

A Quixotic Quest for Definition: Perceptions of “Organic” and Implications for The Environment and for Market Participants

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INTRODUCTION

We recently began a quest, Don Quixote-like, to determine the definition of “organic” food, or at least to assess how most consumers of organic food in the United States (“U.S.”) perceive that term to be defined. Our quest was inspired by a visit to a “sustainable”¹ farm that was hosting a farm-to-table dining event. The crowd was large and enthusiastic; the meal was exceptional; and the farm setting was bucolic and impressive.

In our conversations with the very capable farm owner, we were surprised to learn that her products, mostly vegetables, were not certified organic by the U.S. Department of Agriculture (“USDA”). When we inquired further about the reasons for this, the very foundations of our “organic” world began to crack. She explained that, not only was the program administratively burdensome for many small farmers, it also was ideologically anathematic to those who farm using 100 percent natural techniques and products. This is because USDA certified organic farmers are permitted to treat their crops with synthetic substances from an approved list.² The

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¹ The adjectives “alternative,” “sustainable,” and “agroecological” are utilized interchangeably herein to describe a particular approach to farming. The term “organic” is limited to U.S. Department of Agriculture-certified organic farms, but the authors acknowledge that the term “certified organic” has become a “political, cultural, economic and social [construct] ... located within western ideologies and practices” and is laden with hegemonic overtones. *See, e.g.*, CATHY FARNWORTH & JESSICA HUTCHINGS, INT’L FED’N OF ORGANIC AGRIC. MOVEMENTS, ORGANIC AGRICULTURE AND WOMEN’S EMPOWERMENT 4, 5 (2009).

² *See* Miles McEvoy, *Organic 101: Allowed and Prohibited Substances*, USDA (Aug. 16, 2018), <https://www.usda.gov/media/blog/2012/01/25/organic-101-allowed-and-prohibited-substances> [<https://perma.cc/4Y3N-GL32>].

farm hostess was discouraged by her belief that multinational food companies now disproportionately influence the USDA “organic” program, exerting constant pressure to allow the use of conventional materials preferred by industrial operators as well as the import of products from countries with “organic” standards that may not have been audited or may be weaker than those in the U.S.

This, of course, was quite disturbing to zealous organic food converts. Disillusioned, we did what any academics would do—we decided to research the issue to see if our naivete was singular, or if there were, perhaps, others who had similar perceptions of the meaning of the “organic” label. If there were others suffering this cognitive dissonance, what might the impact be on the environment and on the broad spectrum of participants in the sustainable food market?

I. THE U.S. MARKET FOR SUSTAINABLE FOOD PRODUCTS

Consumer demand for organically produced food in the U.S. increased dramatically since 1997 when the U.S. Department of Agriculture first collated and analyzed retail data.³ Sales reached a historic \$47.9 billion in 2018, an increase of 5.9 percent from 2017.⁴ Compare this gain to the 2.3 percent growth in total U.S. food sales.⁵

Organic food is now available to consumers through many sale outlets. For example, one can find organic products in over 20,000 natural and specialty food retailers as well as in nearly three out of four conventional grocery stores.⁶ Organic products are also sold in membership clubs, so-called “big-box” stores, farmers’s

³ CAROLYN DIMITRI & LYDIA OBERHOLTZER, USDA ECON. RES. SERV., MARKETING U.S. ORGANIC FOODS: RECENT TRENDS FROM FARMS TO CONSUMERS NO. 58 (2009).

⁴ *U.S. Organic Industry Survey 2019*, ORGANIC TRADE ASS’N, <https://ota.com/resources/organic-industry-survey> [<https://perma.cc/E8Z5-AN4P>]. This is consistent with trends in past years. For example, sales of organic food products reached \$39.7 billion in 2015, an 11 percent increase over the 2014 sales figures. *See* Maggie McNeil, *U.S. Organic Sales Post New Record of \$43.3 Billion in 2015*, ORGANIC TRADE ASS’N (May 19, 2016), <https://www.ota.com/news/press-releases/19031> [<https://perma.cc/RK5X-V5SN>] (reporting on the Organic Trade Association’s 2016 Organic Industry Survey).

⁵ ORGANIC TRADE ASS’N, *supra* note 4.

⁶ CAROLYN DIMITRI & CATHERINE GREENE, USDA ECON. RES. SERV., RECENT GROWTH PATTERNS IN THE U.S. ORGANIC FOODS MARKET NO. 777 (2002).

markets, Community Supported Agriculture farms and networks, and other direct sale outlets.⁷

Driven by the strength of consumer demand, the organic food segment of the market has blossomed from a small industry niche to a large, multi-billion-dollar business, with major corporate entities investing in organic food products,⁸ such as Frito-Lay's Simply Lay's® Wavy Organic Potato Chips,⁹ Simply TOSTITOS® Organic Black Bean and Corn Salsa, and Simply TOSTITOS® Blue Corn Tortilla Chips;¹⁰ Tyson Foods's all natural NatureRaised Farms® chicken brand¹¹ and Open Prairie Natural Angus® beef brand;¹² as well as Coca-Cola's Honest Tea, Honest Kids, Zico Coconut Water, Odwalla, Peace Tea, Vitamin Water, and Simply Orange.¹³

Despite this interest and investment in organic foods, theoretical and practical approaches to the actual definition of the adjective “organic” widely diverge. For example, some consumers associate “organic” with terms such as “chemical-free,” “healthier/more nutritious,” and “alternative lifestyle.”¹⁴ Others believe that “organic” relates more to concepts such as sustainable

⁷ Dimitri & Oberholtzer, *supra* note 3.

⁸ See Jennifer Ann von Sehlen, *Beyond Organic: Defining Alternatives to USDA Certified Organic* (May 2007) (MA Thesis, U of Mont.), <https://scholarworks.umt.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1113&context=etd> [<https://perma.cc/78CM-RX3E>].

⁹ See *Lay's Better For You*, LAY'S, <https://www.lays.com/product-category/lays-better-for-you> [<https://perma.cc/BRR8-NZGY>].

¹⁰ See *Products, Tortilla Chips*, TOSTITOS, <https://www.tostitos.com/product-category/tortilla-chips> [<https://perma.cc/W3F9-DUMN>]; see, e.g., Renée Shaw Hughner et al., *Who are Organic Food Consumers? A Compilation and Review of Why People Purchase Organic Food*, 6 J. CONSUMER BEHAV. 94, 106 (2007) (stating “[s]ome have overtly created their own brands of organic foods (e.g., Frito-Lay's Naturals product line; Tesco's organic range in the UK and Ireland), while others have been considerably more discreet (e.g., Odwalla, makers of organic orange juice, is owned by Minute Maid, a division of Coca Cola”); Megan S. Houston, *Ecolabel Programs and Green Consumerism: Preserving a Hybrid Approach to Environmental Regulation*, 7 BROOK. J. CORP. FIN. & COMM. L. 226, 241 (2012).

¹¹ See Marion Nestle, *Tyson Antibiotic-Free Chicken*, FOOD POLITICS (June 20, 2007), <https://www.foodpolitics.com/2007/06/tyson-antibiotic-free-chicken/> [<https://perma.cc/US4M-QKTY>].

¹² See *Open Prairie® Natural Meats*, TYSON, <https://www.tysonfreshmeats.com/our-brands/open-prairie-natural-meats> [<https://perma.cc/74BW-F8QS>].

¹³ Hughner et al., *supra* note 10; see generally *Brands*, COCA-COLA COMPANY, <https://www.coca-colacompany.com/brands> [<https://perma.cc/XCB6-A7QC>] (listing Coca-Cola's different products).

¹⁴ See, e.g., Carolyn Raab & Deana Grobe, *Consumer Knowledge and Perceptions About Organic Food*, 43 J. EXTENSION 4 (2005).

natural, local, free from additives/preservatives, green supply chain, GMO, and climate change.¹⁵ For those in the organic food business and those regulating that business, it is important to understand these differing interpretations in order to meet consumer expectations in the organic market.

A. “Organic”: History, Governance, and Standards

The organic food movement began in Britain with farmers developing alternative production methods.¹⁶ Between 1920 and 1940, agricultural scientists and farmers focused on cultivating healthy, fertile soil to promote human and animal health.¹⁷ Philosophically, organic farmers opposed the use of chemicals to replace minerals in soil, preferring instead to utilize natural systems due to their concerns regarding the impact of artificial food upon animal and human nutrition.¹⁸ In the early 1940s, organic farmers in the U.S. began implementing agroecological farming techniques such as composting, crop variation, and natural pest suppressants.¹⁹

The publication of Rachel Carson’s *Silent Spring* in 1962 was significant for the organic and environmental movements in the U.S.²⁰ The book documents the effects of pesticides on the environment and on human and livestock health, with a particular focus on the then widely-used dichlorodiphenyltrichloroethane (“DDT”).²¹ *Silent Spring* became a best seller and influenced public

¹⁵ Daniele Asioli et al., *Making Sense of the “Clean Label” Trends: A Review of Consumer Food Choice Behavior and Discussion of Industry Implications*, 99 FOOD RES. INT’L 58, 59–60, 65 (2017); *New ‘Natural’ Definition Will Go Beyond Organic Standards*, NUTRACEUTICALS WORLD (Oct. 12, 2015), https://www.nutraceuticalsworld.com/issues/2015-11/view_breaking-news/new-natural-definition-will-go-beyond-organic-standards [<https://perma.cc/HRP2-H3VR>]; Joanna K. Sax & Neal Doran, *Food Labeling and Consumer Associations with Health, Safety and Environment*, 44 J. L. MED. & ETHICS 630, 635 (2016).

¹⁶ von Sehlen, *supra* note 8, at 3-4.

¹⁷ *Id.*

¹⁸ Cf. Valerie J. Watnick, *The Organic Foods Production Act, the Process/Product Distinction, and a Case for More End Product Regulation in the Organic Foods Market*, 32 UCLA J. ENVT’L. L. POL’Y 40, 45–46 (2014) (discussing the regulatory history of organic farming and marketing in light of Rodale’s influence on the organic farming movement).

¹⁹ von Sehlen, *supra* note 8, at 4–5.

²⁰ Jack Lewis, *The Birth of EPA*, EPA (Nov. 1985), <https://archive.epa.gov/epa/aboutepa/birth-epa.html> [<https://perma.cc/J7K9-995P>].

²¹ *Id.*; see also Eliza Griswold, *How ‘Silent Spring’ Ignited the Environmental Movement*, N.Y. TIMES MAG. (Sep. 21, 2012),

thinking and legislative activity, including the creation of the U.S. Environmental Protection Agency (“EPA”) in 1970, a governmental agency which some have called “the extended shadow of Rachel Carson.”²² “Organic” also began catching on in magazines and with proponents who emphasized their opposition to chemical fertilizers and large-scale farming.²³

The popularity of organic food increased between 1960 and 1970 with a growing number of non-conformist young adults and environmentalists who created food co-ops and practiced organic farming.²⁴ “Organic” was gaining political momentum during this era as it was associated with anti-industrialism and counterculture.²⁵ This was met with resistance by federal officials.²⁶ In 1974, for example, the U.S. Food and Drug Administration (“FDA”) unsuccessfully attempted to ban the term “organic” but successfully prohibited claims that natural or organic foods were more nutritious than conventionally-produced foods.²⁷ Former U.S. Secretary of Agriculture Earl Butz even contended that there might be mass famine if society reverted to organic farming methods.²⁸

Yet even federal resistance did not stop the growth of organic farming.²⁹ In the 1970s and 1980s, when the cost of petroleum-based inputs for conventional agricultural farming increased,³⁰ even some opponents of “organic” began to recognize that there might be “positive agronomic and environmental conservation characteristics” associated with low-cost input farming practices.³¹ During this timeframe, independent organic standards, official certification programs, and legal definitions proliferated, developed by multiple, competing independent farmers, trade associations, and

<https://www.nytimes.com/2012/09/23/magazine/how-silent-spring-ignited-the-environmental-movement.html> [<https://perma.cc/T8NE-J5RN>].

²² Lewis, *supra* note 20.

²³ See von Sehlen, *supra* note 8, at 5.

²⁴ *Id.*

²⁵ *Id.*; see also Shelia Gholkar, Comment, *Moving Beyond the Industrial Organic Food Movement: Rethinking Organic Food Regulations*, 2 ARIZ. J. ENV'L L. & POL'Y 1, 1 (2012).

²⁶ *Id.*

²⁷ von Sehlen, *supra* note 8, at 6.

²⁸ *Id.*

²⁹ See *id.* at 5.

³⁰ *Id.* at 6.

