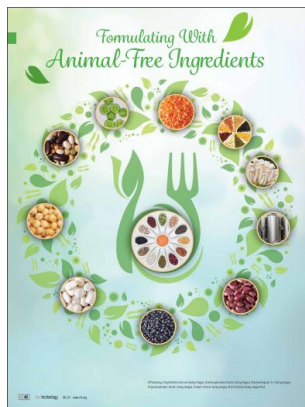


The Good Food Institute (GFI) is pleased to highlight a selection of our notable achievements thus far in 2019—all made possible by the generosity of our donors—as well as a selection of our top achievements over the past two years.

GFI Accomplishments

SciTech Research + Development Papers

We announced the [14 recipients](#) of our inaugural [Competitive Research Grant Program](#), 11 of whom had never conducted plant-based or cultivated meat research. The program, which is funding \$3 million in open-access research worldwide in its first year alone, has more than doubled the amount of open-access cultivated meat research funding over the past 20 years and represents the largest infusion of grant money for plant-based meat research ever. Grant recipients receive funding for the first phase of critical research projects and are also provided with connections to prospective private sector partners and/or sources of additional funding. Companies have already reached out to inaugural grant recipients with requests to apply their research findings; as just one example, one of the largest cultivated meat companies in the world will be testing growth factors engineered by one of our grantees on their own cell lines.



We authored a seven-page article for the Institute of Food Technologists' (the world's largest body of professional food technologists) *Food Technology* magazine titled [Formulating with Animal-Free Ingredients](#). This is the plant-based complement to our [cover story on cultivated meat](#) from early last year. Read highlights [here](#).

Our GFI-India team helped secure a [\\$640,000 grant](#) from the Government of India for the [Centre for Cellular and Molecular Biology](#) to conduct cultivated meat research, which represents one of the largest cultivated meat research investments ever made by a government.

Policy

Our Policy team responded in full force to legislative efforts meant to restrict meat terms on the labels of food that is not from slaughtered animals. As we share in our [Food Label Censorship: Anti-Market & Anti-Speech](#) report, these bills violate producers' First Amendment rights, are unnecessary (federal law already prohibits misleading labels), and disrupt the free market by favoring one industry over another. We opposed label censorship bills in 25 states by hiring contract lobbyists, sending staff to lobby, submitting more than 30 letters to over 600 legislative offices, and leading biweekly calls for a coalition with 10 other organizations that oppose the bills. Our efforts have prevailed in 14 states, including Texas, Nebraska, and Virginia. Along with the ACLU and ALDF, we are in the process of suing the state of Arkansas on behalf of Tofurky (details [here](#)) to have the state's label censorship law overturned as

unconstitutional. Our legislative efforts have received extensive media coverage, including on CNN, which [featured](#) Policy Director Jessica Almy.

We celebrated a legislative win with the fiscal 2019 agriculture appropriations bill signed into law without the rider on cultivated meat we vigorously opposed. The rider would have given sole jurisdiction over cultivated meat products from livestock and poultry to USDA and would have required new regulations. The subsequent announcement of joint USDA-FDA oversight for cultivated meat aligned with our [comment to the agencies](#).



Our U.S. and international policy teams provided regulators in India, the United Kingdom, and Singapore with helpful resources for developing cultivated meat policy frameworks and we are cautiously optimistic about creating a clear and swift regulatory path forward in these three countries.

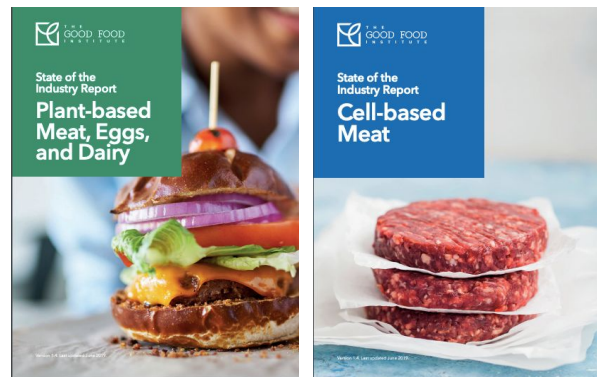
Corporate Engagement

We worked with MorningStar Farms to secure the company's [landmark commitment](#) to make their entire product line fully plant-based by 2021. The transition will take 300 million egg whites out of production annually and we are thrilled to partner with them in their efforts to make delicious plant-based meat accessible to everyone.

