

War & Price

Top Ten Topics: First Quarter 2022



In the first quarter, stewardship practices and the weather led influential discussions of food, beverage and agriculture production. All three shared a common denominator: water — or the lack thereof. As a necessary input for crop and livestock production and a crucial ingredient in its own right, managing water systems has become increasingly important to the long-term health of food and beverage production responsibly. As drought limits farmers' options in the western United States, global brands have committed to reducing their impact on water systems.

After Russia invaded Ukraine in late February, sanctions against Russia propelled two dark horse topics — trade

and fertilizer — to the forefront of conversations. International trade to and from Russia fell substantially as sanctions took effect, limiting global access to wheat, oil and fertilizer. With Ukraine's ports cut off, there are serious concerns about global grain shortfalls. Even as other countries attempted to fill the gap, limited supplies added to already-rising food prices.

Domestically, snarled supply chains added to food price inflation. Labor shortages and strikes exacerbated trucking backlogs. Meanwhile, Congress worked on shipping reform policies as containers continued to pile up at ports.

1. Stewardship

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



Stewardship practices held the top spot in influential discussions due to the topic’s importance to companies at all stages of the supply chain, with water proving to be the pivotal resource this quarter. Due to drought across the western U.S. (more on that below), management of scarce

water supplies served as a steady backdrop. In The Counter, Jessica Fu [explained](#) a USDA report showing that current irrigation practices will become less and less effective as drought continues. Additionally, Modern Farmer [covered](#) a Dartmouth College study finding that crop yields may drop by 25% if Western states restricted groundwater use to match replenishment rates. Environmental Defense Fund [broke down](#) Texas’ \$80 billion water infrastructure plans, while Western

Growers [highlighted](#) Arizona’s more modest \$1 billion investment.

The American Farm Bureau Federation [welcomed](#) an upcoming Supreme Court case on how the EPA defines “waters of the United States” under the Clean Water Act and all 50 Republican senators [requested](#) that EPA halt current efforts to update the rule until the court rules.

On World Water Day, March 22, [Coca-Cola](#) and [PepsiCo](#) announced plans to use less water than they replenish by 2030, while Keurig Dr Pepper [aimed](#) for “net positive water impact” by 2050. National Ag Day fell on the same day, prompting the U.S. Poultry & Egg Association to [share](#) how the poultry industry has reduced water use since 1965. The International Food Information Council [examined](#) broader trends for water use on the farm. And the Rodale Institute [discussed](#) how runoff from fields can hurt both crop yields and local water supplies.

2. Weather

Weather conditions and their effect on farming

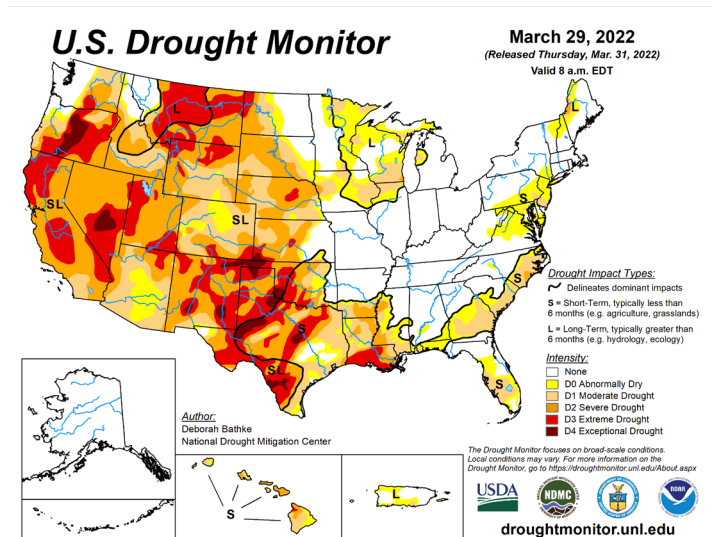


Widespread drought continues, with the U.S. Drought Monitor [showing](#) 58% of the lower 48 states in drought at the end of March and most of the western United States categorized as in “severe” or “extreme” drought. The New York Times [reported](#) that scientists have declared the last two decades

— often referred to as a “megadrought” — to be the driest in “at least 1,200 years.” In Feedstuffs, Oklahoma State University Professor Derrell Peel [discussed](#) how such broad metrics often mask rapid changes in local conditions. Farm Journal [detailed](#) how heavy rainfall can quickly shift an area from drought to flooding.

