

A NEW HIGHER CALLING IN AGRICULTURAL LAW

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I. INTRODUCTION

Farming is a high calling. Lawyering on behalf of farmers and agriculture is characterized by many to be a similarly noble enterprise.

At least two assumptions have been the basis for the belief that agricultural law holds a special place in legal practice. First, in ways that are hard to describe and that seem to have deep origins in human culture, the production of food and fiber is special. The mysteries of nature that surround farming and the provision of our most basic necessities, and even the very act of agriculture itself, all seem somehow unique and important to human beings.¹ In a more contempo-

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1. The development of agriculture 10,000 years ago may be humankind’s most profound accomplishment. By one estimation, were all cultivated acres on the planet to go fallow, and the raising of domesticated animals to end, subsistence based on hunting, fishing, and gathering would provide for perhaps no more than 500 million people. MARCEL MAZOYER & LAURENCE ROUDART, A HISTORY OF WORLD AGRICULTURE: FROM THE NEOLITHIC AGE TO THE CURRENT CRISIS

rary context, one could add the cultural values associated with rural life, a heritage in the United States of significant political and social contribution by farmers, and other aspects of this specialness.²

Second, agricultural lawyers represent farmers and agriculture and therefore also have a special role.³ That role is to support farmers in their conflicts

19 (James H. Membrez trans. 2006) (2006). *See generally* JEFFREY M. PILCHER, *FOOD IN WORLD HISTORY* (2006) (describing history of food and food consumption globally); MARK B. TAUGER, *AGRICULTURE IN WORLD HISTORY* (2011) (discussing the history of agriculture and food globally).

2. Agrarianism—the ideology based on the idea that there is something special or superior about rural society engaged in agriculture in contrast to urban society—has a long history and many current adherents. *See* JAMES A. MONTMARQUET, *THE IDEA OF AGRARIANISM: FROM HUNTER-GATHERER TO AGRARIAN RADICAL IN WESTERN CULTURE* (1989) (explaining the history of agrarianism). A wide range of values can be described as agrarian. *See* M. THOMAS INGE, *AGRARIANISM IN AMERICAN LITERATURE* (M. Thomas Inge ed. 1969) (surveying agrarianism in American fiction). *Compare* WENDELL BERRY, *THE UNSETTLING OF AMERICA: CULTURE & AGRICULTURE* (1996) (arguing for small-scale farming and environmental stewardship for agriculture), *with* JOHN CROWE RANSOM ET AL., *I'LL TAKE MY STAND: THE SOUTH AND THE AGRARIAN TRADITION* (1930) (arguing Southerners should reject urban and industrial modernity in favor of rural, traditional, and paternalistic agrarianism).

Pastoralism, a related though somewhat different notion, also has a long genealogy. *See* TERRY GIFFORD, *PASTORAL: THE NEW CRITICAL IDIOM* (1999) (discussing the pastoralism genre's history and present state); PAUL ALPERS, *WHAT IS PASTORAL?* (1996) (discussing the main features of pastoralism); LEO MARX, *THE MACHINE IN THE GARDEN: TECHNOLOGY AND THE PASTORAL IDEAL IN AMERICA 2* (1964) (describing “the uses of the pastoral ideal in the interpretation of American experience”).

Popular music is one non-scientific gauge of the cultural influence of farming and food. Felisa Rogers, *Why Americans Sing About Food*, SALON.COM (Jan. 8, 2012), http://www.salon.com/2012/01/08/why-americans_sing_about_food/ (discussing popular music's fixation with food). Farming is a frequent reference point for music. *Compare* BOB WILLS, *TAKE ME BACK TO TULSA* (Okeh 1941), *with* MAHALIA JACKSON, *KEEP YOUR HAND ON THE PLOW* (Columbia/Legacy 1954).

More subtly, the importance of agriculture in shaping society is easily underestimated. For example, the American Civil War can in significant part be seen as a struggle between two visions of agrarian society. *See* ERIC FONER, *FREE SOIL, FREE LABOR, FREE MEN: THE IDEOLOGY OF THE REPUBLICAN PARTY BEFORE THE CIVIL WAR* (1970); EUGENE D. GENOVESE, *THE WORLD THE SLAVEHOLDERS MADE* (1969) (exploring antebellum ideology). And, although often thought to be politically conservative, the largest American movement for a radically egalitarian economy was fueled by farmers. *See* LAWRENCE GOODWYN, *THE POPULIST MOMENT: A SHORT HISTORY OF THE AGRARIAN REVOLT IN AMERICA* (1978) (describing farmer populism in postbellum America). Viewed more broadly, the form of agrarian society helps explain the divergent paths that result in fascism, democratic capitalism, and revolutionary communism as industrialized countries modernized. *See* BARRINGTON MOORE, JR., *SOCIAL ORIGINS OF DICTATORSHIP AND DEMOCRACY: LORD AND PEASANT IN THE MAKING OF THE MODERN WORLD* (1966).

3. *See generally* Neil Hamilton, *The Study of Agricultural Law in the United States: Education, Organization and Practice*, 43 ARK. L. REV. 503–22 (1990) (summarizing the emergence of agricultural law as a coherent endeavor); SUSAN A. SCHNEIDER, *FOOD, FARMING, AND SUSTAINABILITY: READINGS IN AGRICULTURAL LAW 13–17* (2011) (treating agricultural law as a distinct field of study in a recent text book on the same subject). Drew L. Kershen compiles a

with “the other”—the non-agriculture—that threatens agriculture and what is special about agriculture. Agricultural lawyers protect farmers from federal, state, and local government regulators of various agencies and types; nuisance and other common law actions that limit farmer autonomy and production practices; environmental and animal welfare consumer activists that seek to have a say in how agriculture is conducted—the list goes on and is a familiar one for those following agricultural issues.⁴ Agriculture, and the special nature of agriculture, according to this thinking, is under attack, and lawyers are essential to protect farming and farmers from those attacks.

Even to the extent that agricultural lawyers represent something larger than farms or farmers, there has been a sense that legal representation of the agricultural sector of the economy supported farming as a whole. One could practice Uniform Commercial Code, bankruptcy, or cooperative law and still work essentially on behalf of farming even if one did not represent farmers themselves. For example, an effective means of making farm loans and enforcing creditor remedies seems essential to the functioning of agriculture in a market society. Therefore, to represent banks or other agricultural creditors is to work in support of farming. Much of the legal work is akin to old-fashioned fencing law disputes.⁵ Just as we need clear rules on the proper maintenance of boundary fences shared by neighboring farmers, we need clear legal rules in agriculture for farming. There will be disputes about the rules, but in a dispute between two farmers about a fence line we are all—the farmers and the lawyers—on the same team: the team of agriculture. In sum, farming is special and agricultural lawyers live in the penumbra of that specialness.

There have, however, always been blind spots in these assumptions about the specialness of agriculture. One might group the blind spots into two categories. First, there has been a tendency to underestimate the inequalities within agriculture. Farming has not escaped the larger society’s tendency to divide people and opportunity along various lines.⁶ Race, gender, and class come to mind

comprehensive bibliography of agricultural law publications at the National Agricultural Law Center’s website. NAT’L AGRIC. L. CTR., <http://www.nationalaglawcenter.org/bibliography/browse/> (last visited Mar. 18, 2013).