Our GFI-Brazil team worked with the largest egg company in Brazil, Grupo Mantiqueira, to [launch a plant-based egg product: N.Ovo](#). We also worked with a new company, Fazenda Futuro, to create a plant-based [Futuro Burger](#), the first meat-like Brazilian burger built with scalable tech at a competitive cost. The company sold 20 metric tons in its first month alone.

Industry Growth

We published [Cell-based Meat](#) and [Plant-based Meat, Eggs, and Dairy](#) State of the Industry Reports, which illustrate the tremendous growth and innovation taking place across these sectors. The reports cover the top companies and investors in each industry, discuss key regulatory updates in the U.S., and provide the first in-depth analysis of the investment landscape using custom datasets curated by GFI (highlights [here](#)).



We released GFI's second annual [Good Food Restaurant Scorecard](#), which evaluated both the number of plant-based entrées at Top 100 restaurants as well as how well these entrées have been marketed to appeal to mainstream audiences. [We noted progress over last year's findings](#), and we are using the Scorecard in our efforts to convince all chain restaurants to add plant-based entrées.

Inform + Inspire

Following our collaborations with Stanford University and UC Berkeley to establish courses on slaughter-free meats, we officially launched GFI's [Massive Open Online Course \(MOOC\)](#), which teaches the basics of plant-based and cultivated meat; approximately 2,000 scientists, academics, industry representatives, and others have enrolled to date.

We reviewed all comparative life cycle assessments of plant-based meat versus conventional meat done to date and synthesized our findings in a [plant-based meat sustainability fact sheet](#). We found that, depending on the type of conventional animal meat they replace, plant-based meats use 47%–99% less land and 72%–99% less water, emit 30%–90% fewer greenhouse gases, and cause 51–91% less aquatic nutrient pollution.

Our second annual [Good Food Conference](#) sold out three weeks early. The event brought together almost 1,000 attendees from 34 countries, plus thousands of livestream viewers from 50 countries, including scientists, entrepreneurs, investors, policymakers, and corporate leaders. The [schedule](#) featured cutting-edge research, strategies for industry growth, and perspectives on regulatory issues. National and international government leaders expressed interest in funding alternative protein R&D, large corporations publicly committed to expanding their plant-based meat offerings, numerous startups secured investor support, and corporate innovation leaders connected with [GFI grant recipients](#) whose research projects will inform companies' alternative protein product development. News of the conference was broadcast across dozens of media outlets all over the world and leadership from one of the world's largest food corporations shared a conference report with their 80,000+ employees.

Innovation

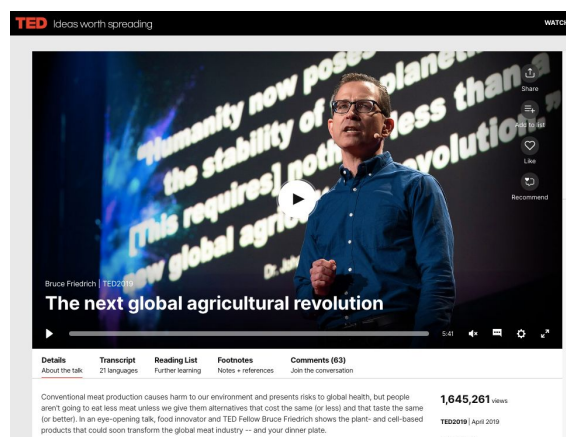
We launched the GFI Investor Directory, which is a list of investors interested in plant-based foods, cultivated meat, and other innovative alternatives to animal products. The directory contains information such as the types of investments these investors are looking for, at what stages and how much they typically invest, and their contact information. Alternative protein startups that are currently fundraising or have closed a funding round successfully can request access to the directory from GFI's Corporate Engagement team.

