Climate Policy

ISSN: (Print) (Online) Journal homepage: www.tandfonline.com/journals/tcpo20

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To cite this article: Loredana Loy & Jennifer Jacquet (11 Mar 2025): The animal agriculture industry's obstruction of campaigns promoting individual climate action, Climate Policy, DOI: 10.1080/14693062.2025.2460603

To link to this article: https://doi.org/10.1080/14693062.2025.2460603

Published online: 11 Mar 2025.

CLIMATE POLICY
https://doi.org/10.1080/14693062.2025.2460603

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The animal agriculture industry's obstruction of campaigns promoting individual climate action

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ABSTRACT

The oil and gas industry has regularly deflected responsibility towards individual consumers. In contrast, here we show that the US animal agriculture industry has not only avoided notions of individual responsibility but has obstructed even modest efforts to encourage individual dietary change. Drawing on records from 1989 to 2023, we document civil society efforts to advocate dietary shifts as a climate change mitigation strategy, including the Greenhouse Crisis Foundation, Diet for a New America, Beyond Beef, and Meatless Monday, and the industry's opposition to these campaigns. The animal agriculture industry hired scientists to produce industry-friendly emissions reports and challenge individual action, influenced public discourse around dietary change, and created a front group, the Food Facts Coalition, with a mission to defend the industry against 'anti-cow arguments'. The animal agriculture industry's response to individual dietary change illustrates a unique form of climate obstruction and suggests that an industry's approach to personal responsibility is context-dependent and action-specific.

Key policy insights:

- Dietary change is an action with significant potential to reduce greenhouse gas emissions that is immediately available to individuals.
- Since the 1980s, civil society campaigns have encouraged dietary change as a climate mitigation strategy and faced systematic obstruction from the animal agriculture industry.
- The animal agriculture industry's opposition to dietary change contrasts with the oil and gas industry's support for individual energy reduction and shows that industry attitudes towards individual action are context-dependent and action-specific.
- Climate advocates should emphasize the feasibility and scientific support for dietary change as a form of individual action and reclaim earlier, more ambitious dietary change goals that were diminished in part due to industry opposition.

ARTICLE HISTORY
Received 14 April 2024
Accepted 24 January 2025

KEYWORDS
Individual responsibility; climate change mitigation; animal agriculture industry; climate obstruction; climate policy; dietary change

1. Introduction

In 2006, the United Nations (UN) Food and Agriculture Organization (FAO) published the first global estimate of greenhouse gas (GHG) emissions from animal agriculture and found that these emissions represented 18% of total global emissions (Steinfeld et al., 2006). While the report did not call for dietary change, some civil society groups used the findings in their advocacy to encourage individuals to eat less meat to address climate change. As part of its response, the National Cattlemen's Beef Association (NCBA) – the primary trade association for the US cattle industry – commissioned a University of California (UC), Davis professor to respond to the FAO's

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report; in doing so, he also challenged civil society calls for dietary change (Morris & Jacquet, 2024). In a university press release, the professor stated: 'We certainly can reduce our greenhouse-gas production, but not by consuming less meat and milk' (Wright, 2009). More recently, in 2021, NCBA paid for advertorials in *The Washington Post* and *The Wall Street Journal* claiming that 'eliminating beef is not a realistic or impactful solution for climate change' (NCBA, 2021).

The animal agriculture industry's response contrasts sharply with that of the oil and gas industry. The latter has emphasized personal responsibility. Researchers have found that deflecting responsibility towards individuals is a common discursive strategy that industries use to delay action on climate change (Lamb et al., 2020). For instance, in 2004, British Petroleum introduced a personal carbon footprint calculator for consumers to track their emissions (Kaufman, 2020); in 2008, Chevron advertorials featured individuals pledging to 'unplug things more', 'use less energy', and take 'golf clubs out of the trunk' (Chesapeake Climate Action Network, 2008); in 2020, Shell asked on social media: 'What habits are individuals willing to give up to cut emissions?' (Koning Beals, 2020); and in 2023, Esso encouraged individuals to carpool and shop locally (Esso, 2023). In addition, a rhetorical analysis of 180 ExxonMobil documents related to public climate change messaging found the company had 'fixated on individual responsibility' (Supran & Oreskes, 2021).