³¹ Garth Youngberg & Suzanne P. DeMuth, *Organic Agriculture in the United States: A 30-Year Retrospective*, 28 RENEWABLE AGRIC. & FOOD SYS. 294, 302–03 (2013).

governmental units.³² For example, in 1973 and 1979, respectively, the states of Oregon and California enacted legal definitions.³³ Initially, however, California refused to enforce its own 1979 Organic Food Act by failing to include provisions for enforcement.³⁴ The California legislature later instituted penalties for noncompliance in the Organic Food Act of 1990.³⁵

At the federal level, the U.S. Congress passed the Organic Food Production Act (“OFPA”) in 1990.³⁶ The OFPA required the USDA, via a National Organic Standards Board (“NOSB”), to establish national standards for the marketing and production, and to facilitate interstate commerce, of organic agricultural products.³⁷ Over a decade later, in 2002, the USDA promulgated the rules that implemented the Act, a draft of which generated thousands and thousands of comments claiming that the standards as proposed were contrary to the organic farming industry's goals.³⁸

It is pursuant to the OFPA, and to the National Organic Program (“NOP”), that the USDA administers a voluntary organic certification program.³⁹ The NOP is a marketing program administered by the USDA Agricultural Marketing Service (“AMS”).⁴⁰ It establishes four tiers of certified agricultural products: Tier One products are “100% Organic;” Tier Two products are “Organic” and must have 95 percent or more organic ingredients; Tier Three products are “Made with Organic Ingredients” and contain at least 70 percent organic ingredients; and Tier Four products, with “Less than 70% Organic Ingredients,” contain organic

³² *Id.* at 308-10; *see also* Gholkar, *supra* note 25, at 1-2.

³³ von Sehlen, *supra* note 8, at 7.

³⁴ *Id.*

³⁵ *Id.* at 8.

³⁶ Chenglin Liu, *Is “USDA Organic” a Seal of Deceit? The Pitfalls of USDA Certified Organics Produced in the United States, China and Beyond*, 47 STANFORD J. INT’L L. 333, 337 (2011).

³⁷ *Id.* at 338; Watnick, *supra* note 18, at 46-47.

³⁸ *See generally* Organic Research, Promotion, and Information Order, 7 C.F.R. § 1255 (2017) (depicting a summary of the proposed rule and information surrounding it); *see also* J.B. Ruhl, *Farms, Their Environmental Harms, and Environmental Law*, 27 ECOLOGY L.Q. 263, 266 n. 3 (2000).

³⁹ *See* *USDA Organic 201*, USDA (June 2015), <https://www.ams.usda.gov/sites/default/files/media/Organic%20201%20Training%20Final%20June%202015.pdf> [<https://perma.cc/DB6X-LW4U>].

⁴⁰ Liu, *supra* note 36, at 339-41.

ingredients set forth in the ingredient list.⁴¹ Agricultural products may be USDA certified and labeled according to these organic tiers if produced, handled, and labeled in accordance with NOP standards.⁴²

Regulators in other geographic locations have created legal regimes based upon differing conceptions or approaches to the definition of “organic.”⁴³ For example, Canada and many European countries, including England and Germany, prohibit the marketing or selling of food produced by hydroponic production methods as “organic.”⁴⁴ However, compliant hydroponic production methods currently are eligible to be certified as “organic” in the U.S.⁴⁵

B. Definitional Issue

In the U.S., consumers, producers, distributors, retailers, and regulators lack consensus about the definition of “organic” as it pertains to food products.⁴⁶ The regulatory framework for organic food products administered by the USDA does not appear to have been designed, and has not evolved, to be consistent with what we perceived to be consumer expectations or purchasing habits when we first became interested in changing our diets to organic food. While consumers appear to be focused on the health-related, the environmental, and the locally-grown aspects of organic products,⁴⁷ U.S. regulations allow products to be certified “organic” even if certain synthetic substances are used in their production, if they are not completely free of synthetic chemical residue, or if they are not produced sustainably or locally.⁴⁸

The NOP system for organic certification and labeling is complex, and consumers may not be aware of the significance of the

⁴¹ *USDA Organic 201*, *supra* note 39.

⁴² *Id.* at 3.

⁴³ See Memorandum from Miles V. McEvoy, Deputy Adm’r Nat’l Organic Program (NOP) to the Nat’l Organics Standard Bd. (July 21, 2016), [<https://perma.cc/B8TY-WPL7>].

⁴⁴ *Id.*

⁴⁵ Dan Nosowitz, *National Organic Standards Board Decrees That Hydroponic Can Be Organic*, MODERN FARMER (Nov. 2, 2017), [<https://tinyurl.com/ybfjujp4>] [<https://perma.cc/6RXM-6ZFY>]; see also McEvoy, *supra* note 43.

⁴⁶ See Liu, *supra* note 36, at 338.

⁴⁷ Raab & Grobe, *supra* note 14.

⁴⁸ Liu, *supra* note 36, at 338.

various tiers.⁴⁹ Further, the system does not appear to reflect in any meaningful way consumer preferences or values.⁵⁰ When drafting the OFPA, legislators acknowledged that “[m]ost consumers believe that absolutely no synthetic substances are used in organic production[,]”⁵¹ yet, in the final Act, they defined “organic” in a way that appears to be inconsistent with public perception.⁵² As one former Vice-Chair of the NOSB once stated, “[USDA] organic labels are not statements regarding the healthiness, nutritional value, or overall safety of consuming such products.”⁵³

Further, the USDA labeling system has been criticized by many in the organic sector as having been captured by large corporate agricultural interests that produce and distribute their certified organic products in ways that are contrary to the ideals of the organic movement and inconsistent with consumer perceptions that buying organic products supports small, local farms.⁵⁴ It is widely reported that many of the largest international food company brand producers in the world are invested in organic food, including “Coca-Cola, Dole, General Mills, H.J. Heinz, Kellogg, Mars, Kraft, Sara Lee, and Tyson Foods.”⁵⁵ Like us, many consumers apparently base their organic purchasing decisions at least in part upon their support for “sustainable agriculture and local food systems, and opposition to the ‘corporate’ food system.”⁵⁶ Yet some small farmers are making the decision to opt out of organics; as one California farmer stated, “if big business kills the name ... why go organic?”⁵⁷

Were we alone in our disillusionment? We set out to confront the truth about our Quixotry and to assess how other U.S. residents interpret and understand the term “organic”; specifically, the

⁴⁹ See Raab & Grobe, *supra* note 14.

⁵⁰ See *id.*

⁵¹ Kenneth C. Amaditz, *The Organic Foods Production Act of 1990 and its Impending Regulations: A Big Zero for Organic Food?*, 52 FOOD & DRUG L.J. 537, 550–51 (1997).

⁵² *Id.*

⁵³ William J. Friedman, *The Framework for Global Organic Food Trade Circa 2005: Accomplishments and Challenges*, 60 FOOD & DRUG L.J. 361, 366 (2005).

⁵⁴ Omri Ben-Shahar, *The Surprising Failure of Food Labeling*, FORBES (Apr. 18, 2016), <https://www.forbes.com/sites/omribensshahar/2016/04/18/the-surprising-failure-of-food-labeling/#19deb3953f8b> [<https://perma.cc/N29W-TD8G>].

⁵⁵ Houston, *supra* note 10.

⁵⁶ David Conner & Ralph Christy, *The Organic Label: How to Reconcile its Meaning with Consumer Preferences*, 35 J. FOOD DISTRIBUTION RES. 40, 42 (2004).

⁵⁷ Ariele Lessing, *A Supplemental Labeling Regime for Organic Products: How the Food, Drug, and Cosmetic Act Hampers a Market Solution to an Organic Transparency Problem*, 18 MO. ENVTL. L. & POL'Y REV. 418, 452 (2011).

accuracy of the labeling with the production practices of USDA certified organic food products. Our quest was:

1. To identify survey data assessing U.S. residents's perceptions of the definition of the term "organic" as it pertains to food products and their purchasing preferences for these products.

2. To gain an understanding of the relationship between the existing U.S. regulatory framework for organic food products and U.S. residents' perceptions and their purchasing preferences regarding these products.

3. To consider the implications of the public's perceptions and their purchasing preferences with a view to determining what, if any, impact these perceptions might have on the environment and on market participants with the possibility of offering guidance or proposals for marketing, education, and communication strategies, if appropriate.

While these questions were, of course, personally important, we also felt that they were generally significant given the level of growth in the organic food sector and the increasing level of discontent with the imprecise and inconsistent definitions and labels and with the regulatory regime that governs the sector. When the organic movement began in the first half of the twentieth century, with adherents chanting the mantra "[f]eed the soil, not the plant," they likely did not foresee the astounding appetite that U.S. consumers would have for these products.⁵⁸ The total volume of sustainable investments in the U.S. doubled between 2012 and 2014.⁵⁹ This growth means that the regulatory framework pertaining to organic food is increasingly under scrutiny and is confronting numerous challenges. The growing influence and dominance of large-scale agri-businesses on the NOSB has not, however, created more regulatory transparency, but, seemingly, more opportunity for consumer confusion.⁶⁰

Being Quixotic, it is our hope that a review of the literature might provide valuable insights into the implications of the relationship between U.S. residents's perceptions and their purchasing preferences regarding organic food products and the existing U.S. regulatory framework for these products as well as for

⁵⁸ McEvoy, *supra* note 43, at 9.

⁵⁹ MORGAN STANLEY, INST. FOR SUSTAINABLE INVESTING, SUSTAINABLE SIGNALS: THE INDIVIDUAL INVESTOR PERSPECTIVE 1, 6 (2015), *available at* <https://perma.cc/9XWS-PY8V>.

⁶⁰ *Cf.* JAMES ANGRESANO, A CORPORATE WELFARE ECONOMY (2016).

future marketing, education, and communication strategies. This information could be significant to all stakeholders in the organic food sector. Firstly, it may clarify consumer expectations and values with regard to their motivations for purchasing organics. It may also encourage regulators to promulgate regulations that are more responsive to consumer concerns and interests. Finally, it may provide critical information for the marketing and communications strategies of producers, distributors, and retailers, as well as inform their business planning vis-à-vis the USDA's certification process.

We recognize, however, that our research is subject to several limitations, one of which is that we limited our examination of "organic" products to food items such as fresh fruits, vegetables, beverages, etc. Other green products, including pet food, beauty products, health and wellness products, and green lifestyle products, were excluded. We also focused on the most recent iteration of the NOSB and the current laws in effect.

Just to clarify, the following terms have been operationally defined for purposes of our research:

- "Green products" are other products that consumers potentially would identify as organic but that have not been certified through the USDA process.⁶¹
- "Hydroponic" food production occurs "in nutrient solutions without soil[.]"⁶²
- "National Organic Program (NOP)" is the program "authorized by the [OFPA] for the purpose of implementing its provisions."⁶³
- "National Organic Standards Board (NOSB)" is an entity "established ... to assist in the development of standards for substances to be used in organic production and to advise ... on any

⁶¹ See Sani Marc, *Organic vs. Green – What's the Difference*, SANIMAG (Nov. 8, 2016), <http://sanimag.sanimarc.com/organic-vs-green-whats-the-difference/> [<https://perma.cc/R9C9-RYWJ>].

⁶² Kellie J. Walters et al., *Historical, Current, and Future Perspectives for Controlled Environment Hydroponic Food Crop Production in the United States*, HORTSCI, (2020), 10.21273/HORTSCI14901-20. See also Christine Eigenbrod & Nazim Gruda, *Urban Vegetable for Food Security in Cities. A Review*, 35 AGRONOMY FOR SUSTAINABLE DEV. 483, 488 (2015).

⁶³ See 7 C.F.R. § 205.2 (2011).

other aspects of the implementation of the National Organic Program.”⁶⁴

- “National List of Allowed and Prohibited Substances” is a list of approved and prohibited substances included in the standards of production and handling established under the OFPA in order for products to be sold or labeled as organically produced.⁶⁵

- “Organic” is “[a] labeling term that refers to an agricultural product produced in accordance with the [Organic Foods Production] Act and the [implementing] regulations.”⁶⁶ This somewhat circular definition is one of the focal points of this article. As used in this paper, the term “organic” with quotation marks indicates the term’s use as a noun. Without quotation marks, organic is used as an adjective. Conversely, conventional farming, sometimes referred to as industrial farming, is any agricultural system which engages in practices or uses inputs that are prohibited by formal organic regulatory standards.

- An “organic food product” for purposes of this article is “any agricultural commodity or product, whether raw or processed, including any commodity or product derived from livestock, that is marketed in the [U.S.] for human... consumption.”⁶⁷

II. THE LITERATURE

As background for our research, we reviewed literature in a number of very different theoretical fields, such as: (1) economics, including theories pertaining to private and governmental labeling schemes; (2) psychology and sociology, including cognitive, psychosocial theories that examine consumer perceptions of organic labels; and (3) law, including academic literature that analyzes and evaluates the relevant statutory and regulatory framework, particularly in the U.S.

Armed with this background, we then sought literature that contained survey data assessing U.S. residents’s perceptions of the definition of the term “organic” as it pertains to food products and their purchasing preferences for these products.