International Growth

We launched GFI-Europe and GFI-Israel and expanded the size and impact of our affiliates in Brazil, India, and Asia Pacific. We are happy to provide strategic plans from each of our affiliates as well as key highlights of GFI's international accomplishments upon request.

Awards + Recognition

Out of more than 2,000 entrants, Fast Company designated the [Sustainable Seafood Initiative](#) and [Good Food Startup Manual](#) as honorees of their World Changing Ideas awards, based on their potential for impact and scalability.



Our Executive Director Bruce Friedrich was named a [2019 TED Fellow](#) and was invited to speak on the mainstage of the annual [TED Conference](#). Since being posted on its site May 21st, his [TED talk](#) has been viewed nearly than 1.8 million times and translated into 24 languages. The TED Radio Hour, the seventh most popular podcast in the U.S. (and also airing on more than 600 radio stations) [featured](#) Bruce in its "Climate Crisis" episode, and Kara Swisher, one of the most influential tech journalists in the world, [featured](#) Bruce on her podcast.

Our efforts received extensive media coverage in hundreds of additional media outlets, including Newsweek, The Wall Street Journal, USA Today, The Washington Post, CBS, NPR, BBC, and The New York Times.

Core program achievements over the past two years

Science & Technology (SciTech) Achievements

Our SciTech Department advances and shares the foundational science of alternative protein.

- **Mobilizing funding to accelerate plant-based and cultivated meat R&D (referenced in 2019 progress report above)**—In 2018, we launched GFI’s Inaugural Competitive Research Grant Program [Competitive Research Grant Program](#) and we announced the [14 recipients](#) in 2019, 11 of whom had never conducted plant-based or cultivated meat research. The program, which is funding \$3 million in open-access research worldwide in its first year alone, has more than doubled the amount of open-access cultivated meat research funding over the past 20 years and represents the largest infusion of grant money for plant-based meat research ever. Grant recipients receive funding for the first phase of critical research projects and are also provided with connections to prospective private sector partners and/or sources of additional funding. Companies have already reached out to inaugural grant recipients with requests to apply their research findings; as just one example, one of the largest cultivated meat companies in the world will be testing growth factors engineered by one of our grantees on their own cell lines.
- **Inspiring and educating scientists to work on plant-based and cultivated meat through scientific publications**—GFI’s groundbreaking scientific publications have established a scientific base of plant-based and cultivated meat knowledge and are inspiring further scientific and technological inquiry. Our work has been featured in prominent publications and shared with thousands of scientists, entrepreneurs, policymakers, and investors.
 - In 2017, we presented opportunities for plant-based and cultivated meat development in our *Plant-based Meat and Clean Meat* mind maps.
 - In 2018, we published a chapter on addressing global protein demand through diversification and innovation in the *Encyclopedia of Food Chemistry* (a textbook for food scientists).
 - In 2018, we wrote a cover story about cultivated meat for *Food Technology* (the journal of the world’s largest food science professional society), a peer-reviewed paper about cultivated meat in *Biochemical Engineering Journal*, and an article in *The Biochemist* about both plant-based and cultivated meat.
 - In 2018, we crafted a white paper, *Cellular Agriculture: An extension of common production methods for food*, that dives into the technology used by Perfect Day, Clara Foods, and Geltor—producing animal proteins through fermentation.
 - In 2019, we wrote a white paper, *An analysis of culture medium costs and production volumes for cell-based meats*, which calculates the cost of the main inputs for cultivated meat and provides targets for cultivated meat price points to achieve economic viability.
 - In 2018, we wrote an action paper, *An Ocean of Opportunity: Plant-based and Clean Seafood for Sustainable Oceans without Sacrifice*, which is a call to contribute to the development of the plant-based and clean seafood industry. This paper launched GFI’s Sustainable Seafood Initiative.
 - In 2019, we created a Reddit series on the science of cultivated meat. This series of articles goes beyond our previous publications on cultivated meat to provide an in-depth analysis of the current technologies being researched and applied to cultivated meat production and provides an opportunity for readers to have their questions answered by a SciTech team member.
 - In 2019, we commissioned a gap analysis of the existing cultivated meat Life Cycle Assessments (LCA). This analysis, performed by the Nova Institute, summarizes the methods and results from each published LCA and provides a framework for future cultivated meat LCAs.
- **Creating and leading plant-based and cultivated meat academic courses (referenced in 2019 progress report above)**—We launched a course on plant-based and cultivated meat at Stanford University in