With long-term trends in mind, conversations shifted to how tight water supplies affect food production. Karl Plume of Reuters [projected](#) that wheat crops will be smaller this year. Food Dive [covered](#) how less water leads to smaller avocados. And Bloomberg’s Michael Hirtzer [tracked](#) shrinking cattle herd sizes due to unavailability of forage and higher feed prices. The last problem isn’t new: On March 31, the USDA [announced](#) relief funds for livestock producers who faced forage loss due to drought or wildfires in 2021.

Other extreme weather events also contributed to conversations. In January, Pilgrim’s Pride [boosted](#) worker pay to maintain its workforce after tornadoes struck hatcheries in Mayfield, Kentucky (Reuters). An outbreak of more than a dozen tornados in Iowa on March 5 [prompted](#)



Drought continues across the western United States (U.S. Drought Monitor).

USDA to provide disaster assistance for farmers and [spurred](#) Sens. Chuck Grassley (R-Iowa) and Joni Ernst (R-Iowa) to introduce the TORNADO Act “to simplify and improve communication alerts.” Meanwhile, activist organization Environmental Working Group [argued](#) that more than 300,000 acres of cropland along the Mississippi River should be taken out of production to mitigate “billions of dollars spent on crop insurance payouts” for flooding.

3. International Trade

Imports and exports of food and agricultural products



Overseas markets reclaimed a heightened focus in the first quarter due to Russia’s invasion of Ukraine and subsequent sanctions against the aggressor. The Washington Post [warned](#) that food prices in the United States would rise as the Russian invasion

halted Ukrainian wheat and sunflower oil shipments. As many smaller nations began to worry about food security, the U.N. Food and Agriculture Organization [urged](#) countries to not limit food exports. Sanctions against Russia also caused supply chain disruptions in the oil, grain and fertilizer markets. Food Processing [noted](#) that nations such as Canada, Argentina and Australia were ready to fill in the gaps in the supply chain. While many companies [limited](#) business in Russia (Yale), Politico’s Meredith Lee [highlighted](#) tricky ethical positions that food companies face.

In other trade news, Mexico’s \$3 billion avocado industry took a brief hit in February after the USDA issued a six-day suspension of Mexican avocado imports in response

to a threat made to a U.S. plant safety inspector in Mexico ([Bloomberg](#)). The U.S. Senate [passed](#) the Ocean Shipping Reform Act on March 31 — for which agriculturalists, such as the [International Fresh Produce Association](#) and [American Farm Bureau Federation](#), thanked Congress.

Fears of foreign animal disease — particularly avian influenza and African swine fever — prompted the USDA and U.S. Customs and Border Protection (CBP) to step up inspections of imported goods, with CBP [confiscating](#) a record 131 tons of contraband at Los Angeles-area ports in the final quarter of 2021. Sens. Joni Ernst (R-Iowa) and Raphael Warnock (D-Ga.) [requested](#) more funds for an operation known as the “Beagle Brigade.”

“FARMERS HAVE LOST OUT ON UP TO \$4 BILLION IN AGRICULTURAL EXPORTS BECAUSE OF THE LACK OF ACCESS TO EXPORT CONTAINERS, RECORD SHIPPING COSTS AND HARMFUL SURCHARGES.”

— ZIPPY DUVALL, PRESIDENT,
[AMERICAN FARM BUREAU FEDERATION](#)

4. Workforce

Pay, benefits and safety of workers



Early in the quarter, the omicron variant of COVID-19 and ongoing labor shortages drove already-weary workers to their limits. In what the National Retail Federation [called](#) “a significant victory for employers,” the Supreme Court

[overturned](#) the Biden administration’s vaccine mandate for employees at large companies on January 13. CDC [relaxed](#) mask-wearing guidelines on February 25. Meanwhile, retail workers [told](#) The New York Times that with so many out sick because of the pandemic, morale among remaining workers was low and contributed to empty store shelves and longer checkout lines.

To fill workforce gaps, food brands are increasingly looking to automate. Nation’s Restaurant News [highlighted](#) foodservice company strategies. Food Dive [profiled](#) how food manufacturers are using artificial intelligence for product reformulation. And FMI, The Food Industry Association, [looked at](#) some benefits of automation in online grocery sales.

Recent wins by unions and strikes helped bolster support among frustrated workers. In Denver, more than 8,000 workers at Kroger supermarkets [negotiated](#) a new three-year

contract that included wage increases and benefits (The Wall Street Journal). The Counter [wrote](#) that Starbucks has been experiencing “a swelling wave of labor activism” after a successful union vote at a Buffalo-area store last year.



Source: Adobe Stock

And the National Labor Relations Board (NLRB) [scheduled](#) a second unionization vote for workers at an Alabama Amazon facility (CNBC). NLRB found that Amazon violated a labor law during the first election held last year, when the workers voted against unionizing.