The animal agriculture industry's pushback against dietary change has a long history – for example, opposing a vegetarian White House Food Day organized by the Jimmy Carter administration in 1977 (Wedemeyer, 1977) – but here we focus specifically on how the US meat and dairy industry reacted to campaigns advocating for individual dietary change for climate-related reasons, rather than for ethical reasons and animal rights, other environmental concerns, or health. Here we use publicly available materials to trace a series of civil society campaigns over the last four decades that promoted dietary change as a climate change mitigation strategy, as well as the responses from the animal agriculture industry. Campaigns including the Greenhouse Crisis Foundation (1989), Diet for a New America (1990), Beyond Beef (1992), Meatless Monday (2003), and the European Union's Less Meat = Less Heat (2009) met sustained industry opposition. Rather than embrace notions of individual responsibility, the animal agriculture industry hired scientists, pressured the media, and formed business coalitions to obstruct civil society efforts to promote dietary change as climate action. We conclude with some broader implications of our findings.

2. Campaigns for dietary change as climate action and how the US animal agriculture industry responded

2.1. 1980s

In 1989, following the release of several seminal scientific reports on methane emissions (e.g. Blake et al., 1982; Blake & Rowland, 1988; Crutzen et al., 1988; Ramanathan et al., 1985; Stauffer et al., 2006), the Environmental Protection Agency (EPA) released two reports: one that emphasized the role of methane emissions from animal agriculture (Gibbs et al., 1989), and another report to Congress on the effects of global climate change on the US that identified methane as a contributor to climate change, and emissions from cows among its sources (Smith & Tirpak, 1989). Also in 1989, the Greenhouse Crisis Foundation (GCF) urged citizens concerned about global warming 'to reduce consumption of beef and other meats' (Arieff, 1989). In addition, the GCF initiated a 'nationwide public mobilization to address the greenhouse crisis' (GCF, 1989). Thirty members of Congress and 19 civil society organizations joined forces to support the three-year campaign, which focused on 101 steps each individual can take to 'avert the global warming crisis' (GCF, 1989). The fourth step on the list was reducing meat consumption (Thomas, 1989). Economist and activist Jeremy Rifkin, the founder of the GCF, published an editorial in *USA Today* that emphasized that 'cow-produced methane' contributed significantly to climate change and urged the public to reduce beef consumption (Rifkin, 1989).

In response to both the science and the advocacy, the National Cattlemen's Association (NCA; which became the NCBA in 1996) funded Texas A&M researcher F.M. Byers, to estimate the industry's emissions. Byers concluded that 'cattle are not a significant source of greenhouse gases' and that 'methane produced by all beef cattle in the U.S.A. amounts to less than 0.5 percent' (O'Neill, 1990). This estimate was featured in a

New York Times article, where the lead author of an EPA report on animal agriculture and methane (i. e. Gibbs et al., 1989) described it as 'rather low' (O'Neill, 1990). Byers later published an editorial in *USA Today* claiming that 'eating meat won't harm the environment' (Byers, 1990). The NCA also claimed that environmental groups were spreading 'messages about cows' that promoted a 'hidden agenda, which is vegetarianism' (Arieff, 1989).

2.2. 1990s

In 1990, Diet for a New America, a national campaign to raise awareness about the way 'our meat-addicted diet has everything to do with global warming' and how 'it takes 40 times more fossil fuels to produce one pound of protein from feedlot beef than from wheat' ("Vegetarians see meat addiction", 1990) was launched shortly after the publication of the book with the same title (i.e. Robbins, 1987). The NCA spent $25,000 to commission Texas A&M researchers to check and rebut *Diet for a New America* (Looker, 1990). Furthermore, the California Cattlemen's Association (CCA) sought to dissuade a TV station from airing a programme covering Robbins's book and, when that failed, pressured the station to include an industry-sanctioned nutrition expert on their panel discussion (Bernstein, 1991). The industry contended that behind the climate concerns was a vegetarian agenda (O'Neill, 1990). After environmental advocates distributed leaflets stating that 'the most important thing you can do for the environment is to become vegetarian' (as cited in Looker, 1990) at a 1990 Earth Day event, NCA spent $100,000 for full-page ads in *The New York Times* and *USA Today* with the tagline 'Every Day is Earth Day for American Cattlemen' (Looker, 1990; NCA, 1990).