2018 and we developed the first Plant-Based and Clean Meat MOOC (massive open online course), a free online course exploring the science behind plant-based and cultivated meat, in 2019. As of May 2019, the MOOC has 1,945 registrants including entrepreneurs, corporate CEOs, and university professors (full breakdown available on request). We also helped UC Berkeley launch a permanent “Program for Meat Alternatives” and Plant-Based Meat Innovation Lab, which has since expanded to include cultivated meat as one of the challenge areas students can address.

- **Conducting technical due diligence for cultivated meat startup companies**—Since 2017, we have conducted technical due diligence for more than a half-dozen of the very first cultivated meat startup companies. Our support directly fueled multi-million-dollar investments to kickstart the commercial pursuit of cultivated meat in 2017 and 2018.
- **Advising key food and life science companies**—Since 2017, we have provided an overview of the plant-based and cultivated meat industry to 225 food and life science companies and discussed opportunities for new products and technical innovation. We use the papers listed above as the basis for our conversations and education of these companies.

Policy Achievements

Our Policy Department advocates for fair regulation of plant-based and cultivated meat and lobbies for government investment in sustainable protein R&D.

- **Advising the creation of international cultivated meat regulatory frameworks (referenced in 2019 progress report above)**—We developed information for policymakers about cultivated meat to provide helpful background for developing a policy framework in any market. We adapted and shared this information with regulators in India, the United Kingdom, and Singapore. We are cautiously optimistic about creating a clear and swift regulatory path forward in these three countries.
- **Shaping the U.S. cultivated meat regulatory framework (referenced in 2019 progress report above)**—We have been actively shaping the U.S. regulatory framework for cultivated meat by making oral remarks (including [this](#) official statement) and regulatory submissions (such as [this](#) one joined by seven leading cultivated meat companies) to the U.S. Department of Agriculture (USDA) and the U.S. Food and Drug Administration (FDA). It is premature to assess the precise impact we are having, but the agencies are moving ahead productively and their talking points (e.g., the U.S. leading the world on cultivated meat) have frequently mirrored our submissions.
- **Successful lobbying for federal plant-based and cultivated meat R&D**—In 2017 and 2018, our Policy team’s lobbying shaped spending bill report language urging USDA to invest in research on plant proteins, which then spurred a call for proposals from USDA’s Agriculture and Food Research Initiative. This year we made a much more significant effort to promote plant-based and cultivated meat R&D in both the House and the Senate. We directly lobbied 20 key offices, sent a sign-on letter with other supporters to an additional 37, and spoke at a briefing on cultivated meat R&D. We also played a key role in killing a rider to last year’s spending bill that would have delayed the regulatory process for cultivated meat. One measure of our success was that after we met with staff of the Energy and Commerce Committee, committee leadership issued a joint bipartisan letter making the key points we had presented.
- **Fighting label censorship legislation (referenced in 2019 progress report above)**—Our Policy team responded in full force to legislative efforts meant to restrict meat terms on the labels of food that is not from slaughtered animals. As we share in our [Food Label Censorship: Anti-Market & Anti-Speech](#) report, these bills violate producers’ First Amendment rights, are unnecessary (federal law already prohibits misleading labels), and disrupt the free market by favoring one industry over another. We opposed label censorship bills in 25 states by hiring contract lobbyists, sending staff to lobby, submitting more than 30 letters to over 600 legislative offices, and leading biweekly calls for a coalition with 10 other organizations that oppose the bills. Our efforts have prevailed in 14 states, including Texas, Nebraska, and Virginia. Along with the ACLU and ALDF, we are in the process of suing the state of Arkansas on behalf of Tofurky (details [here](#)) to have the state’s label censorship

law overturned as unconstitutional. Our legislative efforts have received extensive media coverage, including on CNN, which [featured](#) Policy Director Jessica Almy.