4. The National Agricultural Law Center makes available an extensive collection of law review articles and other documents on these and other agricultural issues in its reading room. See NAT’L AGRIC L. CTR., <http://www.nationalaglawcenter.org/readingrooms/> (last visited Mar. 18, 2013).

5. Those supposing fence law is a simple matter should see Craig R. Heidemann, *Fencing Laws in Missouri: Confusion, Conflict, Ambiguity and a Need for Change*, 63 MO. L. REV. 537 (1998).

6. Less charitably, one might say that given the importance of agriculture in shaping the larger society, societal inequalities can fairly be traced to agriculture itself.

immediately, but there are certainly others.⁷ The team of agriculture, in other words, has always been more fractured, and one might unfortunately say more exploitative of itself and others, than many have wanted to admit. Many of the conflicts addressed by agricultural lawyers, as a result, have actually involved conflicts within agriculture. The thinking of agriculture as one big and unified team, therefore, has been and can still be misleading.

Second, agriculture creates social and environmental costs that are not absorbed by farmers as a cost of doing business.⁸ These costs have seemed to increase significantly in the last few decades. One can argue about their extent, how to measure them, and how they should be remedied, but no credible analysis can suggest the costs are minimal.⁹

II. THE GROUND SHIFTS

If the old higher calling in agricultural law had blind spots, they were largely ignored. Things have changed dramatically in the last several years to make the spots more visible. In part, agriculture has changed, possibly increasing some of the problems associated with farming. More importantly, consumers care much more about how farming is conducted than once was the case.¹⁰

Three brief examples suggest the scope of these changes in farming and in society. First, to the amazement of many involved in agriculture, the hippie-based organic movement became mainstream.¹¹ It splintered into a thousand

7. It continues to be possible for scholars to write long accounts of American agriculture and neglect to discuss gender, race, or ethnicity. An exception is SCHNEIDER, *supra* note 3, at 303–55 (including discussions of race in agricultural law text book).

8. In the language of an economist, these are externalities, and can constitute market failures in that even otherwise smoothly functioning markets do not take them into account. For the basic concept see J.J. Laffont, *Externalities*, in THE NEW PALGRAVE DICTIONARY OF ECONOMICS (Steven N. Durlauf & Lawrence E. Blume ed., 2d ed. 2008). For other accounts, see SAMUEL BOWLES, MICROECONOMICS: BEHAVIOR, INSTITUTIONS AND EVOLUTION 205–32 (2004) (providing a more unorthodox perspective); DONALD W. KATZNER, AN INTRODUCTION TO THE ECONOMIC THEORY OF MARKET BEHAVIOR (2006) (providing a mainstream economics perspective); CHARLES WHEELAN, NAKED ECONOMICS: UNDRESSING THE DISMAL SCIENCE (2003) (providing a popularized version).

9. See discussion *infra* Part IV.A.

10. A recent survey suggests that large majorities of consumers see their food purchasing decisions as affected by how the food is produced. Lisa Cassady & Jennifer Reinhard, *Americans Say Food Production Headed in Right Direction, Widespread Misperceptions Remain*, U.S. FARMERS & RANCHERS ALLIANCE (Nov. 15, 2012), <http://www.fooddialogues.com/news/2012/11/15/americans-say-food-production-headed-in-right-direction-widespread-misperceptions-remain>.

11. The changes can be traced to a countercultural movement. See WARREN J. BELASCO, APPETITE FOR CHANGE: HOW THE COUNTERCULTURE TOOK ON THE FOOD INDUSTRY (2d ed. 2007).

overlapping segments—organic, sustainable, local, directly marketed, urban, and humanely raised—but grew incredibly.¹² It seems fair to call these splintered segments collectively “new farm and food movements,” and they are powerful. As a historical matter, it was surprisingly difficult to convince people that food raised in a distant place, processed by industry, and preserved for future use was actually a good thing.¹³ Now, it seems, consumer acceptance of these widespread practices is eroding.

Meeting this demand inevitably involves significant changes in the actual conduct of farming, and the changing consumer perspective is embraced by thousands of farmers. The once-marginalized organic commune has evolved into a significant sector of farmers and of farming.¹⁴ In some cases, farmers seek a price premium for organic or other traits characterizing their product. In many other cases, however, farmers engage in sustainable practices without any direct financial benefit.¹⁵

12. See LESLIE A. DURAM, *ENCYCLOPEDIA OF ORGANIC, SUSTAINABLE, AND LOCAL FOOD* (2010) (providing a brief and sympathetic account of the central elements of these movements, including community-supported agriculture, fair trade, farmers’ markets, farm to school programs, food miles, community gardens, local food, direct marketing, organics, natural food, and vegetarianism). A sense of the legal issues in these efforts can be gleaned from Derrick Braaten & Marne Coit, *Legal Issues in Local Food Systems*, 15 *DRAKE J. AGRIC. L.* 9 (2010) and Neil Hamilton, *Essay—Food Democracy and the Future of American Values*, 9 *DRAKE J. AGRIC. L.* 9 (2004).

13. See SUSANNE FREIDBERG, *FRESH: A PERISHABLE HISTORY* (2009) (analyzing the “perishable history” of beef, eggs, fruit, vegetables, and dairy).

14. For the wide variety of farming practices that have come to be known as sustainable agriculture, see NAT’L RESEARCH COUNCIL, *TOWARD SUSTAINABLE AGRICULTURAL SYSTEMS IN THE 21ST CENTURY* (2010) [hereinafter *TOWARD SUSTAINABLE AGRICULTURAL SYSTEMS*] and NAT’L RESEARCH COUNCIL, *ALTERNATIVE AGRICULTURE* (1989).

15. If seen solely as a business operator, such farmers are sacrificing profit in the name of a higher good. Sustainable farmers work hard to overcome the financial penalty of their production practices, but it seems certain that in general the sustainable practices, when compared to conventional practices, are often less profitable for the farmer. Brief discussions of the financial challenges for farmers adopting a more sustainable agriculture can be found at *TOWARD SUSTAINABLE AGRICULTURAL SYSTEMS*, *supra* note 14, at 189–212, and Martha E. Rosemeyer, *What Do We Know About the Conversion Process? Yields, Economics, Ecological Processes, and Social Issues*, in *THE CONVERSION TO SUSTAINABLE AGRICULTURE: PRINCIPLES, PROCESSES, AND PRACTICES* 15, 15–48 (Stephen R. Gleissman & Martha Rosemeyer eds., 2010).

The idea that large corporations should or actually ever do sacrifice profits for socially responsible ends is controversial. A summary of these debates may be found in DAVID VOGEL, *THE MARKET FOR VIRTUE: THE POTENTIAL AND LIMITS OF CORPORATE SOCIAL RESPONSIBILITY* (2005). Recent economic evaluations are discussed by Markus Kitzmueller & Jay Shimshack, *Economic Perspectives on Corporate Social Responsibility*, 50 *J. ECON. LITERATURE* 51 (2012) and Forest L. Reinhardt et al., *Corporate Social Responsibility Through an Economic Lens*, in *ECONOMICS OF THE ENVIRONMENT: SELECTED READINGS* 423 (Robert Stavins, ed., 6th ed. 2012).

Most galling to many, the new food movements and the farmers they promote seem to claim the “specialness” of agriculture all for themselves. Grass fed versus grain fed. Antibiotic-free versus growth promotion antibiotic use. Farmers’ markets versus supermarkets. Farming feels less and less like one big team.