In 1992, Rifkin published *Beyond Beef: The Rise and Fall of the Cattle Culture*, which included a chapter on global warming and cited research on animal agriculture emissions (i.e. Ensminger, 1991; Pimentel, 1989; Pimentel and Hall, 1989). The book came out alongside an international campaign encouraging individuals to halve their meat consumption due to environmental concerns, including global warming ('Coalition plans', 1992). The campaign singled out beef production as a major source of global warming (Beyond Beef Coalition, 1992) and featured print, TV, and radio ads designed to 'spoil people's appetite for beef' (Debusmann, 1992a, 1992b). It had support from groups such as Greenpeace, Rainforest Action Network, Food First, International Rivers Network, Fund for Animals, and the National Coalition Against the Misuse of Pesticides (Foundation on Economic Trends, 1993). Campaigners planned protests at more than 3,000 McDonald's restaurants (Perry, 1993) and distributed leaflets that emphasized how 'individual decisions as consumers add up to create such a devastating global impact' (as cited in Munro, 1993). Over 20,000 Beyond Beef activists participated in national and international campaign events (Foundation on Economic Trends, 1993).

According to press coverage, the industry was concerned 'the anti-cow campaign [would] provoke emotional responses' and mounted a 'determined counterattack' that included presenting cows as beneficial to the environment, including as 'Mother Nature's recycling machine' (Debusmann, 1992a, 1992b). The industry also retorted with a 'Don't blame it on Bossie' slogan (Kay, 1992). Groups such as the Grocery Manufacturers Association called media outlets to say that the Beyond Beef campaign 'advances misleading and unsubstantiated indictments against beef consumption and the beef industry' (Kay, 1992) and an industry publication described the campaign as having 'declared war against the beef industry' (Albertson, 1992). NCA also claimed that only large producers and not 'family farms' would be able to survive a 50% reduction in individual meat consumption ('Coalition plans', 1992).

Next, the US animal agriculture industry formed the Food Facts Coalition (FFC) – an alliance of 13 industry groups that included American Meat Institute, American Farm Bureau Federation, and NCA, with a mission to defend the industry against 'anti-cow arguments' (Debusmann, 1992a). At its 1992 conference, FFC presented an official position on Beyond Beef, including quotes discrediting the campaign from industry-friendly experts (Food Facts Coalition, 1992). NCA's president said that if the Beyond Beef campaign was successful, it would 'jeopardize the viability of the largest segment of American agriculture' and 'sacrifice the livelihoods of hundreds of thousands of persons' to 'achieve a radical social agenda' (Lambert, 1992). FFC attended Beyond Beef campaign events (Foundation on Economic Trends, 1993), and declared in media interviews that the campaign was built on scare tactics and 'a total disregard for science' and labelled it the 'Beyond Belief Crusade' (Goerne, 1992), a phrase that may have been borrowed from a UC Davis horticulturist who, speaking on

behalf of the beef industry, had said that Rifkin 'takes a piece of information and extrapolates it beyond belief' (Kay, 1992).

Moreover, Beyond Beef advocates alleged that radio producers informed them that callers misrepresenting themselves as the book's publicist were scheduling fake media interviews, which resulted in tour cancellations in four major cities (Kay, 1992), and the Washington Post reported that 'people are screaming at [Rifkin] on call-in talk shows' and that the book tour ultimately had to be cancelled (Sugarman, 1992). Some suggested that these incidents were orchestrated by the industry (Helvarg, 1994; Stauber & Rampton, 1995). The industry also hired the public relations firms Edelman and Burson-Marsteller to send the media pro-beef materials and offer journalists free trips to Wyoming ranches (Kay, 1992). Nevertheless, the Federal Energy Information Administration (FEIA) credited a decline in methane emissions in the early 1990s to a decrease in red meat consumption and beef herd sizes (FEIA, 1993), thereby reinforcing the rationale behind campaigns such as Beyond Beef. It would be a decade before another campaign to reduce meat consumption – Meatless Monday – aimed at encouraging individuals to abstain from meat one day a week, launched in 2003 (or rather relaunched, since the original effort began during World War I to promote meat reduction during the war [Emel & Hawkins, 2010], and President Roosevelt reintroduced Meatless Monday during World War II; Johns Hopkins Center for a Livable Future, 2017).