- **Advocating for plant-based milk labels**—In 2018, we filed an amicus brief in the class action lawsuit *Painter v. Blue Diamond Growers*. The U.S. Court of Appeals for the Ninth Circuit ruled that consumers are not confused by almond milk labels. During oral argument, the panel read a portion of our amicus brief aloud, and *USA Today* published our op-ed on the case. Note that our work against non-dairy labeling censorship will translate into our work on meat labeling censorship. The arguments are identical, and if we lose on dairy, we are likely to lose on meat.

Corporate Engagement Achievements

Our Corporate Engagement Department builds relationships with the world's biggest food companies to mobilize resources for alternative protein.

- **Driving plant-based product innovation at “Big Meat” companies**—We engaged eight of the world's largest meat companies and helped drive plant-based meat product innovation at four of them. We were invited to speak at the annual board meeting of one of the largest meat companies in the world as well as the strategy meeting for top executives and board members for one of the largest food companies in the world. Both companies are becoming increasingly involved in plant-based protein and see GFI as a key and trusted partner. We have also recently engaged with another of the largest meat companies in the world to advise them on their plant-based protein strategy.
- **Engaging Consumer Packaged Goods (CPG) companies**—We cultivated collaborative relationships with over a dozen of the world's leading CPG companies and played a critical role in influencing Kellogg's MorningStar Farms, the largest U.S. plant-based brand, to transition their product line to 100% plant-based by 2021, which will remove an estimated 300 million eggs annually from their supply chain.
- **Publishing the Good Food Restaurant Scorecard (referenced in 2019 progress report above)**—The Good Food Restaurant Scorecard annually ranks the Nation's Restaurant News Top 100 Restaurants according to the breadth and depth of their plant-based entrées and their promotion of plant-based eating. We released the inaugural Restaurant Scorecard in 2017 and a second edition in 2018, which collectively led to meetings with over 30 of the largest global restaurant chains, including several of the largest Quick Service Restaurants. The Scorecard is not only helping GFI build awareness and relationships with U.S. restaurant chains, it is also generating media coverage to raise the profile of GFI and plant-based foods for the whole industry. From 2017 to 2018, we saw scores increase across almost all segments, driven by the introduction of new plant-based entrées and the increased availability of plant-friendly breakfast foods. The number of Top 100 restaurant chains earning zero points on our Scorecard dropped from 55 in 2017 to 45 in 2018. In 2019, we anticipate further increases in aggregate scores due to recent high-profile plant-based launches, including Burger King's Impossible Whopper, multiple large Mexican chains embracing plant-based beef, Little Caesar's and other pizza chains debuting plant-based meat toppings, and the introduction of Beyond Meat's breakfast sausage.
- **Collaborating with Unilever**—We partnered with Unilever Food Service to present a webinar to hundreds of U.S. chefs—including representatives from Sodexo, Compass, Disney, Marriott, White Castle, Hyatt, Famous Dave's, Publix, Meijer, and Shoprite —on opportunities for plant-based meat development. This webinar covered consumer insights (including an overview of the motivations behind the increase in plant-based eating), a global overview of the plant-based protein market, a look at the growth of plant-based foods in food service, best practices for naming and marketing plant-based products, usage of “meat” and “milk” terms, and a brief overview of cultivated meat technology and regulation. A similar webinar for the Canadian market took place in June 2019.
- **Influencing major U.S. retailers**—We convinced a retail chain to integrate all refrigerated plant-based meat products directly in the meat aisle with dedicated signage and marketing efforts. This retailer has since influenced other retailers, industry colleagues, and the Power of Meat study,

which now recommends shelving plant-based meat in the meat aisle as a result. We have also partnered with two major retail chains to advise them on the development of more plant-based private label product offerings, which will significantly increase accessibility and affordability of plant-based foods. We have built relationships with and advised more than five of the largest U.S. retailers on plant-based product assortment, marketing, and merchandising.