A second symptom of the large changes in society is that a journalist food writer could arrive repeatedly on the best-seller list with books that talk about agricultural policy and the nuances of production practices, and are highly critical of the way things are done now.¹⁶ The food writer advocates “voting with your fork,” and many people do just that.¹⁷ Urban bookstores have sections on agriculture. Referenda on animal welfare topics generate interest and support.¹⁸ Paradoxically, as the population generally becomes increasingly removed from a direct involvement in agriculture, an interest in agriculture has grown. The central point is that to a heretofore unimaginable extent, a very significant portion of the population cares about how food is raised and acts on those cares. It is no longer possible, therefore, to hope that agriculture will simply be left alone.¹⁹ The public cares, votes, and purchases food. The last point is one we will return to in a moment.

For many years agriculture treated alternative farming and alternative farmers as marginal. Similarly marginal were concerns about how food is raised. Marginal concerns can be treated in one of two ways. First, they can be safely ignored, and this has historically been a common response to current food movement concerns. Second, if not ignored, views considered marginal can be attacked with vigor. The attack mode triggered a defensiveness that called on all

16. MICHAEL POLLAN, IN DEFENSE OF FOOD: AN EATER’S MANIFESTO (2008); MICHAEL POLLAN, OMNIVORE’S DILEMMA: A NATURAL HISTORY OF FOUR MEALS (2006); Michael Pollan, *The Food Movement, Rising*, N.Y. REV. OF BOOKS (June 10, 2010), <http://www.nybooks.com/articles/archives/2010/jun/10/food-movement-rising/?pagination=false>; Michael Pollan, *Voting with Your Fork*, N.Y. TIMES (May 7, 2006), <http://pollan.blogs.nytimes.com/2006/05/07/voting-with-your-fork/> [hereinafter Pollan, *Voting with Your Fork*].

17. Pollan, *Voting with Your Fork*, *supra* note 16. Not everyone was thrilled with Pollan’s writing. Julie Guthman, *Commentary on Teaching Food: Why I Am Fed Up with Michael Pollan et al.*, 24 J. AGRIC. & HUMAN VALUES 261 (2007). Industry spokespeople were aghast. See Trent Loos, *It’s Time to Turn up the Heat*, FEEDSTUFFS, Mar. 15, 2010, at 8; Sarah Muirhead, *Farmers Unite to Defend Ag*, FEEDSTUFFS, Sept. 28, 2009, at 1, 4.

18. See, e.g., *Proposition 2—Standards for Confining Farm Animals*, CA SEC’Y OF STATE (2011), <http://www.sos.ca.gov/elections/sov/2008-general/maps/returns/props/prop-2.htm> (last visited Mar. 18, 2013).

19. See generally DANIEL IMHOFF, FOOD FIGHT: THE CITIZEN’S GUIDE TO THE NEXT FOOD AND FARM BILL (2d ed. 2012) (discussing in detail the Farm Bill and its implications for agriculture and the American food system, a publication available in bookstores that would have been hard to imagine a few years ago).

of agriculture and its supporters to rally around one another and fend off critiques and challenges. The treatment of Rachel Carson provides a vivid and unfortunate example of this tendency.²⁰ The attack mode, of course, has yet to disappear.²¹

A third way that society has changed is exemplified by legal action. Social inequality recently became the centerpiece of litigation involving farmers. In a series of lawsuits, farmers have alleged discrimination.²² Billions of dollars are changing hands as a result of this litigation, and tens of thousands of people are succeeding in making claims.²³ Further, the new farm and food movements raise

20. The contemporary response to Carson's work is described in a number of places. See LINDA LEAR, *RACHEL CARSON: WITNESS FOR NATURE* 428–56 (1997). Secretary of Agriculture Ezra Taft Benson reportedly wondered in a letter to President Eisenhower why “a spinster with no children was so concerned about genetics?” Benson's view: she was “probably a Communist.” *Id.* at 428–29.

21. Note, for example, the effort to criminalize animal rights activist videos of animal welfare conditions on farms. Alexandra Silver, *A Legal Assault on Animal-Abuse Whistle-Blowers?*, TIME (June 14, 2011), <http://www.time.com/time/nation/article/0,8599,2077514,00.html>. The videos include abuse on farms. A recent gruesome example is described in Andy Vance, *Idaho Dairy Implicated in Video*, FEEDSTUFFS, Oct. 15, 2012, at 1, 4. See also Mercy for Animals, *Burger King Cruelty-Video Exposes Horrific Animal Abuse at a Burger King Dairy Supplier*, BURGER KING CRUELTY, <http://www.burgerkingcruelty.com/> (last visited Mar. 18, 2013). The video, involving a very large dairy farm, includes a downer cow dragged by the neck with a tractor. *Id.*; see also Sonci Kingery, Note, *The Agricultural Iron Curtain: Ag Gag Legislation and the Threat to Free Speech, Food Safety, and Animal Welfare*, 17 DRAKE J. AGRIC. L. 645 (2012) (discussing proposed laws restricting video recording on farms and suggesting legal alternatives to the “ag gag” legislation).

22. The cases in question concern discrimination against African Americans, Hispanics, Native Americans, and women. See Stephen Carpenter, *The USDA Discrimination Cases: Pigford*, In re Black Farmers, Keepseagle, Garcia, and Love, 17 DRAKE J. AGRIC. L. 1, 13–34 (2012) (providing an overview of the cases); see also SCHNEIDER, *supra* note 3, at 351–55 (discussing discrimination against these groups of farmers). Although the litigation is relatively recent, discrimination in agriculture was hardly a secret. For a sample of widely available discussions of African American farming, see Calvin L. Beale, *The Black American in Agriculture*, in THE BLACK AMERICAN REFERENCE BOOK 284, 284–315 (Mabel M. Smythe ed., 1976); THE BLACK RURAL LANDOWNER—ENDANGERED SPECIES: SOCIAL, POLITICAL, AND ECONOMIC IMPLICATIONS (Leo McGee & Robert Boone eds., 1979); VERA J. BANKS, ECON. RESEARCH SERV., USDA, RURAL DEV. RESEARCH REPORT NO. 59, BLACK FARMERS AND THEIR FARMS (1986); ROBERT A. HOPPE ET AL., ECON. RESEARCH SERV., USDA, RURAL DEV. RESEARCH REPORT NO. 61, SOCIAL AND ECONOMIC ENVIRONMENT OF BLACK FARMERS (1986); Gail Dishongh & Dreamal Worthen, *Federal Farm Programs and Limited Resource Farmer: A Black Perspective*, 11 RURAL SOCIOLOGIST 19 (1991); Hezekiah S. Jones, *Federal Agriculture Policies: Do Black Farm Operators Benefit?*, 22 REV. BLACK POL. ECON. 25 (1994); William C. Payne, Jr., *Institutional Discrimination in Agriculture Programs*, 11 RURAL SOCIOLOGIST 16 (1991); Robert Zabawa et al., *The Decline of Black Farmers and Strategies for Survival*, 7 S. RURAL SOC. 106 (1990).

23. See Carpenter, *supra* note 22, at 13–34.

inequality as an explicit issue of concern in the world of agriculture and food.²⁴ The extent to which these movements have made progress on issues of social equality is another matter and is discussed below.