5. Protein

Protein as a nutrient and its role in human diets



One of the first things on President Biden's agenda for 2022 was addressing "unfair and anticompetitive practices," arguing that consolidation is responsible for consumer price increases and that more competition will lead to lower prices in the protein market.

On January 3, the administration [announced](#) a \$1 billion investment to support independent meat and poultry producers. The plan was met with criticism from industry groups like the [North American Meat Institute](#) and the [National Chicken Council](#), who called the plan "a solution in search of a problem." National Farmers Union President Rob Larew [welcomed](#) the move for addressing a "lack of transparency and competition in livestock markets."

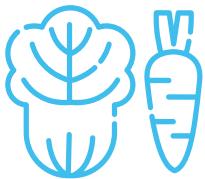
Protein markets also contended with the spread of avian

influenza across the United States beginning in February. The disease eventually affected commercial flocks in 19 states, prompting producers to cull as many as 15 million birds ([USDA](#)). Food Business News [focused on](#) rising food prices ahead of Easter. The New York Times [summarized](#) the situation through the end of the quarter, assuring consumers it was safe to eat properly cooked poultry products.

Cell-cultured proteins continued to capture headlines. In early January, FMI [posted](#) an update on the cell-cultured journey to market, explaining that "cell-cultured meat will provide new offerings for consumers who may be less interested in plant-based alternatives." In the latest twist, Food Ingredients First [explained](#) how the Israeli startup BioBetter is using the "maligned" tobacco plant to help scale production capacity.

6. Meatless

Vegetarianism, veganism and substitutes for animal products



The tone in conversations around plant-based meat alternatives took a definitive turn this quarter, focusing on poor performance relative to expectations. The lackluster discussion and coverage of "Veganuary" compared with previous years may have served

as a precursor for some pessimistic developments to follow. Media coverage remained strong — and new product launches remained persistent — but skepticism of the category's financial future grew.

In late February, headlines included phrases like "Bleeding Out Profits," "Hit By Slower Sales" and "Takes a Beating" to [describe](#) an 11% dip in the stock price of category leader Beyond Meat. Financial Times described how the

category slumped after Beyond Meat missed its quarterly expectations. Reuters [captured](#) Beyond Meat CEO Ethan Brown's assurance that sales would bounce back because of partnerships with McDonald's, Yum! Brands and PepsiCo. On Twitter, UC Davis Professor Frank Mitloehner [summarized](#) the change in tone with the traditional exuberance journalists had for the category: "News have become much more sober around plant based meat alternatives that were once hyped to overtake or even replace real meat."

Yet we tracked at least \$250 million of fresh capital investment and continued funding of new concepts in the plant-based protein space. Notably, alt-chicken maker Next Gen Foods [pulled in](#) \$100 million from investors that included Paul McCartney and Redefine Meat [raised](#) \$135 million for its 3D-printed take on steak.



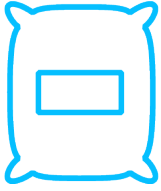
60-second marketing lessons on brand "good"

Introducing 'The Good Minute,' our new interview series in which we talk with leaders from food and beverage brands about how they define their good and then make that good known.

Listen at BaderRutter.com/food for perspectives from the National Pork Board, Tillamook, GoodSport and Cabot Creamery Co-operative.

7. Fertilizer

Manure, nitrogen, phosphorus, potash and other products that boost crop growth



For the first time since we began tracking in 2012, fertilizer captured enough attention to make the Top Ten. Supply chain issues have transformed fertilizers from a necessary but rarely discussed input to a prominent source of food cost inflation. In January, The Associated Press [reported](#) that prices had increased by as much as 90% in the preceding year and Farm Journal's Tyne Morgan [covered](#) the impact of a Canadian truck driver strike on already-tight supplies.

Sanctions against Russia — the largest exporter of fertilizer — for its invasion of Ukraine only worsened the problem. CropLife America found that many U.S. farmers already had supplies for spring planting but [noted](#) that the future held “plenty of questions and ‘black swans.’” Several sources began investigating alternatives to the most common fertilizers. USDA [announced](#) a \$250 million grant program to produce fertilizers domestically. Modern Farmer [shared](#) research showing that black-eyed peas can substitute for nitrogen. And AgFunder News [profiled](#) a startup that harnesses nitrogen-fixing bacteria.