⁶⁴ *Id.*

⁶⁵ 7 U.S.C. § 6517 (2016). The list appears in 7 C.F.R. § 205.600-606 (2011).

⁶⁶ 7 C.F.R. § 205.2 (2011).

⁶⁷ *Id.* We derived this definition from the NOP’s definition of “agricultural product.” 7 CFR § 205.2 (2011).

A. Background Literature: Theory of Asymmetric Information: An Economic Theory Pertaining to Private and Governmental Labeling Schemes

Governments; food producers and processors; private entities/firms; and consumers's purchasing and consumption choices determine the information that appears on food labels.⁶⁸ Profit-maximizing firms may choose to add labeling information to packaging to help consumers differentiate similar food products.⁶⁹

This occurred in the organic food market. In the 1970s and 1980s, U.S. organic farmers began to voluntarily label their products in order to inform consumers of specific attributes of organic food products versus similar non-organic products.⁷⁰ Label information is a cost-effective way for farmers to distinguish their products in saturated markets.⁷¹ In 1997, U.S. food producers spent \$48.7 billion on packaging materials, not all of which can be attributed to labeling that focused on specific product qualities.⁷² Organic producers use labeling as a way to explain the 20–30 percent price premium that consumers pay for organically-produced food compared to non-organic products:⁷³ this price premium offsets the cost of organic food production.⁷⁴

⁶⁸ ELISE GOLAN ET AL., USDA Econ. RES. SERV., ECONOMICS OF FOOD LABELING No. 793, at 1, Dec. 2000 [<https://perma.cc/Z7Y9-F2UX>].

⁶⁹ See, e.g., Lotta Immonen, Package Cues and Their Influence on the Perception of Premium Quality of Premium Private Label Products 9 (2010) (unpublished M.S. thesis, Aalto University) (on file with Aalto University Library system), http://epub.lib.aalto.fi/en/ethesis/pdf/12281/hse_ethesis_12281.pdf [<https://perma.cc/9TLM-9FL5>].

⁷⁰ See von Sehlen, *supra* note 8, at 6–7.

⁷¹ See HOWARD ELITZAK, USDA ECON. SERV., FOOD COST REVIEW, 1950–97 No. 780 (1999).

⁷² GOLAN ET AL., *supra* note 68.

⁷³ Kate L. Harrison, *Organic Plus: Regulating Beyond the Current Organic Standards*, 25 PACE ENVTL. L. REV. 211, 211–12 (2008).

⁷⁴ But see Magali A. Delmas & Laura E. Grant, *Eco-Labeling Strategies and Price-Premium: The Wine Industry Puzzle*, 53 BUS. & STRATEGY 6, 35 (2014) (stating “[o]ur results show that eco-labeling has a negative impact on prices in the wine industry, although there is a price premium associated with eco-certification. Overall, certifying wine increases the price by 13%, yet including an eco-label reduces the price by 20%, confirming the negative connotation consumers apply to ‘green wine.’”).

Firms attempt to identify a food products's desirable attributes such as content, place of origin, organic production, and/or health benefit.⁷⁵ Attribute identification is complex given that consumers have vastly different preferences.⁷⁶ Attributes of organic (and conventionally produced) food products include food safety, nutrition, value, package, and production process.⁷⁷

Attributes can be categorized as: (1) search, (2) experience, or (3) credence.⁷⁸ Search attributes are characteristics that are examined by the consumer prior to purchase, and they include price, size, and color.⁷⁹ Experience attributes are evaluated by the consumer after purchasing the product.⁸⁰ Taste, durability, and maintenance needs are examples of experience attributes.⁸¹ Credence attributes are unobservable and cannot be evaluated by the consumer prior to, during, or after purchase or use.⁸² "Organic" is characterized as a credence attribute because, without a label, consumers are not capable of determining if a food product was organically produced.⁸³

Consumers often infer that attributes which are not included on the label are negative or are associated with inferior quality.⁸⁴ The "unfolding" theory posits that all positive attributes result in explicit labeling claims.⁸⁵ For example, nutritional labeling was inconsistent prior to the 1990 implementation of the Nutrition Labeling and Education Act ("NLEA").⁸⁶ Nutritionally-superior food products

⁷⁵ See GOLAN ET AL., *supra* note 68, at 7.

⁷⁶ See *id.* at 10, 13.

⁷⁷ Emmanuel K. Yiridoe et al., *Comparison of Consumer Perceptions and Preference toward Organic Versus Conventionally Produced Foods: A Review and Update of the Literature*, 20 RENEWABLE AGRIC. & FOOD SYS 193, 195 (2005).

⁷⁸ LORNA ALDRICH, USDA ECON. RES. SERV., CONSUMER USE OF INFORMATION: IMPLICATIONS FOR FOOD POLICY, AGRIC. HANDBOOK NO. 715, at 1, 2 (1999).

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ See *id.*

⁸² Brian Roe & Ian Sheldon, *Credence Good Labeling: The Efficiency and Distributional Implications of Several Policy Approaches*, 89 AM. J. AGRIC. ECON. 1020, 1020 (2007).

⁸³ GOLAN ET AL., *supra* note 68, at 7.

⁸⁴ *Id.* at 7–8.

⁸⁵ Aldrich, *supra* note 78, at 12; see also GOLAN ET AL., *supra* note 68, at 8.

⁸⁶ Nutrition Labeling and Education Act of 1990, 21 U.S.C. § 343 (2018); GOLAN ET AL., *supra* note 68, at 8.

displayed label information while other food products did not.⁸⁷ “Unfolding,” thus, accentuates the undesirable attributes of alternative food products.⁸⁸

The theory of asymmetric information may explain both voluntary labeling programs and the necessity for enforcement of labeling content in the organic food market segment.⁸⁹ Asymmetric or missing information occurs when the market provides insufficient information to consumers to enable them to make choices that reflect their consumption preferences.⁹⁰ Producers and sellers are aware of the attributes and quality of a product; consumers are not.⁹¹ This can result in inefficient markets.⁹² Sellers in asymmetric markets know, but may choose not to disclose, relevant information to consumers.⁹³ This situation can be particularly problematic in markets in which there are foods containing negative credence attributes.⁹⁴

i. The Role of Third-Party Services in Voluntary Labeling

In the context of product labeling, third-party services include those provided by consumer groups, producer associations, governmental entities, and international organizations.⁹⁵ Examples of third-party services include the Good Housekeeping Institute, the American National Standards Institute, the Underwriters Laboratories (“UL”), the Council of Better Business Bureaus (“BBB”), the Advertising Self-Regulatory Council (“ASRC”), and the International Organization for Standardization (“ISO”).⁹⁶ Third-party labeling services for organic food products include the USDA’s AMS.⁹⁷ The designation “Certified Naturally Grown” (“CNG”), discussed in more detail later, is an alternative to the USDA’s

⁸⁷ GOLAN ET AL., *supra* note 68.

⁸⁸ Aldrich, *supra* note 78, at 12.

⁸⁹ Jill J. McCluskey, *Organic Foods: An Analysis of Asymmetric Information and Policy*, 29 AGRIC. & RES. ECON. REV. 1, 8 (2000).

⁹⁰ GOLAN ET AL., *supra* note 68, at 13.

⁹¹ *Id.*

⁹² McCluskey, *supra* note 89, at 1.

⁹³ *Id.*

⁹⁴ GOLAN ET AL., *supra* note 68, at 13.

⁹⁵ *Id.* at 9.

⁹⁶ *Id.*

⁹⁷ *Id.*

“organic” label.⁹⁸ The terms “wild” and “residue free” are not regulated by the USDA or third-party labeling services and can be used by all food processors.⁹⁹ Despite calls for clarification and proposals for regulation,¹⁰⁰ these terms remain undefined by the USDA; only informal guidance exists regarding their use.¹⁰¹

Third-party services enhance voluntary labeling claims by providing: (1) standard setting, (2) testing, (3) certification, and (4) enforcement.¹⁰² Standard setting establishes common terminology and quality levels for goods opting to display labels, facilitates market transactions, and may provide some consistency for consumers in the presentation of information.¹⁰³ Testing services strengthen quality claims, particularly for credence attributes, and, when supported by a single third-party service rather than individual producers, they can increase market efficiencies.¹⁰⁴ Consistent and reliably-performed certification has the potential to assure consumers that credence attributes and labeling claims are accurate.¹⁰⁵

While third-party services can increase the value of a label to consumers by providing credible and reliable information, enforcement is a critical component of labeling schemes.¹⁰⁶ Not only must inaccurate and fraudulent claims be penalized, but consumer misconceptions regarding the role of third-party certifiers must be

⁹⁸ Rita-Marie Cain Reid, *Alternative Organic: Legal Issues in Marketing Uncertified Organic Products*, 73 FOOD & DRUG L.J. 570, 595–96 (2018); Chris Arnold, *The Truth About Organic Certification*, GRIT (2013), <https://www.grit.com/departments/organic-certification-zmgz13mjzgou> [<https://perma.cc/B4KM-5W49>].

⁹⁹ Watnick, *supra* note 18, at 55–56.

¹⁰⁰ See Product Labeling: Use of the Voluntary Claim “Natural” in the Labeling of Meat and Poultry Products, 74 Fed. Reg. 46951 (proposed Sept. 14, 2009) (codified at 9 C.F.R. pt. 317, 381).

¹⁰¹ See, e.g., *Meat and Poultry Labeling Terms*, USDA FOOD SAFETY & INSPECTION SERV. (Aug. 10, 2015), <https://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/food-labeling/meat-and-poultry-labeling-terms/meat-and-poultry-labeling-terms> [<https://perma.cc/P94S-GDPY>]; see also *Use of the Term Natural on Food Labeling, What is the Meaning of Natural on the Label of Food?*, U.S. FDA (Oct. 22, 2018), <https://www.fda.gov/food/food-labeling-nutrition/use-term-natural-food-labeling> [<https://perma.cc/J6KJ-N2VC>].

¹⁰² GOLAN ET AL., *supra* note 68, at 1, 9.

¹⁰³ *Id.* at 9.

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

¹⁰⁶ See *id.* at 11.

addressed.¹⁰⁷ Consumer understanding about and confidence in third-party labeling services is essential for their success.¹⁰⁸

Enforcement has been problematic for private firms and third-party service providers in the context of organic labeling.¹⁰⁹ As previously mentioned, most organic attributes fall into the credence category, and they cannot be observed by consumers, nor can they be evaluated prior to, during, or after purchase or use.¹¹⁰ This asymmetric information has the potential to incentivize fraudulent claims that products are organic.¹¹¹ If credence attributes like “organic” are not monitored and/or enforced, the price premium cannot be commanded,¹¹² and brand equity may be diminished.¹¹³ Further, consumers and private firms often lack the resources to investigate, or the authority to enforce, credence labeling claims, and are instead dependent upon the government for enforcement.¹¹⁴ The legal framework governing fraudulent and deceptive advertising, therefore, is the ultimate regulatory mechanism for the enforcement of voluntary labeling standards.¹¹⁵

2. Governmentally-Imposed/Mandatory Labeling

Historically, the government has proposed to intervene in food labeling in order to: (1) improve human health and safety; (2) respond to environmental hazards; (3) ensure fair competition; (4)

¹⁰⁷ Cf. Margarita Guilabert & John A. Wood, *USDA Certification of Food as Organic: An Investigation of Consumer Beliefs About the Health Benefits of Organic Food*, 18 J. FOOD PRODUCTS MARKETING 353, 354, 363–64 (2012) (researchers posited that consumers’ confirmatory bias that organic foods are healthier, safer, and/or more nutritious are inconsistent with the USDA organic labeling standards and label requirements that do not imply organic foods are safer); see generally Greg Northen, Comment, *Greenwashing the Organic Label: Abusive Green Marketing in an Increasingly Eco-Friendly Marketplace*, 7 J. FOOD LAW & POLY 101, 133–34 (2011) (increased awareness of green marketing, and the corresponding increase in potential fraudulent or misleading advertisements, creates an ideal atmosphere for increased enforcement of current regulations and creation of new regulations).

¹⁰⁸ GOLAN ET AL., *supra* note 68, at 11–12.

¹⁰⁹ Cf. GOLAN ET AL., *supra* note 68, at 10.

¹¹⁰ McCluskey, *supra* note 89, at 1.

¹¹¹ Cf. *id.* at 1–2.

¹¹² *Id.* at 8.

¹¹³ See generally Immonen, *supra* note 69, at 23–25 (illustrating that consumers are generally willing to pay a price premium for products that they perceive to be of greater quality).

¹¹⁴ See GOLAN ET AL., *supra* note 68, at 10.