The times have changed. As agriculture's blind spots become more visible, consumers and farmers increasingly embrace new food movements. It has become less tenable to ignore the movements and, increasingly, unwise to engage in a full bore assault against them.

For agriculture and agricultural lawyers, this means two things. First, the criticisms of conventional agriculture need to be taken seriously and addressed in a thoughtful way. The critique of conventional agriculture makes a number of valid points. Environmental problems associated with agriculture are real.²⁵ There can be little dispute about whether agriculture creates runoff of soil and nutrients, causes aquatic dead zones in oceans and other bodies of water, contributes significantly to greenhouse gas emissions, emits air pollution, or contributes to the risk of antibiotic resistance bacterial infections. Further, animal welfare concerns are rational. Farm animals feel pain, experience states of mind that can be fairly described as anxiety, stress, and fear, and strive to express themselves in natural behaviors.²⁶

24. See, e.g., PATRICIA ALLEN, *TOGETHER AT THE TABLE: SUSTAINABILITY AND SUSTENANCE IN THE AMERICAN AGRIFOOD SYSTEM* (2004); *CULTIVATING FOOD JUSTICE: RACE, CLASS, AND SUSTAINABILITY* (Allison Hope Alkon & Julian Agyeman eds., 2011); *FOOD FOR THE FUTURE: CONDITIONS AND CONTRADICTIONS OF SUSTAINABILITY* (Patricia Allen ed., 1993).

25. See, e.g., JASON W. CLAY, *WORLD AGRICULTURE AND THE ENVIRONMENT: A COMMODITY-BY-COMMODITY GUIDE TO IMPACTS AND PRACTICES* (2004); CLIVE PONTING, *A GREEN HISTORY OF THE WORLD* 68–87 (1991) (discussing the rise of agricultural societies and the extraordinary effect intense cultivation had on the planet's environment); Nicholas Z. Muller et al., *Environmental Accounting for Pollution in the United States Economy*, 101 *AM. ECON. REV.* 1649 (2011) (analyzing air pollution, including a look at agriculture); J.B. Ruhl, *Farms, Their Environmental Harms, and Environmental Law*, 27 *ECOLOGY L.Q.* 263 (2000).

26. E.g., DAVID DEGRAZIA, *ANIMAL RIGHTS: A VERY SHORT INTRODUCTION* (2002) (summarizing animal welfare issues); see also *ANIMAL WELFARE IN ANIMAL AGRICULTURE: HUSBANDRY, STEWARDSHIP, AND SUSTAINABILITY IN ANIMAL PRODUCTION* (Wilson G. Pond et al. eds., 2011); ANDREW FERGUSON FRASER & DONALD M. BROOM, *FARM ANIMAL BEHAVIOR AND WELFARE* (3d ed. 1997); BERNARD E. ROLLIN, *FARM ANIMAL WELFARE: SOCIAL BIOETHICAL, AND RESEARCH ISSUES* (2003); *THE WELL-BEING OF FARM ANIMALS: CHALLENGES AND SOLUTIONS* (G. John Benson & Bernard E. Rollin eds., 2004); C.C. Croney & S.T. Millman, *Board-Invited Review: The Ethical and Behavioral Bases for Farm Animal Welfare Legislation*, 85 *J. ANIMAL SCI.* 556 (2007); I.J.H. Duncan, *Science-Based Assessment of Animal Welfare: Farm Animals*, 24 *SCI. & TECH. L. REV.* 483 (2005); A.K. Johnson, *ASAS Centennial Paper: Farm Animal Welfare Science in the United States*, 87 *J. ANIMAL SCI.* 2175 (2009); Jeff Rushen et al., *Animal Behavior and Well-Being Symposium: Farm Animal Welfare Assurance: Science and Application*, 89 *J. ANIMAL SCI.* 1219 (2011).

It is time for agriculture to shed its tendency to provide the last refuge for pernicious social inequality.²⁷

Second, we need a careful and intellectually honest discussion of the alternatives offered by new farm and food movements. This is a much more challenging discussion. If we accept that there are significant environmental, animal welfare, or social justice problems with contemporary agriculture, the central question should be how to address them. The new movements offer answers to that question.

III. A SOCIAL MOVEMENT AND THE BALANCE BETWEEN STATE AND MARKET FORCES

If we remember that new food and agriculture movements are social movements—not government policies, abstract ideologies, or even political parties—two aspects of their character are especially notable.²⁸

27. If one starts with the circumstances faced by farm laborers, moves to the difficulties faced by low-income family farmers, and continues to the conditions of workers in the food processing industry, it would be possible to argue agriculture is one of the most exploitative sectors in the country's economy. Several authors have written about a variety of views on farm labor. See generally WILLIAM KANDEL, ECON. RESEARCH SERV., USDA, REP. NO. 60, PROFILE OF HIRED FARMWORKERS: A 2008 UPDATE (2008); MARGARET REEVES ET AL., FIELDS OF POISON: CALIFORNIA FARMWORKERS AND PESTICIDES (1999); DANIEL ROTHENBERG, WITH THESE HANDS: THE HIDDEN WORLD OF MIGRANT FARMWORKERS TODAY (1998); OXFAM AM., LIKE MACHINES IN THE FIELDS: WORKERS WITHOUT RIGHTS IN AMERICAN AGRICULTURE (2004); MIRIAM J. WELLS, STRAWBERRY FIELDS: POLITICS, CLASS, AND WORK IN CALIFORNIA AGRICULTURE (1996); U.S. GOV'T ACCT. OFFICE, GAO/HRD-92-46, HIRED FARMWORKERS: HEALTH AND WELL-BEING AT RISK (1992); Tracie McMillan, *As Common as Dirt*, AM. PROSPECT, Sept. 11, 2012, <http://prospect.org/article/common-dirt-0>.

Many family farmers struggle to make a living and face possible dispossession. See ROBERT A. HOPPE & DAVID E. BANKER, ECON. RESEARCH SERV., USDA, STRUCTURE AND FINANCES OF U.S. FARMS, FAMILY FARM REPORT, 2010 EDITION 40-45 (2010) (discussing "limited resource farmers," which account for slightly more than ten percent of all farms); see also KATHRYN MARIE DUDLEY, DEBT AND DISPOSSESSION: FARM LOSS IN AMERICA'S HEARTLAND (2000) (discussing farm loss); LINDA M. LOBAO, LOCALITY AND INEQUALITY, FARM AND INDUSTRY STRUCTURE AND SOCIOECONOMIC CONDITIONS (1990) (confirming one's intuition that the loss of family farms hurts rural communities).

The predicament of meat processing workers is described in LANCE A. COMPA, HUMAN RIGHTS WATCH, BLOOD, SWEAT, AND FEAR: WORKERS' RIGHTS IN U.S. MEAT AND POULTRY PLANTS (2004), available at <http://www.hrw.org/reports/2005/01/24/blood-sweat-and-fear> (discussing meat processing plants).

28. Coalition-type organizations provide a good beginning for the identification of active sustainable farm movement organizations. *Farmer Resource Network*, FARM AID, <http://ideas.farmaid.org/> (last visited Mar. 18, 2013); NAT'L FAMILY FARM COAL., <http://www.nffc.net/> (last visited Mar. 18, 2013); NAT'L SUSTAINABLE AGRIC. COAL., <http://sustainableagriculture.net/> (last visited Mar. 18, 2013); THE RURAL COAL., <http://www.ruralco.org/> (last visited Mar. 18, 2013).