- **Driving plant-based market analysis**—We drove the 2018 expanded Nielsen market analysis on the U.S. retail sales of plant-based foods, which has generated tremendous enthusiasm for plant-based meat and has resulted in over 500 media mentions, including repeated mentions in Bloomberg, FT, CNBC, and other key business outlets. Our fact sheet offers a snapshot of the market penetration of plant-based foods, noting that sales of plant-based meat increased 23% in the past year and that the plant-based foods market has now grown to a \$3.7 billion market domestically. With the addition of SPINS U.S. retail sales data on plant-based alternatives in the natural channel, the total U.S. plant-based retail market is worth over \$4.1 billion. The analysis also determined that plant-based dollar sales are increasing by double-digits in every region of the country, highlighting the widespread demand. We are broadly disseminating these findings to encourage alternative protein R&D and investments by both major corporations and investors.

Innovation Achievements

Our Innovation Department helped innovators build successful companies and steered private sector funding to the cause of a sustainable and just food system.

- **Creating The Good Food Startup Manual**—Created in 2018, this is an extensive step-by-step guide for starting a plant-based or cultivated meat company. The manual includes real-world knowledge from successful entrepreneurs in alternative protein food tech, including best practices, potential barriers to success, and recommended resources. In less than one year, the manual has been downloaded more than 3,000 times and was an honoree in Fast Company's 2019 World Changing Ideas awards based on its potential for both scalability and impact.
- **Launching the GFIdeas Community**—We launched the GFIdeas community of entrepreneurs as a forum for alternative protein company founders to provide peer support, access funding and partnership opportunities, and to discuss challenges and best practices. Since the community's inception in 2017, we have grown to more than 560 members and have connected multiple entrepreneurs who have launched alternative protein companies together, including Better Meat Co. and New Age Meats.
- **Publishing plant-based and cultivated meat State of the Industry Reports (referenced in 2019 progress report above)**—We published the first-ever comprehensive reports on the plant-based meat, egg, and dairy industry and the cultivated meat industry, including the top companies in the space, key regulatory updates in the U.S., and the first in-depth analysis of the investment landscape using custom datasets curated by GFI. The plant-based report also provides insights into how plant-based foods are performing in retail and foodservice markets. These reports have been referenced widely in the news media and are a key part of GFI's efforts to generate enthusiasm for alternative protein among scientists, investors, entrepreneurs, and policymakers globally.
- **Driving influential consumer communication**—We leveraged pro bono research support from MindLab and conducted our own consumer research to advance the understanding of how best to communicate globally about plant-based meat products. This research has been shared with restaurant chains, food manufacturers, and meat companies that are contemplating introducing or increasing their plant-based meat options.
- **Promoting cultivated meat understanding and acceptance**—We coordinated a message strategy research project between GFI, Memphis Meats, and Mattson (a leading food innovation marketing company) to develop a powerful new narrative and analogy in order to help consumers understand and accept cellular agriculture. Our thesis was that it is possible to be science-forward and transparent while staying rooted in familiar concepts and appealing language. Mattson worked pro

bono with GFI to explore, test, and hone communication materials and to find a name. Through this work, we developed three different tools:

- [A narrative framework](#) for explaining cellular agriculture to the general public
- [A visual analogy](#) for illustrating the parallels between cellular agriculture and a more familiar form of food production
- [An analysis of the benefits and challenges](#) of different names

We concluded that “cultivated meat” is the optimal name for this space and provide a high-level summary of our decision [here](#).