¹¹⁵ *Id.*

deflect international trade disputes; (4) support domestic food-related businesses; and (5) increase consumer awareness and knowledge.¹¹⁶ Table 1.1 below illustrates major U.S. food labeling laws and/or events between 1938 and 2016.¹¹⁷

The government may require labeling information or enforce voluntary labeling programs when there is asymmetric, imperfect, or missing information or when private consumption decisions result in externalities.¹¹⁸ As previously mentioned, the organic food market is one in which asymmetric information is an issue, and consumers's purchasing and consumption choices may not reflect their preferences.¹¹⁹ Some unscrupulous sellers in the organic sector know, but may not disclose, relevant information to consumers, which is a particular concern given the credence attributes associated with organic foods.¹²⁰ Government intervention in these situations seeks to redress asymmetry problems and increase market efficiency vis-à-vis implementation or enforcement of labeling requirements.¹²¹ While ambiguous or imperfect information may be difficult to convey, clear and concise labels can mitigate problems for consumers associated with asymmetric information.¹²²

¹¹⁶ *Id.* at iv, 1.

¹¹⁷ *See infra* Table 1.1.

¹¹⁸ *See* GOLAN ET AL., *supra* note 68, at 13–14.

¹¹⁹ *See generally* McCluskey, *supra* note 89, at 8 (stating that in the market for quality-differentiated food products, consumers cannot directly observe the quality of the goods even after consumption).

¹²⁰ *Id.* at 4–8; *see also, e.g.*, Donna M. Byrne, *Cloned Meat, Mandatory Labeling, and Organic Oreos*, 8 PIERCE L. REV. 31, 48–55 (2009).

¹²¹ GOLAN ET AL., *supra* note 68, at 13–14.

¹²² *Id.* at 14.

Table 1.1. U.S. Food Labeling between 1938 and 2016¹²³

Date	Title of the Act	Small Description	U.S. Code
1938	The Federal Food, Drug, and Cosmetic Act (FDCA)	Food labels must disclose food name, net weight, and the name and address of the manufacturer and distributor.	21 U.S.C. §§ 301, et seq.
1946	The Agricultural Marketing Act (AMA)	Farm Credit Administration protects and stabilizes interstate and foreign commerce in the marketing of agricultural commodities and agricultural food products and prevents and controls surpluses in agricultural commodities.	7 U.S.C. §§ 1621, et seq.
1957	The Poultry Products Inspection Act (PPA)	The USDA is authorized to inspect and regulate poultry products and labeling.	21 U.S.C. §§ 451, et seq.
1966	The Fair Packaging and Labeling Act (FPLA)	Household packages ("consumer commodities") labels must disclose net contents, identity of commodity, and the name and address of the manufacturer, packer, or distributor.	15 U.S.C. §§ 1451, et seq.
1990	The Organic Food Production Act (OFPA)	The USDA is required to establish standards, assure consistency, and facilitate interstate commerce of organically produced food products.	7 U.S.C. §§ 6501, et seq.
1990	The Nutrition Labeling and Education Act (NLEA)	This Act amended Section 301 of the FDCA. The FDA requires nutrition labeling on most food products. Nutrient content (i.e., "high fiber," "low fat," etc.) and health claims must satisfy agency regulations.	21 U.S.C. § 301
1994	The Dietary Supplement Health and Education Act (DSHEA)	This Act amended several sections of the FDCA. Under this Act, dietary supplements are not food products and are thus subject to less stringent labeling requirements.	21 U.S.C. §§ 301, 321, 343, 343-2, 350b, 42 U.S.C. § 287c-11
2016	The National Bioengineered Food Disclosure Standard (NBFDS)	Scannable QR codes or mandatory on-package labels are required for the bioengineering disclosure on food products.	7 U.S.C. § 1639(b)(2)(D)

iii. *The Costs and Benefits of Mandatory Labeling*

Governmental mandatory food labeling and/or enforcement of voluntary labeling schemes may be an appropriate policy choice if they are able to more efficiently address market imbalances associated with asymmetric information than are alternative labeling programs provided by third-parties or private firms.¹²⁴ It is difficult, however, to measure, then weigh, the costs and benefits of these labeling schemes in this context.¹²⁵

¹²³ See, e.g., *Milestones in U.S. Food Law*, N.D. ST. U., <https://www.ag.ndsu.edu/foodlaw/overview/history/milestones> [https://perma.cc/J6XW-P5UE].

¹²⁴ See, e.g., McCluskey, *supra* note 89, at 48.; GOLAN ET AL., *supra* note 68, at 17–18.

¹²⁵ Cf. Paulo Nunes & Laura Onofri, *The Profile of a "Warm Glower:" A Note on Consumer's Behavior and Public Policy Implications* (Fondazione Eni Enrico Mattei, Working Paper No. 113, 2004); GOLAN ET AL., *supra* note 68, 17–18.

Benefits, on the one hand, include more informed consumption, product reformulation and innovation, increased product quality, and consumer confidence.¹²⁶ Product reformulation occurs if producers seek to eliminate negative product attributes rather than disclose negative attributes on the label.¹²⁷ This reformulation can lead to more socially responsible food products.¹²⁸ The transformation process is communicated on the label, and it could generate a competitive differential for the producer relative to firms increasing asymmetric information between producers and consumers by distributing deceptive and misleading labeling.¹²⁹

The government, however, will incur many costs to initiate, administer, and enforce mandatory labeling programs.¹³⁰ Industry program costs, on the other hand, are typically passed on to the consumer.¹³¹ This can have a regressive impact on poor, less educated consumers who may pay for labeling information that they do not value.¹³²

Smaller industry participants may be at a competitive disadvantage if the increased price per-food-unit does not cover the additional labeling costs.¹³³ There also may be an additional cost burden if too much information is included on the label, causing consumer confusion and inhibiting purchasing decisions.¹³⁴ Standards should align with consumer preferences and capabilities.¹³⁵

¹²⁶ GOLAN ET AL., *supra* note 68, at 16.

¹²⁷ *Id.*; but see Giuseppe Marotta, Mariarosaria Simeone & Concetta Nazzaro, *Product Reformulation in the Food System to Improve Food Safety. Evaluation of Policy Interventions*, 74 APPETITE 107, 114 (2013).

¹²⁸ GOLAN ET AL., *supra* note 68, at 16.

¹²⁹ *Cf.* Marotta, *supra* note 127, at 114.

¹³⁰ GOLAN ET AL., *supra* note 68, at 16.

¹³¹ *Id.*

¹³² *Id.*

¹³³ *Id.* at 16–17; see Mel Scott & Richard Bruce, *Five Stages of Growth in Small Business*, 20 LONG RANGE PLANNING 45, 48–52 (1987).

¹³⁴ See, e.g., Lessing, *supra* note 57, at 475–76; Jason J. Czarnezki et al., *Creating Order Amidst Food Eco-Label Chaos*, 25 DUKE ENVTL. L. & POL'Y F. 281, 282 (2015), available at <https://perma.cc/ZQR9-L43V>; GOLAN ET AL., *supra* note 68, at 17.

¹³⁵ GOLAN ET AL., *supra* note 68, at 36–37.

Accordingly, it is difficult to determine if mandatory labeling is an effective, or the most effective, policy tool.¹³⁶ Labeling may be more effective than alternate policy options, i.e., bans, quotas, taxes, production and marketing practice regulation, and educational programs, to address problems of asymmetric information, yet information-based policies such as labeling are the least responsive when externalities are involved.¹³⁷

4. Background Literature: Theory of Confirmation Bias: A Cognitive, Psychosocial Theory Examining Consumer Perceptions of Organic Labels

If there is information asymmetry in a particular market, consumers do not have sufficient information and cannot make rational purchasing decisions.¹³⁸ This results in limited consumer cognitive ability referred to as “bounded rationality.”¹³⁹

There is no scientific consensus that organic food products are “healthier” than conventionally produced food.¹⁴⁰ However, many consumers infer that the USDA organic label is an endorsement of healthy, safe, and nutritious food products.¹⁴¹ Conversely, there does appear to be a scientific consensus that food that contains a genetically modified organism (“GMO”) or has been genetically modified (“GM”) is as safe as conventional food, yet consumers report that foods labeled GMO are less safe, healthy, or environmentally-friendly than foods with other labels.¹⁴² These results may be explained by confirmation bias.

¹³⁶ *Id.* at 17–18; *Cf.* Byrne, *supra* note 120, 72–79.

¹³⁷ GOLAN ET AL., *supra* note 68, at 15.

¹³⁸ Marotta et al., *supra* note 127, at 108–09.

¹³⁹ *Id.*; see also Andrew Johnston, *Governing Externalities: The Potential of Reflexive Corporate Social Responsibility* 1, 1–2 (University of Cambridge Centre for Business Research Working Paper No. 436, 2012).

¹⁴⁰ See Guilabert & Wood, *supra* note 107, at 364.

¹⁴¹ *Id.* at 354.

¹⁴² Sax & Doran, *supra* note 15, at 631. These authors also note that “[t]housands of years of conventional breeding mean that [nearly all of] the food supply is genetically modified. Put differently, consumers are eating domesticated crops that are no longer genetically identical to the wild-type variety — either through conventional breeding or GMO/GE technology.” *Id.* at 630.

Confirmation bias is the unconscious tendency to seek out and retain evidence in support of a predetermined belief, conjecture, or hypothesis and to ignore contradictory evidence.¹⁴³ Some consumers maintain a strong positive disposition toward organic food products.¹⁴⁴ Other consumers consider “organic” food products to be expensive and potentially not “fresh” or “sanitary.”¹⁴⁵

Consumers can be motivated to defend their beliefs or to refute a particular claim.¹⁴⁶ For example, in some markets, consumers associate quality labeling with quality food products.¹⁴⁷ In the organic market segment, consumers’s positive or negative organic beliefs support their position and/or organic hypothesis.¹⁴⁸ In the confirmatory bias phenomenon, consumers’s expectations serve as a greater confirmation than the taste rating of the organic food product.¹⁴⁹

Confirmation bias connotes a one-sided, case-building process in which consumers selectively acquire and use evidence.¹⁵⁰ Consumers purchase organic foods because of their prior beliefs about these products, and they generally perceive a label such as “USDA Organic” as a guarantee that the product is consistent with their beliefs.¹⁵¹ Similarly, positive confirmation bias may explain why consumers prefer an organically-labeled food product to an identical conventional food product in a taste test.¹⁵²

¹⁴³ See, e.g., Guilabert & Wood, *supra* note 107, at 354, 359; Bettina J. Casad, *Confirmation Bias*, BRITANNICA, <https://www.britannica.com/science/confirmation-bias> [<https://perma.cc/JWV9-SAR5>].

¹⁴⁴ See generally Dimitri & Oberholtzer, *supra* note 3 (explaining consumer preferences and the relationship with consumer characteristics).

¹⁴⁵ See *id.*; see Guilabert & Wood, *supra* note 107, at 356.

¹⁴⁶ Raymond S. Nickerson, *Confirmation Bias: A Ubiquitous Phenomenon in Many Guises*, 2 REV. GEN. PSYCHOL. 175, 176 (1998).

¹⁴⁷ See, e.g., Immonen, *supra* note 69, at 11.

¹⁴⁸ See Guilabert & Wood, *supra* note 107, at 354, 359.

¹⁴⁹ *Id.* at 354.

¹⁵⁰ Nickerson, *supra* note 146, at 175.

¹⁵¹ Yiridoe et al., *supra* note 77, at 195, 197.

¹⁵² See, e.g., Guilabert & Wood, *supra* note 107, at 354.

5. Regulatory Correction for Asymmetric Information: The Impact of Consumer Confirmation Bias

There appears to be a lack of meaningful literature to explain the disconnect between the economic theory of asymmetric information in the context of government intervention in labeling schemes and the cognitive, psychosocial theory of confirmation bias in consumer decision-making as both of these theories relate to and interact with organic food.¹⁵³ If, theoretically, the purpose of government intervention is to address information asymmetry, its intervention should align with consumer expectations, understandings, preferences, and capabilities.¹⁵⁴ Instead, in the context of organic food labeling, the USDA sought to establish national standards for marketing products, to facilitate interstate commerce, and to provide assurances of quality claims.¹⁵⁵ The regulatory process that it produced conformed more to the practices and interests of the organic food producers and processors and private entities/firms than it aligned with consumer preferences regarding health, nutrition, and environmental protection.¹⁵⁶

6. Literature Review-Survey Data

With the previously summarized literature as background, we focused next on identifying survey data regarding U.S. consumer perceptions of the definition of the term “organic” with regard to food products and/or consumer motivations for purchasing “organic” food. The data reveal that consumer beliefs about organic foods fall into a number of categories: (1) organic foods contain few or no chemicals; (2) organic foods are healthier than conventionally produced foods; (3) organic foods taste better than conventionally produced foods; (4) organic foods are better for the environment than are conventionally produced foods; and, concomitantly, (5) organic foods are locally-

¹⁵³ See, e.g., GOLAN ET AL., *supra* note 68, at 27; Lessing, *supra* note 57, at 442–43.