First, social movements are extremely difficult to create and sustain.²⁹ The central difficulty, as summarized by Mancur Olson in the 1960s, is that it is hard to convince people to commit to a movement *even when* people have interests or moral concerns in common.³⁰ This is especially problematic when it is a large group.³¹ Therefore, social movements often depend on moral or altruistic motivation to function, and attempt to develop a culture that promotes that moral view. For both farmers and consumers, this fairly describes a significant part of what is going on with new food movements. This difficulty also helps explain why new food movements can be blunt, confusing, and sometimes self-contradictory instruments for social change.

Second, the extent to which new farm and food movements act through the market and not through government policy is notable. One tends to think of social movements as mobilizations with the aim of changing government policy. This is particularly true for movements concerned with the environment, animal welfare, and social inequality. The traditional answer, even from a non-social movement perspective, for environmental or economic or social justice problems is regulation by the state. Early environmental rules tended to rely on what have come to be called “command and control” methods of regulation.³² Economists have long criticized this approach, and have advocated market-based approaches to regulate pollution.³³ Market-based approaches typically involve either emis-

29. See Rudd Koopmans, *Social Movements*, in THE OXFORD HANDBOOK OF POLITICAL BEHAVIOR 693, 693–707 (Russell J. Dalton & Hans-Dieter Klingemann eds., 2007). Considerable scholarship discusses social movements. See generally THE BLACKWELL COMPANION TO SOCIAL MOVEMENTS (David A. Snow et al. eds., 2004); DOUG MCADAM ET AL., DYNAMICS OF CONTENTION (2001); DAVID S. MEYER, THE POLITICS OF PROTEST: SOCIAL MOVEMENTS IN AMERICA (2006); SOCIAL MOVEMENTS AND ORGANIZATION THEORY (Gerald F. Davis et al. eds., 2005).

30. MANCUR OLSON, THE LOGIC OF COLLECTIVE ACTION: PUBLIC GOODS AND THE THEORY OF GROUPS 1–3 (1965). To follow Olson’s terminology, public goods, such as stopping global warming, are non-excludable. If it happens for one person, it will happen for all. As a result, any time there is a movement that attempts collective action, individuals will have an incentive to free ride—that is to say, enjoy the benefits of the movement without doing the work. Viewed from a purely selfish perspective, the effort to help the movement costs more to an individual than the individual receives from the movement’s success. See BARRINGTON MOORE, JR., INJUSTICE: THE SOCIAL BASES OF OBEDIENCE AND REVOLT (1978) (describing the importance of moral concerns for movements).

31. See OLSON, *supra* note 30, at 2.

32. See Winston Harrington & Richard D. Morgenstern, *Economic Incentives Versus Command and Control: What’s the Best Approach for Solving Environmental Problems?* RESOURCES FOR THE FUTURE, Fall/Winter 2004, at 13 (discussing the efficacy and value of command and control methods as compared to economic incentives).

33. Robert W. Hahn & Robert N. Stavins, *Economic Incentives for Environmental Protection: Integrating Theory and Practice*, 82 AM. ECON. REV. 464, 464–67 (1992).

sion taxes or tradable permits.³⁴ The aim is to improve on what is thought to be the inefficiency of command and control efforts by essentially “getting the prices right” for pollution. The economic approach to environmental regulation inevitably involves reducing the extent of environmental harm to a dollar amount. A number of studies have sought to do this for agricultural environmental costs.³⁵ Economists have also worked on estimating the costs that should be assigned for animal welfare harms.³⁶ Even for economists, however, environmental problems are believed to be best addressed by government action.³⁷ The strategies may

34. See Nicholas Z. Muller & Robert Mendelsohn, *Efficient Pollution Regulation: Getting the Prices Right*, 99 AM. ECON. REV. 1714, 1714 (2009); see also WILLIAM J. BAUMOL & WALLACE E. OATES, *THE THEORY OF ENVIRONMENTAL POLICY* (2d ed. 1988) (examining a standard view of environmental economics and pollution externalities); Ronald H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960) (explaining aggregate harmful effects as an inspiration for tradable permits). For accessible accounts of environmental economics, see *ECONOMICS OF THE ENVIRONMENT: SELECTED READINGS* (Robert N. Stavins ed., 6th ed. 2012); PHILIP E. GRAVES, *ENVIRONMENTAL ECONOMICS: A CRITIQUE OF BENEFIT-COST ANALYSIS* (2007); STEPHEN SMITH, *ENVIRONMENTAL ECONOMICS: A VERY SHORT INTRODUCTION* (2011); Robert N. Stavins, *Environmental Economics*, in *THE NEW PALGRAVE DICTIONARY OF ECONOMICS* (Steven N. Durlauf & Lawrence E. Blume eds., 2d ed. 2008).

35. See, e.g., Muller et al., *supra* note 25, at 1664; see also David Pearce & Robert Tinch, *The True Price of Pesticides*, in *BUGS IN THE SYSTEM: REDESIGNING THE PESTICIDE INDUSTRY FOR SUSTAINABLE AGRICULTURE* 50 (William Vorley & Dennis R. Keeney eds., 1998); R.A. Steiner et al., *Incorporating Externality Costs in Productivity Measures: A Case Study Using U.S. Agriculture*, in *AGRICULTURAL SUSTAINABILITY: ENVIRONMENTAL AND STATISTICAL CONSIDERATIONS* 209 (Vick Barnett et al. eds., 1995); James Stephen Carpenter, *Farm Chemicals, Soil Erosion, and Sustainable Agriculture*, 13 STAN. ENVTL. L. J. 190 (1994); Pierre Crosson, *Soil Erosion Estimates and Costs*, 269 SCIENCE 461 (1995); David Pimentel et al., *Environmental and Economic Costs of Soil Erosion and Conservation Benefits*, 267 SCIENCE 1117 (1995); David Pimentel et al., *Environmental and Economic Costs of Pesticide Use*, 42 BIOSCIENCE 750 (1992); Jules Pretty et al., *Policy Challenges and Priorities for Internalizing the Externalities of Modern Agriculture*, 44 J. ENVTL. PLANNING AND MGMT. 263 (2001); Erin M. Tegmeier & Michael D. Duffy, *External Costs of Agricultural Production in the United States*, 2 INT’L J. AGRIC. SUSTAINABILITY 1 (2004).

36. See F. BAILEY NORWOOD & JAYSON L. LUSK, *COMPASSION, BY THE POUND: THE ECONOMICS OF FARM ANIMAL WELFARE* (2011) (reviewing scientific literature on the topic).

37. Somewhat separate from economics is the economist-influenced public-choice literature that argues that the state is so inevitably corrupted that it cannot be trusted to solve such problems. See JAMES M. BUCHANAN & GORDON TULLOCK, *THE CALCULUS OF CONSENT: LOGICAL FOUNDATIONS OF CONSTITUTIONAL DEMOCRACY* (1965); see also Gordon Tullock et al., *The Theory of Public Choice*, in *GOVERNMENT FAILURE: A PRIMER IN PUBLIC CHOICE* 2, 2–82 (2002). This literature argues that even democratic governments are routinely captured by particular interests and that government of, for, and by the people, is essentially impossible. See generally DENNIS C. MUELLER, *PUBLIC CHOICE III* (2003); *THE OXFORD HANDBOOK OF POLITICAL ECONOMY* (Barry R. Weingast & Donald A. Wittman eds. 2006).