2.3. 2000s

In 2009, Meatless Monday expanded on its 2003 campaign, which aimed to improve health, to emphasize environmental benefits and carbon footprint reduction (Emel & Hawkins, 2010). That same year, the European Parliament also urged legislators to encourage citizens to reduce meat consumption to combat climate change with their Less Heat = Less Meat campaign, citing the FAO's 2006 report (The European Union's Parliament, 2009).

The industry challenged both campaigns. In 2009, after Baltimore City Public Schools adopted Meatless Monday and San Francisco's Board of Supervisors put forward a resolution calling on schools, restaurants, and stores to offer meatless options, industry lobbying groups representing the American Meat Institute, NCBA, National Pork Board, and Farm Bureau sent 'cease and desist' letters to these institutions ('Meatless Monday', 2010).

Industry-related press releases framed dietary change as futile. The Center for Consumer Freedom, an industry-funded public relations group, published a press release excerpted in the *New York Times,* arguing that 'Eating less meat isn't going to move the dial, at least not in this country. Go buy the hybrid. Pay a premium for alternative energy sources, but eating tofu instead of sirloin? It's not gonna make a difference' (Ensha, 2009). With funding from NCBA, UC Davis professor Frank Mitloehner and two co-authors published 'Clearing the Air: Livestock's Contributions to Climate Change' in *Advances in Agronomy* (Pitesky et al., 2009), which mainly explained that the relative contribution of US animal agriculture to US emissions is smaller than the relative contribution of all animal agriculture to global emissions. Although the paper contained no statements or research related to dietary change (Pitesky et al., 2009), the American Chemical Society, where Mitloehner had given a presentation in March 2010, published a press release about the study titled 'Eating less meat and dairy products won't have a major impact on global warming' and featured quotes from Mitloehner objecting to Meatless Monday and the Less Meat = Less Heat campaigns (American Chemical Society, 2010).

2.4. 2010 to present

The animal agriculture industry also challenged meat reduction initiatives within the US Department of Agriculture (USDA). A 2012 USDA internal newsletter suggested that the organization promote Meatless Monday at their cafeterias for environmental reasons. In response, the NCBA issued a press release calling Meatless Monday an 'animal rights extremist campaign' and arguing that the newsletter 'calls into question the USDA's commitment to U.S. farmers and ranchers' (Berry, 2012). In addition, the NCBA criticized the USDA on social media (Harmon, 2012). USDA officially retracted the newsletter and publicly distanced itself from Meatless Monday (Walsh, 2012).

In 2013, the American Meat Institute released a video to 'dispel' the myths of Meatless Monday featuring Mitloehner (National Hog Farmer, 2013). The Animal Agriculture Alliance issued a report stating that the Meatless Monday campaign was 'grossly misrepresenting the campaign enrolment and prevalence among schools, hospitals, and colleges', after a survey of the campaign reported that 62% of people had tried to incorporate a meatless day in their weekly routines (Barclay, 2013). The following year, Mitloehner told the industry that Meatless Monday events 'aren't just a California thing … they exist all over the country as it is a public policy tool to defeat animal agriculture' (Hays, 2014).

In 2015, NCBA criticized a USDA report on dietary guidelines that recommended a reduction in meat consumption to lower the carbon footprint of individuals. An executive from the trade association called the evidence incomplete and said there was 'no basis for Americans lowering their red meat intake … to achieve a sustainable diet' (King, 2015). In 2016, Mitloehner also published a white paper stating that going meatless one day a week would only reduce annual US GHG emissions by 0.3% per year (Mitloehner, 2016) (Peer-reviewed studies suggest a meatless day per week would reduce annual US emissions by between 0.7% and 1.4% [Burke et al., 2023; Hitaj et al., 2019]). The same year, the American Feed Industry Association (AFIA), citing Mitloehner's work, lobbied to support an amendment to the 2017 Defense Bill to ban Meatless Monday in the armed forces, and in its journal described Meatless Monday as a 'political ploy favoured by animal rights groups, designed to increasingly erode consumer demand for meat' (AFIA, 2016). When New York City announced plans to introduce Meatless Monday in schools, the North American Meat Institute sent the city a letter claiming that the campaign's environmental concerns were misplaced (Welshans, 2019).