¹⁵⁴ See generally GOLAN ET AL., *supra* note 68, at 27 (explaining the goals of federal intervention in food labeling).

¹⁵⁵ *Id.*

¹⁵⁶ Lessing, *supra* note 57, at 442–43.

grown.¹⁵⁷ Consumers also express ethical and philosophical reasons for purchasing organic food.¹⁵⁸ We will discuss the data relevant to each of these perceptions and motivations and will consider how many appear to be inconsistent with the USDA's labeling scheme.

There are a number of surveys reporting that consumers believe organic foods contain few or no chemicals.¹⁵⁹ In one survey, for example, 70 percent of consumers responded that they believed that organic food is "safer" and more nutritious than conventional products.¹⁶⁰ In a separate USDA study, a majority of those surveyed declared that they believed organic food contained fewer chemicals than foods produced industrially.¹⁶¹ However, while organic food products contain fewer pesticide residues than their conventionally-grown counterparts, organic fruits and vegetables do contain pesticides.¹⁶² Chemicals that have not been synthetically manufactured, and even a small number of synthetically-manufactured chemicals such as copper sulfate, have been approved for use in organic farming by the NOSB.¹⁶³ In some studies, organic produce has tested positive for pesticide residues over 20 percent of the time, which clearly is inconsistent with consumer definitional expectations.¹⁶⁴

This relates to consumers's strong convictions about their healthy lifestyles. Many consumers believe the term "organic" relates to healthier and more nutritious food products,¹⁶⁵ and they buy organic food because of their perceived personal health

¹⁵⁷ *Id.* at 441–43.

¹⁵⁸ *Id.* at 443–45.

¹⁵⁹ *See, e.g.*, Hank Campbell, *Organic Label Misleads Consumers*, THE DETROIT NEWS (Sept. 19, 2018), <https://www.detroitnews.com/story/opinion/2018/09/20/organic-label-misleads-consumers/1347314002/> [<https://perma.cc/KV3J-J8L7>]; Watnick, *supra* note 18, at 57–58.

¹⁶⁰ Campbell, *supra* note 159.

¹⁶¹ Watnick, *supra* note 18, at 57–58.

¹⁶² *See, e.g.*, Andrew Porterfield, *Why the 'chemical free' organic industry has a 'pesticide problem'*, GENETIC LITERACY PROJECT (May 10, 2019), <https://geneticliteracyproject.org/2019/05/10/why-the-chemical-free-organic-industry-has-a-pesticide-problem/> [<https://perma.cc/DHV3-EBYH>].

¹⁶³ Hannah Ritchie, *Is organic really better for the environment than conventional agriculture?*, OUR WORLD IN DATA (Oct. 19, 2017), <https://ourworldindata.org/is-organic-agriculture-better-for-the-environment> [<https://perma.cc/PQK5-RLZ2>].

¹⁶⁴ *See* A. Christine Green, *The Cost of Low-Price Organics: How Corporate Organics Have Weakened Organic Food Production Standards*, 59 ALA. L. REV. 799, 807–08 (2008).

¹⁶⁵ Campbell, *supra* note 159.

concerns.¹⁶⁶ A 2004 Whole Foods survey reported that 58 percent of consumers believed that organics were better for their health.¹⁶⁷ They appear to be convinced, like we were, that organic foods are healthier than conventionally produced foods for themselves and for their families,¹⁶⁸ and they will not let publicity regarding pesticide levels in these food products negatively affect their purchase and consumption habits.¹⁶⁹ This is especially true of consumers who are millennials or younger Gen Xers, Hispanic or Latino, live in the Northeast or Pacific regions, have post-graduate academic degrees, have younger children in the household, and have an annual household income of over \$100,000.¹⁷⁰

These convictions appear to have support in the literature. Reviews of multiple studies report that organic foods contain higher levels of “vitamin C, iron, phosphorus, and magnesium than do conventional foods.”¹⁷¹ Further, recent meta-analyses indicate that organic foods are higher in antioxidants, contain less cadmium, and have lower pesticide levels than conventional alternatives.¹⁷² In organic milk and chicken, reports have identified higher levels of total beneficial phenols and omega-3 fatty acids.¹⁷³ Additionally, as mentioned above, consumption of organic food products may limit exposure to pesticide residue and antibiotic-resistant bacteria.¹⁷⁴

¹⁶⁶ David Pearson et al., *Organic Food: What We Know (and Do Not Know) About Consumers*, 26 RENEWABLE AGRIC. & FOOD SYS. 171, 172–73 (2010).

¹⁶⁷ Green, *supra* note 164, at 804–05.

¹⁶⁸ Watnick, *supra* note 18, at 58.

¹⁶⁹ Press Release, NPD, Will Consumers of Organic Foods Be Swayed By Negative Publicity on the Quality and Safety of These Foods? Not Likely (May 15, 2018), <https://www.npd.com/wps/portal/npd/us/news/press-releases/2018/will-consumers-of-organic-foods-be-swayed-by-negative-reports-on-the-quality-and-safety-of-these-foods-not-likely/> [<https://perma.cc/F6RV-R29L>].

¹⁷⁰ *Over Half of U.S Consumers Buying More Natural, Organic Foods*, FEEDSTUFFS (May 18, 2018), <https://www.feedstuffs.com/news/over-half-us-consumers-buying-more-natural-organic-foods> [<https://perma.cc/Y7HB-FCH2>].

¹⁷¹ Walter J. Crinnion, *Organic Foods Contain Higher Levels of Certain Nutrients, Lower Levels of Pesticides, and May Provide Health Benefits for the Consumer*, 15 ALTERNATIVE MED. REV. 4, 6 (2010).

¹⁷² Marcin Barański et al., *Higher Antioxidant and Lower Cadmium Concentrations and Lower Incidence of Pesticide Residues in Organically Grown Crops: A Systematic Literature Review and Meta-Analyses*, 112 BRIT. J. NUTRITION 794, 803–05 (2014).

¹⁷³ Crystal Smith-Spangler et al., *Are Organic Foods Safer or Healthier Than Conventional Alternatives? A Systematic Review*, 157 ANNALS INTERNAL MED. 348, 353 (2012).

¹⁷⁴ *Id.* at 354–55.

However, while data suggest that consumption of organic food may have some health benefits, such as a reduced risk of allergic disease and obesity, researchers caution against drawing inferences regarding causation given that organic food consumers generally lead healthier lifestyles, a factor that confounds any firm conclusions.¹⁷⁵

Other investigators note that there are little-to-no published data that quantify the extent to which organic food consumption may affect human health¹⁷⁶ and that there are some reports concluding that there is no increased health benefit associated with consuming organically produced foods.¹⁷⁷ Organic does not always signify ‘healthy.’ For example, products can be high in saturated fats or other unhealthy compounds and still be labeled organic.¹⁷⁸ Because their perceived health benefits motivate consumers to purchase organic food products,¹⁷⁹ it appears prudent to recall that the USDA organic label was designed as a marketing tool, “not a statement about food safety” or a “value judgment about nutrition or quality.”¹⁸⁰

As for more subjective measures, consumers also believe that the “organic” or similar labels relate to tastier and higher quality food products.¹⁸¹ According to a Whole Foods 2004 survey, 32 percent of those surveyed opined that organic food tastes better than other foods.¹⁸² Others felt organic foods were of a higher quality (42 percent).¹⁸³ Similarly, in response to a USDA Diet and Health Knowledge Survey measuring consumer perceptions of “organic,” 79.1 percent of men age 20 and over and 86.6 percent of women in the same age range responded that taste was very important to their purchasing decision.¹⁸⁴ These perceptions are subjective, but sensory

¹⁷⁵ Axel Mie et al., *Human Health Implications of Organic Food and Organic Agriculture: A Comprehensive Review*, 16 ENVTL. HEALTH 111, 16 of 22 (2017).

¹⁷⁶ Marcin Barański et al., *Effects of Organic Consumption on Human Health: The Jury is Still Out!*, 61 FOOD & NUTRITION RES. 1, 4 (2017).

¹⁷⁷ Pearson et al., *supra* note 166, at 173.

¹⁷⁸ Jack Bobo & Sweta Chakraborty, *Predictably Irrational Consumer Food Preferences*, 7 EUR. J. RISK REG. 604, 604–05 (2016).

¹⁷⁹ *See id.* at 604.

¹⁸⁰ Campbell, *supra* note 159.

¹⁸¹ FEEDSTUFFS, *supra* note 170.

¹⁸² Green, *supra* note 164, at 805.

¹⁸³ *Id.*

¹⁸⁴ AGRIC. RESEARCH SERV., U.S. DEP’T OF AGRIC., NFS REPORT. NO. 96-4, RESULTS FROM USDA’S 1994-96 DIET AND HEALTH KNOWLEDGE SURVEY 1, 85 (2001).

research results generally have been equivocal as to whether organic food tastes better than conventional food.¹⁸⁵ With regard to quality, some consumers were of the opinion that organic foods generally were of higher quality than their industrial counterparts.¹⁸⁶ As with taste, research from numerous prestigious publications and institutions has not found any *significant* difference in the “quality” of organic versus conventionally grown food.¹⁸⁷

Consumers also believe that foods with the organic label are better for the environment than their unlabeled peers.¹⁸⁸ In another Whole Foods study, 58 percent of the respondents reported choosing organic products because they believed these products were better for the environment.¹⁸⁹ Many consumers report preferring organic farming because it is perceived as preserving soil fertility, respecting animal welfare, reducing greenhouse gas emissions, conserving ecosystem services, and generally being sustainable.¹⁹⁰ Some contend that organic farming causes less damage to the environment than the conventional form.¹⁹¹ However, there is ambiguity in the scientific literature about the impact of organic farming on the environment.¹⁹² In a fairly recent meta-analysis of results from published comparisons of 742 organic and conventional agricultural systems across a range of environmental impact categories, a life-

¹⁸⁵ See, e.g., RICHARD C. THEUER, DO ORGANIC FRUITS AND VEGETABLES TASTE BETTER THAN CONVENTIONAL FRUITS AND VEGETABLES?, THE ORGANIC CTR. (Sept. 2006), <https://organic-center.org/reportfiles/TasteReport.pdf> [<https://perma.cc/6QRB-FAQY>] (showing varied results in comparative sensory testing).

¹⁸⁶ Green, *supra* note 164.

¹⁸⁷ Cf. ALAN DANGOUR ET AL., NUTRITION AND PUBLIC HEALTH INTERVENTION RESEARCH UNIT LONDON SCHOOL OF HYGIENE & TROPICAL MEDICINE, REPORT FOR THE FOOD STANDARDS AGENCY, COMPARISON OF PUTATIVE HEALTH EFFECTS OF ORGANICALLY AND CONVENTIONALLY PRODUCED FOODSTUFFS: A SYSTEMATIC REVIEW 1–2 (July 2009), [<https://perma.cc/LMU5-7YVV>].

¹⁸⁸ Green, *supra* note 164, at 805.

¹⁸⁹ *Id.*

¹⁹⁰ MAURIZIO CANAVARI ET AL., EU PROJECT ECROPOLIS, NO. 218477-2, SUMMARY REPORT ON SENSORY-RELATED SOCIO-ECONOMIC AND SENSORY SCIENCE LITERATURE ABOUT ORGANIC FOOD PRODUCTS 1, 6 (Nov. 2009), https://orgprints.org/17208/2/deliverable_1_2_sensory_literature.pdf [<https://perma.cc/EU69-HVC3>].

¹⁹¹ Pearson et al., *supra* note 166, at 173.

¹⁹² See Michael Clark & David Tilman, *Comparative Analysis of Environmental Impacts of Agricultural Production Systems, Agricultural Input Efficiency, and Food Choice*, 12 ENVTL. RES. LETTERS 1, June 16, 2017, <https://iopscience.iop.org/article/10.1088/1748-9326/aa6cd5/pdf> [<https://perma.cc/4L82-3TRL>].

cycle analysis revealed that organic farming had less dramatic environmental impacts in some categories, such as energy use and biodiversity, and conventional agriculture for others, including land use and eutrophication potential.¹⁹³

Consumer perceptions, and possible misconceptions, about organic and environmental impacts correlate with their belief that organic foods are locally-grown: 57 percent of consumers in one study reported associating organic with support for small local farms.¹⁹⁴ However, organic food purchases in large grocery stores, which often carry global brands, do not provide significant support to local organic food economies.¹⁹⁵ Cumbersome federal organic regulations favor large, industrial farms,¹⁹⁶ and, as large agribusinesses are consolidating their organic positions, organic food is increasingly being imported to the U.S. from around the globe.¹⁹⁷

Imports of organic products implicate more than the locally-grown concern. In 2013, the U.S. imported \$1.3 billion worth of organic food products, including bananas, coffee, olive oil, and mangos from Mexico, Italy, Peru, Columbia, and France.¹⁹⁸ Forty percent of U.S. organic food is imported from over 100 foreign countries.¹⁹⁹ China is a growing exporter of its organic food to the U.S.,²⁰⁰ yet Chinese organic farmers are permitted to use synthetic materials.²⁰¹ As is true with many countries that export organic foods to the U.S., food safety laws in China are relatively new compared to the U.S. system.²⁰² Despite documented air and water pollution and soil contamination issues in China, the USDA lets years go by between on-site inspections of its accredited certifiers or audits of organically-labeled food products there.²⁰³

¹⁹³ *Id.*

¹⁹⁴ Lessing, *supra* note 57, at 443.