Similarly, antidemocratic conclusions can be drawn from arguments regarding the possibility of a truly democratic decision making process, the lack of knowledge of voters regard-

involve markets, but state coercion of some form is required. Similarly, efforts to address social and economic inequality tend to focus on the state. Thus, we have efforts to prohibit various forms of discrimination,³⁸ establish a welfare state,³⁹ create a progressive tax code,⁴⁰ and so forth.

A remarkable, and largely unappreciated, aspect of the new farm and food movements is the extent to which they seek change via market decisions rather than government policy. This is not to say that government action is not sought on a broad range of issues. The core of the new movements, however, is voluntary action in dialectic between farmers, consumers, and those in between. The movements represent a coming together by producers and consumers who are willing to absorb the cost of doing things differently.

In some respects farmers or consumers or both are voluntarily internalizing additional costs that are imposed by adopting alternatives. Many farmers using sustainable practices on their farms receive no price benefit from their decision.⁴¹ In response to concerns with conventional agricultural practices and the

ing politics, traditional deference to elites, or other sources. See JOHN DRYZEK & PATRICK DUNLEAVY, *THEORIES OF THE DEMOCRATIC STATE* (2009) (summarizing democratic theory); DAVID HELD, *MODELS OF DEMOCRACY* (3d ed. 2006) (providing another summary of democratic theory); see also BRYAN CAPLAN, *THE MYTH OF THE RATIONAL VOTER: WHY DEMOCRACIES CHOOSE BAD POLICIES* (2007) (discussing voter ignorance); DONALD A. WITTMAN, *THE MYTH OF DEMOCRATIC FAILURE: WHY POLITICAL INSTITUTIONS ARE EFFICIENT* 7–19 (1995) (discussing uniformed voters).

Public choice and other writing critical of state action is important in that it reminds one that government should not necessarily be assumed to be able to solve the kinds of environmental and other problems that result in market failure. On the other hand, this literature seems to imply a fundamental retreat from democratic governance. It should go without saying that democracy was hardly an inevitable result in this country, and one would expect that advocates of economic efficiency and other worthy goals would be cautious when suggesting alternative bases for governance. See SEAN WILENTZ, *THE RISE OF AMERICAN DEMOCRACY: JEFFERSON TO LINCOLN* (2005) (providing an account of the precarious and uneven advance of American democracy); see also ALEXANDER KEYSAR, *THE RIGHT TO VOTE: THE CONTESTED HISTORY OF DEMOCRACY IN THE UNITED STATES* (2000).

38. Civil rights advocacy generally focuses on legal protection of what are thought to be elemental rights held by every single person. For a current version of such an effort, see the work of the Human Rights Campaign. *The HRC Story*, HUMAN RIGHTS CAMPAIGN, <http://www.hrc.org/the-hrc-story/about-us> (last visited Mar. 18, 2013) (advocating for equality for lesbians, gays, bisexuals and transgender people).

39. Welfare states, essentially by definition, call for state action to promote economic equality. See GÖSTA ESPING-ANDERSEN, *THE THREE WORLDS OF WELFARE CAPITALISM* (1990) (summarizing the rise of the welfare state).

40. Tax policy, also by definition, involves state action. A contemporary example of direct advocacy for progressive taxation is Citizens for Tax Justice. *Background and History*, CITIZENS FOR TAX JUSTICE, <http://ctj.org/about/background.php> (last visited Mar. 18, 2013).

41. A good example is the voluntary use of buffer strips along streams to reduce the amount of soil and nutrient runoff that would occur if crops were planted all the way to the stream bank. This reduces the number of acres that might otherwise be put into economic production.

willingness of farmers to offer alternatives, food movement consumers are essentially agreeing to pay higher prices to support the farmers that choose not to push environmental and other costs downstream for someone else to absorb. It is not hard to think of examples where farmers and consumers take on costs that effectively reduce environmental or other harms. For example, grass fed milk from a small-scale dairy likely reduces runoff and enhances the welfare of the cattle. If the milk is sold to a conventional processor rather than a specialty market, the cost of reducing these harms are absorbed by the farmer. If a farmers' market requires that sellers produce the product sold, a consumer almost by definition is supporting a family-size farm, and in doing so is often paying for sustainable decisions. There will always be a complicated calculus when considering such alternatives. For the dairy, do the cows emit more methane per pound of milk produced? If so, for greenhouse gas purposes, is that emission more than offset by the greater capture of carbon in the soil of the pasture when compared to corn and bean production?

If we set aside the aspects of the new farm and food movements that are oriented to benefit the primary actor (for example, farmers reducing pesticide use to limit the risk to themselves, consumers buying local because they think it tastes better or is more healthy), a portion of new movement activity involves what can fairly be described as altruistic behavior.⁴² Sustainable farmers reduce erosion in order to protect the soil for future generations, adopt practices that protect biodiversity, and reduce the stress on farm animals without any financial reward even though there is a financial cost to each of these choices. Consumers buy products that they believe support family farmers and that allow farm animals to live better lives. Food processors and retailers follow suit. When this occurs, farmers receive some compensation for their changed practices that comes from the pocket of the consumer. Large retailers, in turn seek to capitalize on this market preference by adopting standards for producers that take food movement concerns into account.

42. Altruism is discussed in NIAL SCOTT & JONATHAN SEGLOW, *ALTRUISM* (2007) and *BEYOND SELF-INTEREST* (Jane J. Mansbridge ed., 1990). A significant and growing literature identifies altruism as an essential element in economic interaction. See SAMUEL BOWLES & HERBERT GINTIS, *A COOPERATIVE SPECIES: HUMAN RECIPROCITY AND ITS EVOLUTION* (2011). This is in contrast to much economic thinking of the last several decades. As Bowles and Gintis remind us in their introduction, however, the importance of moral sentiments, such as altruism, were not ignored by those who preceded neoclassical economics. They quote Adam Smith from 1759: "How selfish soever man may be supposed, there are evidently some principles in his nature, which interest him in the fortune of others, and render their happiness necessary to him, though he derives nothing from it, except the pleasure of seeing it." *Id.* at 1 (quoting ADAM SMITH, *THE THEORY OF MORAL SENTIMENTS* 3 (1759)).

The tendency of new farm and food movements to rely on markets is notable, but not necessarily permanent.⁴³ One could imagine shifts in focus that would be even less comfortable for those that are not sympathetic to the concerns of the new farm and movements.⁴⁴

IV. CRITIQUES OF THE NEW FARM AND FOOD MOVEMENTS

The most effective and important critiques of new farm and food movements center on three points. Each is potentially effective in that it asserts that the new movements fail in their goal of improving on the failings of conventional agriculture. First, it is argued that the movements are not based on sound science. A second critique is that the movements fail to promote social equality, and in fact are a form of elite snobbery. A third critique holds that new movements compromise our ability to feed the world. Each of these criticisms is discussed below in turn.