In 2019, a week before the release of the EAT-Lancet report, which recommended, for personal and planetary health purposes, a diet consisting of far less meat than is currently typical in Western diets, a digital campaign with the hashtag #yes2meat was mobilized against the report (Garcia et al., 2019). Internal UC Davis documents noted that Mitloehner had 'launched an academic opposition composed of more than 40 scientist [*sic*] from across the country, coinciding with the official opposition, named #yes2meat' even though he had 'zero funding for the academic contingent' (UC Davis Clear Center, 2019).

In 2021, Colorado governor Jared Polis declared March 20 a state-wide 'Meat Out Day', which encouraged residents to cut down on meat consumption to reduce their carbon footprint, among other things (Fazio, 2021). In response, the Colorado Cattlemen's Association urged residents to organize 'Meat In Day' events, 26 Colorado counties signed 'Meat In' proclamations (Dickey, 2021), and an industry magazine encouraged readers to purchase beef in bulk at local grocery stores on the same day (Radke, 2021). Following the backlash, Governor Polis backpedalled and declared the following Monday as 'Colorado Livestock Proud Day' and said his favourite snack is beef jerky (Frank, 2021).

3. Discussion

When it comes to climate policy, redirecting responsibility is a documented tactic in industries' 'playbook' of climate obstruction. However, unlike the oil and gas industry, the animal agriculture industry has opposed redirecting responsibility for climate action towards individuals. This suggests that whether an industry favours redirection of responsibility towards individuals may also be context-dependent and action-specific. For example, oil and gas companies have promoted individual actions with low impact, such as turning off lights and carpooling, rather than more significant measures like installing solar panels. Similarly, the animal agriculture industry has opposed dietary change, but has promoted 'climate-friendly' products. While asserting that its products do not cause climate change and changing one's diet will not make a difference (e.g. Wright, 2009) and that emphasis on individual responsibility 'distracts from the problem' (Mitloehner, 2020), the animal agriculture industry has simultaneously made a series of products and claims aimed at climate-conscious consumers. For example, the Oregon-based dairy company Neutral claims to be carbon neutral and states on its packaging: 'This milk fights climate change' (Hamlett, 2023). Tyson Foods, the largest US meat company, introduced 'Brazen Beef', which it claims emits 10 percent fewer GHGs (Samuelson, 2021). JBS USA, part of the largest meat company in the world, has made many climate-related claims, including that the company will reach net-zero by 2040, which led to a lawsuit by the Attorney General of New York alleging that JBS USA has repeatedly misled consumers (Gelles & Andreoni, 2024). This paradox is reminiscent of the tobacco industry, which, in the