¹⁹⁵ A. Bryan Endres, *An Awkward Adolescence in the Organics Industry: Coming to Terms with Big Organics and Other Legal Challenges for the Industry's Next Ten Years*, 12 DRAKE J. AGRIC. L. 17, 26, 29–30 (2007).

¹⁹⁶ *See, e.g.*, Lessing, *supra* note 57, at 444.

¹⁹⁷ Endres, *supra* note 195, at 29.

¹⁹⁸ Porterfield, *supra* note 162.

¹⁹⁹ Liu, *supra* note 36, at 332.

²⁰⁰ Porterfield, *supra* note 162.

²⁰¹ Liu, *supra* note 36, 358.

²⁰² *Id.* at 363.

²⁰³ *See, e.g.*, Roger Blobaum, *Inside Organics: Surprise NOP Auditor Visits to Organic Farms and Processors in China is Overdue Response to Concerns About Integrity of*

Finally, many consumers are motivated by ethical and philosophical beliefs to purchase organic food.²⁰⁴ Religious beliefs, for example, impact consumer organic food purchasing decisions.²⁰⁵ Dharma Realm Buddhists believe that GMO foods violate the Buddhist practice of taking responsibility for the welfare of all sentient beings, and they have resolved that:

[G]enetic engineering of food is not in accord with the teachings of Buddhism. Buddhism considers genetic engineering of foods to be unwarranted tampering with the natural patterns of our world at the most basic and dangerous levels. DRBA believes that the lack of labeling of genetically engineered food is a de facto violation of religious freedom.²⁰⁶

Others have a deep commitment to living in harmony with nature, and, for them, “[o]rganic food is not just about a product; it is a philosophy in which the process of production is as important as the final result.”²⁰⁷ Ethical reasons vary and abound, including humanitarian concerns about corporatism, farm workers, and animal protection, as well as many of the concerns noted above, such as those about the environment.²⁰⁸ These beliefs often are confounded by or misaligned with the reality of the production and regulation of organic foods.²⁰⁹

Organic Food Imports, ROGER BLOBAUM (Sept. 2007), <https://rogerblobaum.com/surprise-nop-auditor-visits-to-organic-farms-and-processors-in-china-is-overdue-response-to-concerns-about-integrity-of-organic-food-imports-sept-07/> [<https://perma.cc/FKH7-988M>].

²⁰⁴ Green, *supra* note 164, at 805.

²⁰⁵ See, e.g., Ron Epstein, Address at the City of Ten Thousand Buddhas: Buddhism and Measure H: Banning the Growing and Raising of Genetically Modified Organisms in Mendocino County (Feb 14, 2004), <http://online.sfsu.edu/rone/GEessays/BuddhismH.htm> [<https://perma.cc/Q2RL-DNYK>].

²⁰⁶ *Id.*

²⁰⁷ Peter Hoffman, *Going Organic, Clumsily*, N.Y. TIMES (Mar. 24, 1998), <https://www.nytimes.com/1998/03/24/opinion/going-organic-clumsily.html> [<https://perma.cc/SJ5P-DXYZ>].

²⁰⁸ Watnick, *supra* note 18, at 58–9.

²⁰⁹ See *id.* at 59–64.

III. ANALYSIS AND PROPOSALS

While our review of the literature did reveal that we were not alone in our confusion about the organic label, that revelation did not clarify what impact, if any, this lack of definitional precision might have on the environment. Nor did it relieve our disillusionment or provide a clear path forward toward definitional clarity. Additionally, the review did not offer obvious solutions to the apparent disconnect between the theory of asymmetric information in the context of the USDA's organic labeling scheme and the confirmation bias in organic consumer decision-making.

With regard to the environmental impact of consumer confusion regarding labeling, there appear to be little direct data that report measurements or other metrics. However, there are numerous sources documenting the benefits to the environment of organic agriculture more generally.²¹⁰ Sustainable agriculture is characterized by production systems that support the health of soils and ecosystems adapted to local conditions.²¹¹ Those who practice this form of farming often do so with a conscience intent to protect land for future generations.²¹² In the tradition of Rachel Carson, farmers who utilize sustainable farming methods focus on ecologically-sound, nonchemical agricultural techniques and technology or those that use less persistent chemicals.²¹³ In North America, for example, farmers engaged in sustainable agriculture apply far less inorganic fertilizer than do their counterparts who farm conventionally and who more commonly engage in chemical-intensive production.²¹⁴ Further, farmers in the organic sector also

²¹⁰ See, e.g., Tiziano Gomiero et al., *Environmental Impact of Different Agricultural Management Practices: Conventional vs. Organic Agriculture*, 30 CRITICAL REV. IN PLANT SCI. 95, 96 (2011); RACHEL CARSON, SILENT SPRING (1962); Kathleen Richards, *Female Farmers in the East Bay Cultivate a Sense of Community*, EAST BAY EXPRESS (Mar. 28, 2018), <https://www.eastbayexpress.com/oakland/the-women-who-grow/Content?oid=14545785> [<https://perma.cc/CZ8J-RT6P>].

²¹¹ Tiziano Gomiero et al., *supra* note 210, at 96.

²¹² See Abigail Smith, *The Importance of Sustainable Agriculture*, PLUGANDPLAY, <https://www.plugandplaytechcenter.com/resources/importance-sustainable-agriculture/> [<https://perma.cc/NRV8-YV9C>].

²¹³ See Gomiero et al., *supra* note 210; see CARSON, SILENT SPRING, *supra* note 210; Richards, *supra* note 210.

²¹⁴ Cf. Mark Paul & Anders Fremstad, *Opening the Farm Gate to Women? Sustainable Agriculture in the United States* (Pol. Econ. Res. Inst., Working Paper No. 422,

only sparingly use heavy machinery, and they perform fieldwork such as planting, cultivating, and harvesting by hand.²¹⁵

These practices appear to result in positive environmental outcomes. Organic agricultural systems may “reduce [greenhouse gas emissions] GHG emissions and ... enhance carbon sequestration in the soil.”²¹⁶ Studies indicate that organic farms emit up to 20 percent less GHGs than conventional farms.²¹⁷ Additionally, organically managed soils have higher water retention and drainage capacity, thus reducing the need for irrigation and the risk of floods or droughts, the risks of which have been predicted to increase with climate change.²¹⁸

The economic choices made by many of those who participate in alternative farming also appear to benefit the environment. When sustainable farmers produce for local markets or work with ecologically-responsible distributors, they are acting to reduce lengthy food chains and minimize their carbon footprints.²¹⁹ As one example, organic farmers in the Western U.S. are able to choose Veritable Vegetable to move their food from farm to market.²²⁰ Veritable Vegetable is an organic produce distributor that operates a fleet of hybrid tractors and hybrid refrigeration units producing nearly zero emissions.²²¹ This fleet utilizes efficient routing, trailer skirts, and sophisticated on-vehicle technologies such as tire pressure monitoring, inflation systems, and wind resistance inserts

2016), <https://www.peri.umass.edu/media/k2/attachments/WP422new.pdf> [<https://perma.cc/6EW8-XBVM>].

²¹⁵ FARNWORTH & HUTCHINGS, *supra* note 1, at 21.

²¹⁶ Nadia El-Hage Scialabba & Maria Muller-Lindenlauf, *Organic Agriculture and Climate Change*, 25 RENEWABLE AGRIC. & FOOD SYS. 158, 164 (2010).

²¹⁷ *Id.* at 159, 165. However, these authors caution that “carbon sequestration has a mitigation effect [in organic agriculture] only if the sequestration is permanent. There are scientific results showing that the carbon stored by no-tillage systems is released by a single ploughing ...” *Id.* at 162.

²¹⁸ *Id.* at 160, 162.

²¹⁹ FARNWORTH & HUTCHINGS, *supra* note 1, at 2, 24.

²²⁰ Brian Straight, *Green Fleet of the Year: Veritable Vegetable: Veritable Vegetable was selected as Fleet Owner’s 2012 Green Fleet of the Year*, FLEETOWNER (Mar. 29, 2012), <https://www.fleetowner.com/running-green/green-fleet-year-veritable-vegetable#menu> [<https://perma.cc/MNQ4-KSCW>].

²²¹ *See id.* For more information about the history, operations, and business culture of Veritable Vegetable, see its website, <https://www.veritablevegetable.com/> [<https://perma.cc/D8NR-BH8H>].

to reduce fuel consumption.²²² As another example, local market sales not only provide alternative farmers with an opportunity to minimize their carbon footprints and decrease food chains, they also allow them to address animal welfare issues related to transportation before slaughter.²²³

With regard to the consumer confusion surrounding organic labeling, scholars and researchers analyzing the issue have provided some thoughts on the consumer confusion issue, the lawyers in particular. We were impressed with many of the proposals.²²⁴ However, as will be seen in the discussion to follow, few provide comprehensive practical solutions to the asymmetry situation so as to provide clarity for consumers. Nor do most provide pragmatic educational, marketing, or other assistance for small alternative farmers who do not participate in the USDA organic program but whose practices align with organic consumer expectations and are environmentally sustainable. Before we set forth the modest suggestions that we have formulated for these particular constituents, we will briefly summarize and review a number of the proposals in the literature.

A. Existing Proposals Regarding Consumer Understanding: Legal Solutions

As one might expect, the solutions proposed by the lawyers to address consumer confusion regarding organic labeling were primarily legal ones. These solutions include proposals to strengthen existing USDA rules regarding organic products and to enact additional, more stringent end product regulations in order to improve the likelihood that labeled products more consistently meet consumer expectations.²²⁵ This might include, according to one suggestion, more residue testing before organic food products are sold.²²⁶

²²² Straight, *supra* note 220.

²²³ FARNWORTH & HUTCHINGS, *supra* note 1, at 2, 24.

²²⁴ See, e.g., FARNWORTH & HUTCHINGS, *supra* note 1, at 2, 24; Watnick, *supra* note 18, at 73-77; Czarnecki et al., *supra* note 134, at 310.

²²⁵ Watnick, *supra* note 18, 73-77.

²²⁶ *Id.* at 76-77.

Several scholars have urged regulators to adopt new labeling regimes or to modify those currently in use. One such new regime would involve eco-labels for food based upon an environmental life-cycle analysis from production and use to distribution and disposal.²²⁷ The information conveyed by these labels would exceed the scope of that required by any existing labeling scheme, pursuant to the OFPA or otherwise, in an effort to ensure transparency and credibility for consumers.²²⁸ Another innovative suggestion involved the creation of a whole-system agriculture certification approach modeled on the Leadership in Energy & Environmental Design (“LEED”) green building certification program, an approach under which points would be awarded to farms for implementing sustainable practices.²²⁹ These specified categories would encompass all components of agricultural resilience, including the protection of biodiversity and ecosystem services, the conservation of water and soil, the use of sustainable materials, and the responsible production and disposal of wastes, as well as categories related to landscape, location, and social and labor considerations.²³⁰ This model of “whole-system” agricultural certification, similar to the environmental life-cycle analysis, would inform consumers that certain foods have been grown under resilient conditions and potentially could influence their purchasing habits.²³¹

Other scholars have proposed that regulators modify the existing national labeling scheme. One such modification would allow for more nuanced organic certification by codifying a number of “Organic Plus” standards that further product differentiation.²³² Another would create a labeling system that allows independent certifiers to create numerous labels that would supplement the USDA organic label on specific product attributes that address consumer perceptions of “organic,” such as the size or location of

²²⁷ Czarnecki et al., *supra* note 134, at 310.

²²⁸ *Cf. id.* at 305, 310.

²²⁹ Mary Jane Angelo & Joanna Reilly-Brown, *Whole-System Agricultural Certification: Using Lessons Learned from LEED to Build a Resilient Agricultural System to Adapt to Climate Change*, 85 U. COLO. L. REV. 689, 696–98 (2014).

²³⁰ *Id.* at 747–49.

²³¹ *Id.* at 755.