A. Using Sound Science

It is often argued that certain aspects of the new farm and food movements are not based on sound science.⁴⁵ This is an important point. Most would agree that, at a minimum, agriculture and food choices and policies should be informed by legitimate science. Without science, particularly in agriculture, we would largely be lost. So, while it is important to acknowledge the centrality of science to what we want from agriculture and food, it is also notable that many harbor a deep suspicion about science and technology, and that some of these concerns have a coherent basis. For now, let us leave these aside. That is to say, let us ignore for present purposes the creepy failures of science—phrenology, eugenics, scientific racism,⁴⁶ and the well-known technological catastrophes.⁴⁷

43. See Michael Pollan, *Vote for the Dinner Party: Is This the Year that the Food Movement Finally Enters Politics?*, N.Y. TIMES MAG., Oct. 14, 2012, at MM62.

44. A recent example of activism that reaches beyond the market is an agreement between the egg industry and the Humane Society of the United States to promote federal legislation governing egg production conditions. See Helena Bottemiller, *Egg Industry, Humane Society Strike Landmark Deal*, FOOD SAFETY NEWS (July 8, 2011), http://www.foodsafetynews.com/2011/07/egg-industry-hsus-strike-landmark-deal-on-humane-handline/#.UUc6_475FeQ.

45. See, e.g., Steven Salzberg, *Does Genetically Modified Corn Cause Cancer? A Flawed Study Fails to Convince*, FORBES, Sept. 24, 2012, <http://www.forbes.com/sites/steven-salzberg/2012/09/24/does-genetically-modified-corn-cause-cancer-a-flawed-study/>.

46. The science of phrenology is at least partially amusing; not so the science of eugenics, which lead to devastating abuse in the United States and other places as the elaborate and hugely influential scientific basis of racism. For a discussion on eugenics, see DANIEL J. KEVLES, *IN THE NAME OF EUGENICS: GENETICS AND THE USES OF HUMAN HEREDITY* (1985) and ALEXANDRA M.

Also, leave aside the largely convincing literature showing that science is in part a social product affected by forces other than the natural world,⁴⁸ and the interesting debates in the philosophy of science regarding what constitutes a convincing and effective scientific method.⁴⁹ Instead, let us for now embrace a strong faith in science and the scientific method. Further, at least for the moment, let us assume that based on mainstream science some of the claims of alternative farm and food movements are questionable.

There are at least three possible responses to the criticism that new farm and food movements are not based on sound science. First, to the extent we embrace what has come to be called “sound science” when thinking about new movements, we should be consistent when considering other important matters. Science for the goose is also good for the gander. If a *basic scientific agreement* is the criteria by which we base our thinking, several dominos fall right away. Climate change is real, will likely be colossally damaging, and is in part caused by agriculture.⁵⁰ Antibiotic use in agriculture increases the risk of antibiotic-

STERN, EUGENIC NATION: FAULTS AND FRONTIERS OF BETTER BREEDING IN MODERN AMERICA (2005). Regarding the scientific support for racism, a century ago scientific consensus held that humans were sorted into a few distinct and permanent races, race was essential for understanding human variation, physical features marked the races, each race had innate social and moral characteristics, and races could be placed in an ordered hierarchy of talent, beauty, and other traits. Whites were on top. See ALI RATTANSI, RACISM: A VERY SHORT INTRODUCTION (2007).

47. Anecdotal reasons for a limited faith in science might include events well known enough to be reduced to a word: Chernobyl, Fukushima, and Bhopal.

48. For work arguing that science is, at a minimum, socially influenced, see THE HANDBOOK OF SCIENCE AND TECHNOLOGY STUDIES (Edward J. Hackett et al. eds., 3d ed. 2008).

49. For surveys of the problems outstanding for the philosophy of science, see A COMPANION TO THE PHILOSOPHY OF SCIENCE (W.H. Newton-Smith ed., 2000); PETER GODFREY-SMITH, THEORY AND REALITY: AN INTRODUCTION TO THE PHILOSOPHY OF SCIENCE (2003); Sven Ove Hansson, *Science and Pseudo-Science*, in STANFORD ENCYCLOPEDIA OF PHILOSOPHY (Edward N. Zalta ed., Fall ed. 2008), available at <http://plato.stanford.edu/entries/pseudo-science/>; SAMIR OKASHA, PHILOSOPHY OF SCIENCE: A VERY SHORT INTRODUCTION (2002).

50. See generally MARK MASLIN, GLOBAL WARMING: A VERY SHORT INTRODUCTION (2d ed., 2009) (providing an accessible summary of the evidence for climate change and a history of the climate change debate); C.L. WALTHAL ET AL., AGRIC. RESEARCH SERV., USDA, TECHNICAL BULLETIN 1935, CLIMATE CHANGE AND AGRICULTURE IN THE UNITED STATES: EFFECTS AND ADAPTATION (2013) (discussing agriculture’s role in climate change and the ability of agriculture to adjust to climate change); see also William D. Nordhaus, *Why the Global Warming Skeptics are Wrong*, N.Y. REV. BOOKS (Mar. 22, 2012), www.nybooks.com/articles/archives/2012/mar/22/why-global-warming-skeptics-are-wrong/?Dagination=false (providing a brief analysis and counter to the argument against climate change); NAT’L ACAD. OF SCI., UNDERSTANDING AND RESPONDING TO CLIMATE CHANGE (2008), available at http://www.nres.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1048006.pdf. A low first estimate of the agricultural contribution can be found in EPA, INVENTORY OF U.S. GREENHOUSE GAS EMISSION AND SINKS: 1990–2006 (2008), available at http://www.epa.gov/climatechange/Downloads/ghgemissions/08_CR.pdf. It assigns agriculture a 6.4% share of greenhouse gas emission in the United States. *Id.* at 2-14; see also NAT’L RESEARCH

resistant infection.⁵¹ Agricultural run-off pollutes waterways and the air.⁵² Agriculture is a central cause of the dead zones in the Gulf of Mexico and other places.⁵³

Second, science may offer less help than is sometimes supposed because the questions asked and answered are often quite narrow and the conclusive answers sometimes hard to identify. For example, for the last several decades the scientific establishment has endorsed the view that pesticides at very low trace levels of consumption are safe for consumers.⁵⁴ This is an important piece of information, but it leaves unanswered the question of risk for rural residents and those that work with pesticides, and certainly tells us nothing about environmental effects of pesticides. This type of problem is magnified when one considers

COUNCIL, CLIMATE STABILIZATION TARGETS: EMISSIONS, CONCENTRATIONS, AND IMPACTS OVER DECADES TO MILLENNIA 4 (2010) (“[P]rovid[ing] important scientific insights about the relationships among emissions, greenhouse gas concentrations, temperatures, and impacts.”).

51. See NAT’L RESEARCH COUNCIL, THE USE OF DRUGS IN FOOD ANIMALS: BENEFITS AND RISKS (1999) (discussing agricultural antibiotic use and bacterial resistance to antibiotics).

52. See LARRY D. JACOBSON ET AL., COUNCIL FOR AGRIC. SCI. AND TECH., ISSUE PAPER NO. 47, AIR ISSUES WITH ANIMAL AGRICULTURE: A NORTH AMERICAN PERSPECTIVE (2011); NAT’L RESEARCH COUNCIL, AIR EMISSIONS FROM ANIMAL FEEDING OPERATIONS: CURRENT KNOWLEDGE, FUTURE NEEDS (2003); NAT’L RESEARCH COUNCIL, SOIL AND WATER QUALITY: AN AGENDA FOR AGRICULTURE (1993); COUNCIL FOR AGRIC. SCI. AND TECH., WATER QUALITY: AGRICULTURE’S ROLE, SUMMARY (1992).