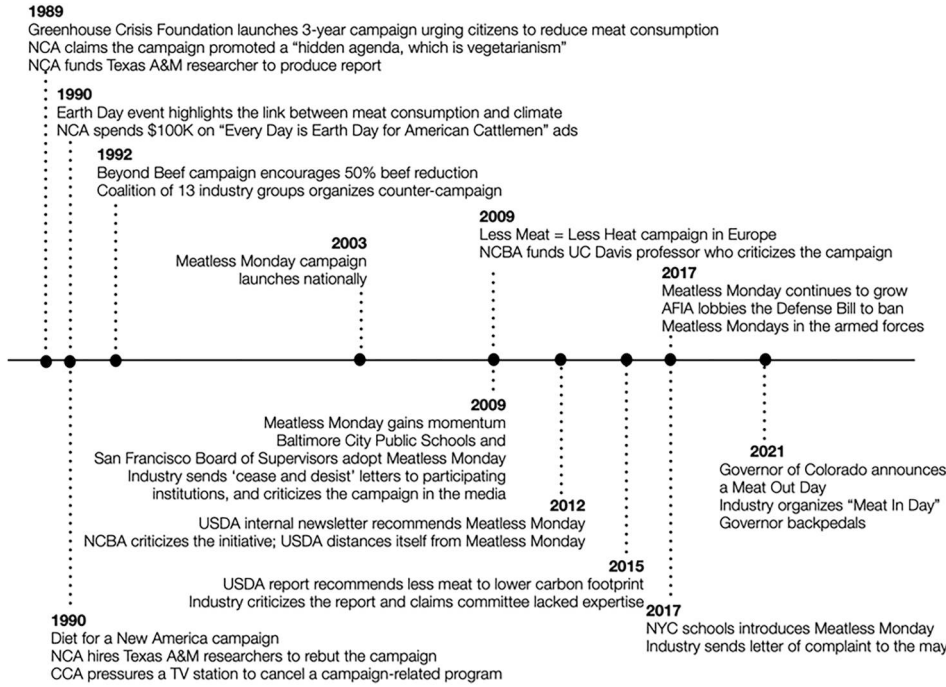

Figure 1. Timeline of mainly US civil society campaigns to encourage meat reduction as individual climate action along with short descriptions of the animal agriculture industry's response.

1950s, began funding a large network to challenge the causal link between smoking and cancer while they also started manufacturing filtered cigarettes that they claimed removed tar and nicotine (Proctor, 2012; Whiteside, 1963). If smoking does not cause cancer, why was a filter necessary? Likewise, if meat and dairy do not contribute to climate change and/or dietary change is insignificant, why produce Neutral milk or Brazen Beef, or commit to net-zero?

Here, we traced a range of civil society campaigns that pressed for dietary change as a climate mitigation strategy and examined the animal agriculture industry's response to these efforts (see Figure 1 for a synopsis of the timeline of main events). The 1992 Beyond Beef campaign's aim to reduce US beef consumption by 50% was a science-driven recommendation because beef has disproportionate climate impacts relative to other animal products, and that remains true today. Yet, US per capita beef consumption has hovered around 40 kg per person since the early 1990s while per capita meat consumption has grown (mainly due to the increase in the consumption of chicken meat) (FAO, 2023). Despite the growing body of scholarship showing dietary shifts away from animal products may be a particularly effective form of individual climate action (e.g. Clark et al., 2020; Poore & Nemecek, 2018; Springmann et al., 2016; Springmann et al., 2018; Wynes & Nicholas, 2017; Xu et al., 2021), civil society efforts to encourage dietary change have diminished their ambition. Americans were asked to reduce their beef consumption by 50% in the early 1990s; by the 2000s, they were asked for one meatless day per week. There has also been a discernible shift in the overall recommendation away from 'eat less meat' to 'eat more plants' (note that these two statements are not equivalent; eating more plants does not necessitate eating less meat). In many cases, NGOs avoid the topic of dietary change altogether citing meat reduction as challenging, ineffectual, and controversial (Laestadius et al., 2014).

Here we suggest at least part of the reason for civil society's diminished ambition and hesitation to advocate for dietary change as a climate mitigation strategy was due to strategic opposition by the animal agriculture industry. To convince individuals of the merits of dietary change as climate action, explaining the flawed argumentation (i.e. diet does in fact matter to one's climate impacts) and highlighting the scientific consensus on dietary change as an effective and immediately feasible way to

address the climate crisis may help 'inoculate' the public against the adverse effects of industry opposition (Cook et al., 2017). Substitutes for meat are widely available, often cost the same or less, decisions about what to eat are made every day, and most importantly, do not rely on transforming infrastructure. As for civil society groups, the evidence presented here that the industry has fought even modest forms of dietary change is reason alone to suggest that dietary change is an effective climate intervention and should be part of climate action and advocacy.

Disclosure statement

No potential conflict of interest was reported by the authors.

Funding

The authors received no funding to conduct this research. LL's position is paid for by JJ's research funds from The Rosenstiel School of Marine, Atmospheric, & Earth Science at the University of Miami. JJ is the paid Associate Research Director of the Climate Social Science Network at Brown University.

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