²³² Harrison, *supra* note 73, at 213, 232.

the farm of origin, the environmental sustainability of that farm's operations, and its social and labor conditions.²³³

Incentives and disincentives also have been suggested as a response to concerns regarding label messaging. One scholar recommended that the USDA expand its organic program to include incentives for supplemental labeling for value-added attributes such as locally produced, etc., for producers that exceed baseline organic standards.²³⁴ Conversely, to disincentivize misleading conduct, another author emphasized the importance of effective monitoring of labeling program requirements, whether by the government or an independent third-party.²³⁵ In the context of a governmental program, this same author also mentioned the possibility of criminal prosecution of program violators; independent program monitors can punish violators with bad publicity and/or civil lawsuits.²³⁶

Legal experts also proffered advice pertaining to specific issues. As one example, one legal commentator advanced a novel argument that producers of organic products might successfully petition the EPA to regulate the use of synthetic nitrate fertilizer on conventional farms.²³⁷ This argument is based upon the contention that a farm using nitrate fertilizer potentially qualifies as a "stationary source" pursuant to the Clean Air Act and thus would be subject to regulation by the EPA.²³⁸

Another novel approach extracted from the literature pertains to an individual's potential claims pursuant to international human rights treaty language.²³⁹ For those consumers seeking to know whether their food has been genetically modified for religious or dietary reasons, one legal

²³³ Lessing, *supra* note 57, 462.

²³⁴ Gholkar *supra* note 25, 1–2.

²³⁵ McCluskey *supra* note 89, at 7–8.

²³⁶ *Id.*

²³⁷ Bryce Y. Hatakeyama, Comment, *Massachusetts v. Environmental Protection Agency and the Organic Movement: Can the "USDA Organic" Label Save Us from Nitrous Oxide*, 17 SAN JOAQUIN AGRIC. L. REV. 109, 125–31 (2007-2008).

²³⁸ *Id.* at 128–31. The Clean Air Act defines a stationary source as, "any building, structure, facility, or installation which emits or may emit any air pollutant." 42 U.S.C. § 7411(a)(3) (2019).

²³⁹ Taiwo A Oriola, *Consumer Dilemmas: The Right to Know, Safety, Ethics and Policy of Genetically Modified Food*, 2002 SING. J. LEGAL STUD. 514, 566–68 (2002).

author postulated that consumers might justify a right to know and choose what to eat based upon an inalienable human right pursuant to the 1948 Universal Declaration of Human Rights; additionally, consumers may find support in certain Articles of the United Nations International Covenant on Civil and Political Rights, in the United Nations Guidelines for Consumer Protection (“UNGCP”), or in national constitutional and legal provisions guaranteeing consumer rights.²⁴⁰

At least one group of scholars approached the topic holistically, suggesting a number of realistic and practical options as well as legal and theoretical steps that might be taken to create a more sustainable food paradigm, or, in our view, a model that more closely aligns with consumer expectations.²⁴¹ Legally, this group proposes improved planning for alternative agricultural distribution and production systems; theoretically, the scholars recommend increased government support for local and regional food economies, and, practically, they suggest focusing on increased consumer awareness and availability of organic options and on direct marketing such as farmers markets and CSAs.²⁴²

1. Existing Proposals: Private Sector and Non-Profit Action

Many researchers reporting on the apparent information asymmetry situation that exists regarding organic food labeling have made little effort to craft solutions, nor do they exhort the government to intervene. Rather, they shift responsibility for implementing responses to interested third parties. For example, one study rather vaguely advised organic food “marketers” to acknowledge and devise strategies to address the ethical displacement of consumer concerns that may arise in certain organic food contexts.²⁴³ In a similar vein, one author discussed the one-on-one conversations that food sellers were having with the public at

²⁴⁰ *Id.* at 567–69.

²⁴¹ *See, e.g.*, Jason J. Czarnecki, *Food, Law & The Environment: Informational and Structural Changes for a Sustainable Food System*, 31 UTAH ENVTL. L. REV. 263 (2011).

²⁴² *Id.* at 278–90.

²⁴³ *See, e.g.*, Gemma C. Harper & Aikaterini Makatouni, *Consumer Perception of Organic Food Production and Farm Animal Welfare*, 104 BRIT. FOOD J. 287, 298 (2002).

farmer's markets.²⁴⁴ These, according to the author, increase "food literacy," as would a "Consumers' Organic Food Literacy Packet."²⁴⁵

2. Existing Proposals: The "More Research" Solution

Some of the most well-documented studies suggest that more research is needed to more clearly understand the relationships between the regulatory definition of "organic," the organic food consumers's perceptions thereof, and their purchasing habits. As one study concludes, "there is a large body of consumers who buy organic food on a more occasional basis, but [they] lack the knowledge, financial resources, conviction, or simply the inclination to buy more regularly . . . [F]urther research . . . is required to complete our understanding."²⁴⁶ Expressing surprise at the extremely limited available evidence, one researcher proclaimed that it "is essential that future research . . . is better designed . . ."²⁴⁷

3. Existing Alternative Labeling and Certification Schemes

For those who already have withdrawn from the national labeling program or who never opted in, there are existing alternative domestic and international certifiers with standards exceeding those of the USDA.²⁴⁸ For example, some organic farmers have become so frustrated with the USDA program that they are advocating its total abandonment.²⁴⁹ Others are developing an "add-on organic label for organic farmers who are willing to meet the expectations of discerning consumers who are demanding real organic food."²⁵⁰

²⁴⁴ von Sehlen, *supra* note 8, at 46, 68.

²⁴⁵ *Id.* at 68.

²⁴⁶ Pearson et al., *supra* note 166, at 175.

²⁴⁷ DANGOUR ET AL., *supra* note 187, at 35.

²⁴⁸ Lessing, *supra* note 57, at 471–73.

²⁴⁹ Jasper Craven, *Is the USDA the Latest Site of Corporate Takeover in the Trump Administration?*, THENATION.COM (Mar. 13, 2018), <https://www.thenation.com/article/is-the-usda-the-latest-site-of-corporate-takeover-in-the-trump-administration/> [<https://perma.cc/N4PZ-LK9F>].

²⁵⁰ *Id.*

Other options exist for those who have become disenchanted with, or find cumbersome, the NOP standards. California Certified Organic Farmers, or CCOF, is one of the oldest and largest organic certification agents in the U.S.²⁵¹ In fact, with its roots in Rodale's *Organic Gardening and Farming* magazine and founded in 1973 by member farmers, CCOF's organic certification standards served as a reference for the USDA's NOP, which, as set forth above, was finalized in 2002.²⁵² Today, CCOF's certification represents compliance with the U.S. and many international standards, and it provides market access to numerous export markets for clients throughout the United States, Canada, and Mexico.²⁵³

The Rodale Institute also has been involved more recently in a partnership with Patagonia and Dr. Bronner's, the maker of Castile soaps, to create yet another new food label, the Regenerative Organic Certification ("ROC") label, for products produced with ingredients from farms that use certified regenerative farming systems.²⁵⁴ Regenerative farming systems are designed to "build healthy soil, boost biodiversity, and draw carbon from the atmosphere via methods like cover cropping and minimum tillage."²⁵⁵

Certified Naturally Grown ("CNG"), a private non-profit, is another large player in the organic labeling and certification market and was founded by farmers the same year the NOP took effect, 2002.²⁵⁶ Although it is not affiliated with the USDA's NOP, its produce and livestock certification standards are based on the NOP standards, but its certification model is a participatory guarantee

²⁵¹ See, e.g., Janet McGarry, *Organic Pioneers Reflect on 40 Years of CCOF*, CIVIL EATS (Jan. 29, 2013), <https://civileats.com/2013/01/29/organic-pioneers-reflect-on-40-years-of-ccof/> [<https://perma.cc/S8JN-FT69>]; *Our History*, CAL. CERTIFIED ORGANIC FARMERS, <https://www.ccof.org/ccof/history> [<https://perma.cc/F2P4-LGNA>].

²⁵² McGarry, *supra* note 251; CAL. CERTIFIED ORGANIC FARMERS, *supra* note 251.

²⁵³ *Why Choose CCOF?*, CAL. CERTIFIED ORGANIC FARMERS, <https://www.ccof.org/certification/how/why> [<https://perma.cc/C9QM-M6MV>].

²⁵⁴ Katie O'Reilly, *"Beyond Organic" Food Labels Seek to Supplant the USDA Standard*, SIERRA (Mar. 23, 2018), <https://www.sierraclub.org/sierra/beyond-organic-food-labels-seek-supplant-usda-standard> [<https://perma.cc/6A5T-BX59>].

²⁵⁵ *Id.*

²⁵⁶ *Frequently Asked Questions*, CERTIFIED NATURALLY GROWN, <https://www.cngfarming.org/faqs> [<https://perma.cc/3PHS-NY4K>].

system (“PGS”) that relies on peer review inspections conducted by other CNG farmers.²⁵⁷

Other alternate certifiers include the Food Alliance, which “provides third-party certification of sustainable agricultural and food handling practices” to farmers, ranchers, food processors, and distributors.²⁵⁸ Its certification system distinguishes itself from that of the USDA by addressing a much broader range of social and environmental concerns, including working conditions, animal welfare, wildlife habitat conservation, the use of hormones and antibiotics, the presence of GMOs, pesticide use, and soil and water conservation.²⁵⁹

The International Federation of Organic Agricultural Movements (“IFOAM”), the international umbrella organization of the organic movement, is another well-established alternative certifier.²⁶⁰ It promotes itself as “the only international umbrella organization for the organic world, uniting a diverse range of stakeholders contributing to the organic vision.”²⁶¹ IFOAM defines organic agriculture as:

“a production system that sustains the health of soils, ecosystems and people[, that] relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects[, and that] combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved.”²⁶²

²⁵⁷ *Id.*

²⁵⁸ *General FAQs: What is Food Alliance?*, FOOD ALLIANCE, <http://foodalliance.org/general-faqs/> [<https://perma.cc/3ZDZ-EULS>].

²⁵⁹ *Info for Consumers*, FOOD ALLIANCE, <http://foodalliance.org/info-for-consumers/> [<https://perma.cc/7WMB-9FSY>].

²⁶⁰ *See About Us*, INT’L FED’N OF ORGANIC AGRIC. MOVEMENTS, <https://www.ifoam.bio/en/about-us> [<https://perma.cc/9CHS-X9KG>].

²⁶¹ *Id.*

²⁶² INT’L FED’N OF ORGANIC AGRIC. MOVEMENTS, STRATEGIC PLAN 2017-2025 OF IFOAM ORGANICS INTERNATIONAL 7 (n.d), https://www.ifoam.bio/sites/default/files/strategic_plan_v03.pdf [<https://perma.cc/NCA5-8G8K>].

The organization regards systems and farmers that use organic methods as “organic,” whether certified or non-certified, and it publishes and promotes standards and regulations that have been assessed to be the equivalent of a normative reference approved by IFOAM’s membership, including group third party certifications or participatory guarantee systems such as that offered by CNG.²⁶³

Another option for those seeking alternatives to a traditional NOP-only process is the Organic Crop Improvement Association (“OCIA”), a farmer-owned and farmer-controlled non-profit organization predating the NOP that provides third-party certification of organic food at all stages of production, processing, and distribution.²⁶⁴ The OCIA is one of the world’s largest organic certification agencies, accredited by numerous industries and governmental entities in the U.S. and abroad.²⁶⁵ For example, an OCIA-certified organic certification mark satisfies the U.S. NOP, the Canada Organic Regime, the International Accredited Certification Bodies Equivalent European Union Organic Production & Processing Standard for Third Countries, the Japanese Organic Agricultural Standards, and the International Organization for Standardization/International Electrotechnical Commission Guide 17065-Conformity Assessment-Requirements for Bodies Certifying Products, Processes and Services.²⁶⁶

Demeter International, yet another certifying body, is a European-based non-profit with a network of individual certification organizations located in North America, Europe, Africa, New Zealand, and India.²⁶⁷ In order to be Demeter-certified, a farm or product must adhere to biodynamic farming and processing standards that exceed U.S. NOP regulations.²⁶⁸ Biodynamic farming methods are based upon management of a farm as a self-contained,

²⁶³ *Id.*

²⁶⁴ *About OCIA*, ORGANIC CROP IMPROVEMENT ASSOCIATION INTERNATIONAL, <http://www.ocia.org/about-ocia> [<https://perma.cc/C5ZF-72R4>].

²⁶⁵ *Id.*

²⁶⁶ *Id.*

²⁶⁷ *Demeter-International- a worldwide Network*, DEMETER, <https://www.demeter.net/demeter-international/worldwide-network> [<https://perma.cc/78TP-NYH8>].

