitigation. Food Business News <u>shared</u> results from a global online survey in which researchers concluded intake of fish and plants can protect against severe COVID-19 infection. And anti-vaccine pariah Joseph Mercola <u>suggested</u> that "good nutrition is the most effective 'vaccine' against COVID-19."

10. International Trade

Imports and exports of food and agricultural products



Although international trade continues to fall from its Trump administration-era high, the topic remains prominent because of the importance of exports for U.S. food producers. USDA <u>estimated</u> that 2020 will set records for

annual exports of food and feed, with March and April already <u>setting</u> records for beef and pork products. U.S. Dairy Export Council <u>cheered</u> efforts to resolve tariffs on dairy exports to Canada. Meanwhile, the National Restaurant Association <u>welcomed</u> a likely increase in

imports following the suspension of tariffs on several European foods and beverages.

Delays at ports raised concerns from commodity groups, particularly in light of pandemic-related supply chain disruptions. North American Meat Institute President and CEO Julie Anna Potts <u>testified</u> on June 15 that the slowdowns "could have long-lasting, detrimental effects for the trade-dependent U.S. meat and poultry industry and agriculture sector which has caused \$1.5 billion in lost revenue." The Federal Maritime Commission <u>countered</u>: "The problems we are experiencing are not new. They occur in every cargo 'surge' or 'peak season."

Timeline: Events That Shaped the Second Quarter of 2021

While the Top Ten Topics highlight the biggest concerns in food production, the most salient events do not always fall neatly into a category and often bridge several topics. Here we highlight the events that sparked the most conversations

April 6	FDA concludes investigation of 2020 <i>E. coli</i> outbreaks tied to leafy greens
April 22	Earth Day prompts wave of commitments from food companies
April 26	Epicurious announces that it will no longer post beef recipes
April 28	President Biden signs bill to make sesame the ninth allergen required on food labels
May 6	Biden administration publishes plan to conserve 30% of U.S. land and water
May 11	World Food Prize awarded to Shakuntala Haraksingh Thilsted for her study of aquaculture and nutrition
May 16	The CDC lifts guidelines on mask use for vaccinated individuals
May 31	JBS suffers cyberattack; shuts down production for two days
June 8	USDA announces \$4 billion plan to build supply chain resilience
June 9	Kroger flies first commercial grocery delivery by drone
June 10	Federal judge blocks relief payments to minority farmers on the grounds of race-based discrimination
June 25	Supreme Court upholds EPA waivers that exempt refiners from mixing biofuels into gasoline
June 29	Drought affects a record 93% of western United States

'Good' Food:

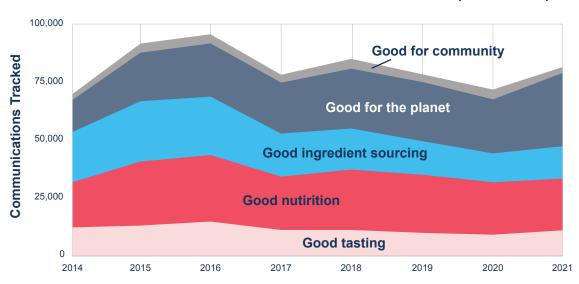
An Evolving Definition

Trends come and go, but one of the larger movements we've tracked over the years is how leaders in the food and beverage industry define "good." By tracking conversations among the most influential voices in the industry, Intel Distillery analysis uncovered just how widely these definitions can vary. Factors have run the gamut from texture and flavor to ingredient lists and social agendas.

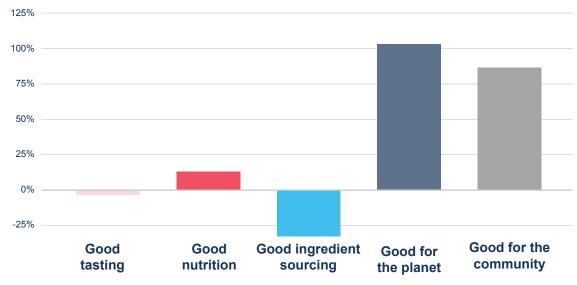
Comparing data from the 1,500 most influential voices in food production, we plotted out how conversations around what makes food "good" have shifted since 2014. Overall, our data indicate that more traditional definitions of "good," such as taste and nutrition, aren't going away — but newer definitions are growing in importance.