8. U.S. Hunger

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

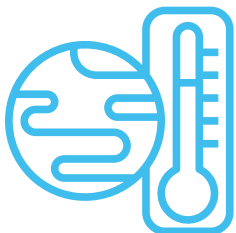


It's always good when hunger declines in our rankings. However, the topic is ever-present and ever-important because of its impact on people here and around the world. In January, USDA [increased](#) school meal reimbursement, “making sure federal reimbursements keep pace with food and operational costs, while ensuring children continue to receive healthy meals at school.” Share Our Strength [applauded](#) the decision, and Sen. Debbie Stabenow (D-Mich.) [highlighted](#) recent USDA efforts on the topic. The Washington Post's Laura Reiley [explored](#) how the end of

child tax credits and other pandemic assistance programs in early February contributed to a surge in need at food banks, despite a recovery in the American labor market. Mitigating hunger is one way food companies define what “good” means for their brands. MOD Pizza [committed](#) to donate 6.2 million meals to Feeding America as part of its MODness Meals hunger relief program. Denny's [raised](#) \$1.5 million for No Kid Hungry. KFC [offered](#) \$500,000 in grants to anti-hunger groups through a TikTok fundraiser. And U.S.-based chefs and humanitarian groups sought to aid Ukrainians affected by the ravages of war. The largest effort, led by chef José Andrés' World Central Kitchen, [established](#) outposts to provide hot meals to displaced Ukrainians.

9. Climate Change

Current and predicted effects of climate change on food production



Climate change saw the largest decrease in attention this quarter — falling six spots — while the related topics of weather and stewardship maintained positions atop the rankings. Most developments stemmed from government actions. On February 7, Agriculture Secretary Tom Vilsack [announced](#) a \$1 billion investment to help producers implement “climate-smart” practices to reduce greenhouse gas emissions or sequester carbon. National Council of Farmer Cooperatives President Chuck Conner [thanked](#) the administration for following suggestions [put forth](#) by the Food and Agriculture Climate Alliance (FACA) in November 2020. Conner further [emphasized](#) FACA's goals in testimony to Congress regarding the upcoming 2023 Farm Bill.

On March 22, the U.S. Securities and Exchange Commission [proposed](#) a rule requiring publicly traded companies to disclose climate-related risks and greenhouse gas emissions. Agri-Pulse [examined](#) how the effects will reverberate through the supply chain.

“A HARD LOOK AT LAND USE AND RELATED CARBON OPPORTUNITY COSTS OF THE GLOBAL FOOD SYSTEM HAS BEEN LONG OVERDUE.”

— THERESA LIEB, ANALYST, [GREENBIZ](#)

As the war in Ukraine disrupted the flow of food trade, GreenBiz writer Theresa Lieb [noted](#) that food security goals could conflict with climate goals, particularly if farmland is taken out of conservation programs.

10. Pesticides

Herbicides, fungicides, insecticides and other forms of pest management



Pest management claimed the final spot on the Top Ten this quarter as the EPA evaluated the safety and environmental impacts of pesticide products. On January 11, the EPA [updated](#) its approval process to “evaluate the potential effects

of the [active ingredients] on federally threatened or endangered (listed) species, and their designated critical habitats.” Progressive Farmer writer Emily Unglesbee [inferred](#) that the agency sought to stem the flow of lawsuits from activist organizations such as Center

for Biological Diversity, which [welcomed](#) the change. Corteva Agriscience became the first company to test the new rule with the registration amendments for Enlist herbicides, which [resulted](#) in county restrictions because of certain endangered species’ habitats (Farm Journal).

On February 10, more than 20 agriculturalist groups sued the EPA for revoking approval of the insecticide chlorpyrifos, with the American Soybean Association [stating](#), “When the government ... ignores the findings of its own scientists, there must be accountability.” Activist organization Environmental Working Group [thanked](#) the EPA for maintaining its ban, which took effect February 25.

Timeline: Events That Shaped the First Quarter of 2022

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.

Date	Event
Jan. 1	Bioengineered foods labeling takes effect
Jan. 3	Biden administration announces \$1 billion to support competition in the meatpacking industry
Jan. 13	U.S. Supreme Court overturns vaccine mandate for large companies
Feb. 4	USDA tightens sodium and whole-grain requirements for school meal program
Feb. 7	Agriculture Secretary Tom Vilsack announces \$1 billion fund to invest in climate-smart agriculture
Feb. 9	Avian influenza outbreak strikes commercial turkey farm in Indiana
Feb. 14	McDonald’s launches meatless McPlant sandwich nationwide
Feb. 17	United States blocks imports of avocados from Mexico after USDA inspector was threatened
Feb. 24	Russia invades Ukraine, disrupting global food and agriculture trade
Feb. 25	CDC lifts mask guidelines for vaccinated individuals
Mar. 1	National Nutrition Month begins
Mar. 31	U.S. Senate passes the Ocean Shipping Reform Act