²⁶⁸ DEMETER ASS’N, INC., BIODYNAMIC® PROCESSING STANDARD 6 (2017), <https://www.demeter-usa.org/downloads/Demeter-Processing-Standards.pdf> [<https://perma.cc/BYG2-PDJZ>]; *see also* Lessing, *supra* note 57, at 472.

self-sustaining living organism, including its soil fertility, crop protection, animal welfare, and biological diversity.²⁶⁹ Not only are synthetic chemical fertilizers, pesticides, herbicides, and fungicides prohibited, but the biodynamic system emphasizes the generation of farm inputs from the living dynamics of the farm itself, reducing dependence on imported fertilizer and pest control with the preparation of medicinal plants, minerals, and compost.²⁷⁰ Demeter-certified “[f]arms are required to maintain at least 10% of total acreage as a biodiversity set-aside[,]” which preserves “riparian zones, wetlands, grasslands, and forests[]” and has the potential to conserve water.²⁷¹

Even individual companies are developing sustainable food product lines to promote carefully-vetted sustainable food products satisfying independent criteria “that address environmental issues, and continue to encourage support of local food producers” beyond the USDA Organic program label.²⁷² The outdoor clothing and gear company, Patagonia, for example, created Patagonia Provisions to promote a line of curated food products based partially on a desire to “help people gain more transparency in their food choices.”²⁷³ Focusing on producers that utilize regenerative agriculture and grazing, diversified crop development, and restorative fishing practices, the company is establishing its own supply chains to source its products and to encourage consumers to “[e]at close to the source; locally produced, minimally processed, wholesome foods.”²⁷⁴

While it does not address the informational asymmetry issue, some companies in the organic industry have taken steps to address consumer concerns by conducting their own product audits beyond

²⁶⁹ *F.A.Q.’s*, DEMETER ASS’N INC., <https://www.demeter-usa.org/about-demeter/demeter-faq.asp> (last visited July 11, 2020) [https://perma.cc/2S4G-L8TH].

²⁷⁰ *Id.*

²⁷¹ *Id.*

²⁷² Yvon Chouinard, *Why Food? How a Clothing Company is Aiming to Fix our Broken Food Chain*, PATAGONIA PROVISIONS, <https://www.patagoniaprovisions.com/pages/why-food-essay> [https://perma.cc/Q4A4-KGPP].

²⁷³ Rose Marcario, *Organic Standards Stem from the Soil*, PATAGONIA PROVISIONS (Oct. 6, 2017), <https://www.patagoniaprovisions.com/pages/organic-standards> [https://perma.cc/UFE8-ADZ4].

²⁷⁴ See Luke Nelson, *Our Ambassadors: Luke Nelson, Patagonia Provisions Ambassador*, PATAGONIA PROVISIONS, <https://www.patagoniaprovisions.com/pages/luke-nelson> [https://perma.cc/MUX2-8E6W].

those required by the USDA to ensure compliance with regulatory standards.²⁷⁵ For example, companies may seek to protect their own organic brands in the U.S. from problems arising from non-organic or questionable “organic” imports.²⁷⁶

C. Authors’s Suggestions

The proposals suggested by other authors were varied and interesting, but, in sum, were not as practical or detailed as we would have hoped. The modest proposals that we will now set forth likely also can be thus criticized, but we believe they may offer a somewhat different perspective. This perspective seeks to generate new thinking on how to provide more clarity for consumers on the meaning of the USDA’s organic labeling and to support small farmers whose practices conform to consumer expectations about organic food in the broader sense to connect with, educate, and market to consumers.

As to legal solutions, we have little reason for optimism that lawmakers will intervene to address any information asymmetries that exist regarding the USDA organic food labeling program. In the absence of regulatory action, consumers and small farmers might seek relief in the courts, but litigation would entail a significant commitment of both finances and time, resources that are often in short supply and that could be utilized more effectively on other efforts.

We have a similarly pessimistic view about the prospect that additional research will significantly impact consumer behavior. In the organic food market, the confirmatory bias phenomenon reportedly has a strong impact; consumer expectations of, and preferences for, organic food products appear to be based upon consumers’s prior beliefs and perceptions about the reliability of the USDA organic seal.²⁷⁷

However, we are more optimistic about the possibilities for creative responses from interested advocates, farmers, and consumers. Educating consumers about the meaning and limitations of the USDA organic label, and about alternative “sustainable” farming models and products, as well as providing consumers access

²⁷⁵ Endres, *supra* note 195, at 35–37.

²⁷⁶ *Id.*

²⁷⁷ Guilabert & Wood, *supra* note 107, at 354.

to these options, may improve informational symmetry, consumer purchasing, and product satisfaction. While they might not have the market penetration of the USDA Organic label, or have as straightforward a path, we believe there are alternative routes to viability for farmers whose practices conform to consumer expectations regarding organic food.²⁷⁸

Access and education often go hand-in-hand, and we have found a number of successful models that would appear to be easy to replicate by smaller sustainable farming operations and/or their supporters. Consider, for example, the very successful Soil Sisters, formerly referred to as the Green County Area Women in Sustainable Agriculture.²⁷⁹ This group is an informal collective of women farmers who jointly engage in political efforts to protect and promote independent farms in Wisconsin.²⁸⁰ The group also organizes farm tours, educational workshops, special dining, and other events that have made their region popular among agritourists.²⁸¹

The Soil Sisters offer one model for smaller sustainable operations seeking to directly market to like-minded consumers. Many of its members have diversified their farm operations, doing so by incorporating activities such as production and sale of farm-related products like knitted clothing, soap, or prepared food and agritourism operations such as cooking schools, inns, and/or restaurants into traditional crop and/or livestock production.²⁸² Other successful farm operations that are not certified pursuant to the USDA process also have taken this approach to introduce consumers to their farms and products and to build relationships by offering a variety of “farm-adjacent” activities.²⁸³ These operations offer a variety of experiences to consumers in order to tempt the public to access their farms, such as farm tours, farm-to-table meals,

²⁷⁸*E.g.*, Jeffrey R. Follett, *Choosing a Food Future: Differentiating Among Alternative Food Options*, 22 J. AGRIC. & ENVTL. ETHICS 31, 31 (2009).

²⁷⁹ Sarah McColl, *Meet the Soil Sisters: Making it as Female Farmers in a Man's World*, MODERN FARMER (Mar. 8, 2018), <https://modernfarmer.com/2018/03/soil-sisters-wisconsin-female-farmers-sustainable-agriculture/> [<https://perma.cc/595V-JBCV>].

²⁸⁰ *Id.*

²⁸¹ Follett, *supra* note 278.

²⁸² *See, e.g.*, McColl, *supra* note 279.

²⁸³ *Id.*; *Pumpkins, Pickling & Preserving, Oh My!*, PDX GREEN TEAM, <http://pdxgreenteam.com/pumpkins-pickling-preserving-oh/> [<https://perma.cc/T5MG-3ZE5>].

haunted farms, pumpkin patches, corn mazes, concerts, or other themed events.²⁸⁴

On a larger scale, data indicate that smaller sustainable farming operations are often unable to secure contracts with large retailers, particularly those with a regional or national presence.²⁸⁵ These larger retailers prefer to reduce their transaction costs by dealing with one or very few large, industrial operations, rather than negotiating with multiple smaller farms.²⁸⁶ These smaller sustainable operations might consider creating cooperative distribution systems that would allow them to compete with their larger counterparts.²⁸⁷ For example, food hubs offer a combination of aggregation, distribution, and marketing services for smaller and mid-sized farmers and ranchers that lack the capacity to gain entry into larger-volume markets and provide a more developed model of this type of system.²⁸⁸ Resources such as the Organic Consumers Association's Buying Guide, which lists FarmMatch and Local Harvest, among others, also exist to connect farmers with retailers and consumers.²⁸⁹

Another example is PRO*ACT, or "Produce Regional Operators Advancing Cooperative Trade," which is a national network of food distributors, the majority of which are family-owned businesses operating under third- or fourth-generation leadership.²⁹⁰ PRO*ACT distributors consolidated purchasing and collective marketing operations to maximize a sustainable competitive advantage for its members.²⁹¹ Through its Greener Fields Together initiative, the food industry's first comprehensive, national seed-to-fork sustainability program, PRO*ACT members engage the

²⁸⁴ PDX GREEN TEAM, *supra* note 283; McColl, *supra* note 279.

²⁸⁵ Endres, *supra* note 195, at 25–26.

²⁸⁶ *Id.*

²⁸⁷ *Id.*

²⁸⁸ JAMES BARHAM ET AL., U.S. DEPT OF AGRIC., REGIONAL FOOD HUB RESOURCE GUIDE 2, U.S. DEPT OF AGRIC., AGRIC. MARKETING SERV. (Apr. 2012), <https://www.ams.usda.gov/sites/default/files/media/Regional%20Food%20Hub%20Resource%20Guide.pdf> [<https://perma.cc/R4QL-FMN2>].

²⁸⁹ *Buying Guide*, ORGANIC CONSUMERS ASS'N, <https://www.organicconsumers.org/buying-guide> [<https://perma.cc/EWY6-R2W8>].

²⁹⁰ *About*, PRO*ACT, <http://www.proactusa.com/about/> [<https://perma.cc/43GC-YM94>].

²⁹¹ *Id.*

entirety of the fresh food supply chain to provide a level of assurance that network sources deliver produce that is grown, harvested, and managed using sustainable practices.²⁹² Smaller producers that lack access to markets or have distribution constraints can create or join these types of formal or informal collective enterprises to leverage efficiencies, contacts, and resources.

In more metropolitan settings, urban initiatives such as Farmscape offer interesting prospects.²⁹³ Based in California, Farmscape has installed urban gardens that grow organic food products in or on corporate campuses, restaurants, private residences, multifamily developments, senior centers, and schools.²⁹⁴ Farmscape offers community residents not only the opportunity to purchase fresh, sustainable products at their local gardens, it also welcomes their participation in gardening and community learning events.²⁹⁵ These sites can provide service-learning opportunities for students through partnerships with educational institutions of all levels, from grade schools to universities.²⁹⁶ Farmer-consumer interactions and transactions, and the enabling of “matching” platforms and distribution networks, can increase consumer knowledge about, as well as their access to, sustainably-grown food products.

CONCLUSION

To conclude, it was small comfort to discover that we were not alone in our disillusionment regarding the definition of the term “organic” as it pertains to food products.²⁹⁷ It was also discouraging to find that others have been seeking for some time to resolve

²⁹² *Sustainability*, PRO*ACT, <http://www.proactusa.com/sustainability/> [https://perma.cc/4RZ7-N7R8].

²⁹³ URBAN LAND INSTITUTE, CULTIVATING DEVELOPMENT: TRENDS AND OPPORTUNITIES AT THE INTERSECTION OF FOOD AND REAL ESTATE 15 (2016), <https://uli.org/wp-content/uploads/ULI-Documents/Cultivating-Development-Trends-and-Opportunities-at-the-Intersection-of-Food-and-Real-Estate.pdf> [https://perma.cc/62Z5-6HJQ].

²⁹⁴ *Id.*

²⁹⁵ *Id.*

²⁹⁶ Julie Grossman et al., *An Exploratory Analysis of Student-Community Interactions in Urban Agriculture*, 16 J. HIGHER EDUC. OUTREACH & ENGAGEMENT 179, 181 (2012).

²⁹⁷ *See, e.g.*, Watnick, *supra* note 18, at 58.

consumer confusion on the issue and to mitigate its impact on affected farmers, to little avail. We reluctantly now agree with one scholar who stated that “the central problem confronting the industry now is that consumers cannot rely on the USDA organic seal.”²⁹⁸ What options exist, then, for consumers like us to find and purchase local (or regional) sustainable food, a term encompassing food produced without pesticides, GMOs, or synthetic ingredients and that has been produced and delivered with as little impact on the environment as possible?

We believe there are many options, particularly for consumers and other participants in the organic food chain committed to agroecology, and to those committed to the environment. Echoing one commentator, we are confident that there is a path forward for farmers who may choose to opt out of the USDA organic certification process but maintain sustainable practices that are consistent with consumer expectations about food products that are free from chemicals, pesticides, and synthetics; that contribute to good health and are of good quality; and that are produced locally or regionally with as little environmental impact as possible.²⁹⁹ This path may involve seeking alternative certifying bodies, such as CNG or CCOF,³⁰⁰ or aligning with a particular retailer, such as Patagonia.³⁰¹

The path may also involve connecting and educating consumers about sustainable food products via CSAs, direct farm sales, farmers markets, food and /or distribution food cooperatives or hubs, and the like.³⁰² These structures will necessarily create deeper relationships between producers, distributors, and consumers, building the loyalty and commitment that sustains enduring consumer brands, whether certified by the USDA, another certifier, or no certifier at all.

Regardless of the road traveled, we hope that the food produced by alternative farmers will find its way to consumers like us, whose interest in the concept of “organic” does not align with the

²⁹⁸ See Craven, *supra* note 249.

²⁹⁹ See Endres, *supra* note 195, at 58–59.

³⁰⁰ Lessing, *supra* note 57, at 471.

³⁰¹ O’Reilly, *supra* note 254.

³⁰² Endres, *supra* note 195, at 58–59.

USDA NOP program. If the USDA's standards remain inconsistent with our perceptions, and if it is not willing to act to correct the information asymmetries³⁰³ that create the inconsistency, we will find our own path to sustainable food products that do.

³⁰³ See Lessing, *supra* note 57, at 451.