- Overall, concerns about our planet and nutrition have historically commanded the largest share of influential food production conversations.
- Conversations surrounding communities and our planet have seen the largest increase in volume, while discussions around ingredient sourcing have declined.

How Influential Voices Define 'Good' Food (2014-2021)



Change in Conversations Around 'Good' Food (2014-2021)



Source: Bader Rutter Intel Distillery annual assessment of food production conversations. © 2021

Good Tasting (-4%)

The taste, texture, aroma and appearance of a product are some of the oldest forms of product differentiation. Discussion of these attributes remains stable from year to year. Most recently, producers of alternative proteins have focused heavily on replicating the taste and texture of traditional meat.

- Kellogg's Morningstar Farms <u>launches</u> Incogmeato brand (2019)
- Vice <u>investigates</u> the intricacies of vegan egg replacements (2021)
- "TASTE AND FRESHNESS ARE NON-NEGOTIABLE, COST AND HEALTH ARE DIFFERENTIATORS."
 - MINTEL, WHAT AMERICA EATS (2021)

Good Nutrition (+12%)

Nutrition and diet trends contribute to the perceived healthfulness of a product. While the shifting popularity of diet plans can quickly change *what* is considered healthy, the link between a "healthy" food and a "good" food remains consistently strong.

- TIME declares: "Eat Butter" (2014)
- Eater writes: "How Protein Conquered America" (2018)
- NPD Group <u>publishes</u> report: "Consumers Increasingly Turn to Food as Medicine During Pandemic" (2021)

Good Ingredient Sourcing (-34%)

Attention to ingredient lists and production practices has fallen in the past decade, mainly due to this topic's dominance prior to Congress passing a national GMO labeling standard in 2016. Transparency and "clean label" foods still hold sway in the marketplace.

- Panera <u>releases</u> "The No-No List" of artificial ingredients (2015)
- Campbell's <u>calls for</u> national GMO labeling standard (2016)

"BUT JUST BECAUSE SOMETHING IS ARTIFICIAL OR ITS NAME IS HARD TO PRONOUNCE DOESN'T MEAN IT'S UNSAFE. ...
THOSE MOVES ARE MORE ABOUT PUBLIC RELATIONS THAN PUBLIC HEALTH."

- MICHAEL JACOBSON, FORMER EXECUTIVE DIRECTOR, CENTER FOR SCIENCE IN THE PUBLIC INTEREST (2015)

Good for the Planet (+104%)

Carbon footprint and sustainability hold an increasingly important place in the idea of a "good" food. During the Trump administration, brands began addressing this proactively, rather than waiting for the government to spark change.

- Danone North America commits to researching regenerative agriculture (2018)
- Cargill, McDonald's and Target <u>partner</u> with The Nature Conservancy to reduce greenhouse gas emissions from beef production (2020)

"THE GOOD NEWS IS THAT TODAY WE HAVE MORE CHOICES THAT CAN HELP US REDUCE OUR IMPACT ON NATURAL RESOURCES AND THE CLIMATE WHILE STILL ENJOYING TASTY FOOD."

- ANDREW STEER, PRESIDENT AND CEO, WORLD RESOURCES INSTITUTE (2020)

Good for the Community (+87%)

In the past, the people supporting and surrounding food and beverage production were rarely featured in messaging about the products. Since the onset of the pandemic, worker well-being, as well as diversity, equity and inclusion, have worked into brand images.

- Quaker Oats <u>retires</u> its Aunt Jemima brand to address racist imagery (2020)
- Tyson hires chief medical officer to <u>fight</u> the impact of coronavirus in food production (2020)
- Coca-Cola weighs in on voting rights (2021)

"FOSTERING AND FEEDING OUR COMMUNITIES IS MORE THAN JUST WORDS, IT'S ABOUT THE ACTIONS THAT SUPPORT THEM. WE'RE PROUD TO SEE OUR PEOPLE STANDING FOR WHAT THEY'RE PASSIONATE ABOUT, AND WE'RE CELEBRATING ALONGSIDE THEM."

- MCDONALD'S (2021)

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