53. See *Dead Zones: Hypoxia in the Gulf of Mexico*, U.S. DEP’T OF COMMERCE, NAT’L OCEANIC & ATMOSPHERIC ADMIN. (Nov. 2009), http://www.noaa.gov/factsheets/new%20version/dead_zones.pdf (discussing the size and potential impacts of the dead zone in the Gulf of Mexico). The U.S. Geographical Survey includes several reports on hypoxia in the Gulf of Mexico. *USGS Hypoxia in the Gulf of Mexico Studies*, U.S. GEOLOGICAL SURVEY, <http://toxics.usgs.gov/hypoxia/> (last modified Jan. 10, 2013); see also Robert J. Diaz & Rutger Rosenberg, *Spreading Dead Zones and Consequences for Marine Ecosystems*, 321 SCIENCE 926 (2008); SUZIE GREENHALGH & AMANDA SAUER, WORLD RES. INSTITUTE, AWAKENING THE DEAD ZONE: AN INVESTMENT FOR AGRICULTURE, WATER QUALITY, AND CLIMATE CHANGE (Feb. 2003); NAT’L OCEANIC & ATMOSPHERIC ADMIN., HYPOXIA IN THE GULF OF MEXICO: PROGRESS TOWARDS THE COMPLETION OF AN INTEGRATED ASSESSMENT (1999); NAT’L SCI. & TECH. COUNCIL, AN INTEGRATED ASSESSMENT: HYPOXIA IN THE NORTHERN GULF OF MEXICO (2000).

54. Put differently, although a significant percentage of food tests positive for residues, the residues rarely exceed established tolerance limits. See NAT’L RESEARCH COUNCIL, THE FUTURE ROLE OF PESTICIDES IN U.S. AGRICULTURE 68 (2000). Still, as the National Academy of Sciences acknowledges, the presence of pesticides in food can increase the risk of death due to cancer. *Id.* Because pesticides do not seem to act through a threshold, any residue consumed can produce a statistical increase in cancer risk. *Id.* at 68–69. Further, population subgroups differ in exposure to residues, and this exposure, coupled with greater susceptibility for infants and children for example, can increase risks for these subgroups. *Id.* at 69. The effect of cumulative residues, and the extent to which various pesticides might act in an additive or synergistic matter, are subjects of ongoing debate. *Id.* Finally, health hazards other than cancer, including hormone disrupting effects, also exist and are subjects of current research. *Id.*

that many important questions have yet to result in a scientific consensus, or that the consensus may seem to be slowly shifting.⁵⁵ Complicating matters further is the possibility of concerted efforts to cloud the picture of mainstream scientific consensus.⁵⁶

Third, except in a science fiction dystopia, science is an essential important contributor policy, but scientific expertise does not exercise absolute veto power over policy. This is especially true for a democracy, one would hope, but it may also be true to an extent in a market society. Science is good at answering certain questions, but not others. Is methane a greenhouse gas? This is a question that science is fit to answer. How much methane should be permitted into the atmosphere from agriculture, and who should be allowed to emit it? This is a question that should be informed by science but cannot be answered solely by it. If the question is risk, and much of the debate about farming and food is about risk, people tend to harbor what some would consider irrational fears on some matters and irrational confidence on others.⁵⁷

In a democratic society should some “irrational” fears of the public be given account? Trusting popular intuition with little regard for science can seem unappealing in a society that often believes in astrology and other suspect theo-

55. The slow rotation of expert scientific advice for nutrition is recounted in two Harvey Levenstein books: HARVEY LEVENSTEIN, *PARADOX OF PLENTY: A SOCIAL HISTORY OF EATING IN MODERN AMERICA* (Univ. of Cal. Press 2003) (1993); HARVEY LEVENSTEIN, *REVOLUTION AT THE TABLE: THE TRANSFORMATION OF THE AMERICAN DIET* (2003). A contemporary look at the scientific debate is found in Charlotte Biltekoff, *Critical Nutrition Studies*, in *THE OXFORD HANDBOOK OF FOOD HISTORY* 172, 172–90 (Jeffrey M. Pilcher ed., 2012).

56. Such efforts are arguably common. See generally DAVID MICHAELS, *DOUBT IS THEIR PRODUCT: HOW INDUSTRY’S ASSAULT ON SCIENCE THREATENS YOUR HEALTH* (2008); NAOMI ORESKES & ERIK M. CONWAY, *MERCHANTS OF DOUBT: HOW A HANDFUL OF SCIENTISTS OBSCURED THE TRUTH ON ISSUES FROM TOBACCO SMOKE TO GLOBAL WARMING* (2010).

57. See generally BARUCH FISCHHOFF & JOHN KADVANY, *RISK: A VERY SHORT INTRODUCTION* (2011) (discussing the many kinds of risks and how people deal with them); John A. (Sean) Fox, *Risk Preferences and Food Consumption*, in *THE OXFORD HANDBOOK OF THE ECONOMICS OF FOOD CONSUMPTION AND POLICY* 75, 75–98 (Jayson L. Lusk et al. eds., 2011) [hereinafter *FOOD CONSUMPTION AND POLICY*] (discussing risks associated with food consumption and how consumers make choices).

ries.⁵⁸ But also unappealing is the notion of a purely scientific and technocratic elite operating without general population input.⁵⁹

A similar argument could be made from the perspective that science should not be permitted to trump consumer preference. While the capitalist free-for-all of food production without any government regulation philosophy seems long ago discredited, one hears with some frequency the argument that if consumers want to buy unhealthy products it is up to them. Consumer desires, for example, are said to be the origin of the industrialization and standardization of poultry and pork production. If the organization of the meat industry is defended on the basis of some sort of autonomous consumer market demand, it is hard to make the argument that consumer interest in organics or any other type of new agriculture should be subjected to terribly much scrutiny. Or, to put it differently, if the market is the conveyor belt for a consumer demand for cigarettes and sugared breakfast cereal, so too it must be for organic apples, grass-fed beef, and cage-free eggs. The nature of consumer markets, how they are shaped, and how they shape society, is itself a central question of which food and agriculture plays only a part.⁶⁰ The potential for consumer decisions to serve explicitly political and social purposes only adds to that complexity.⁶¹ Given the importance of

58. A National Science Foundation annual report on science and engineering analyzed the public attitudes and understanding of science in general, and belief in “pseudoscience” more specifically, with predictable results. See NAT’L SCI. BD., SCIENCE AND ENGINEERING INDICATORS 2006, at 7-21 to -22 (2006). Belief in aliens, psychic powers, and astrology appear to be holding strong. See *id.* Belief in clairvoyance, mental communication with the dead, and channeling may be on the downswing. *Id.*

59. See MARK B. BROWN, SCIENCE IN DEMOCRACY: EXPERTISE, INSTITUTIONS AND REPRESENTATION (2009) (discussing a contemporary and possibly more democratic process); PHILIP KITCHER, SCIENCE IN A DEMOCRATIC SOCIETY (2011).

60. Theories of the meaning of consumerism and consumer culture, widely discussed for several decades, are represented in ACKNOWLEDGING CONSUMPTION: A REVIEW OF NEW STUDIES (Daniel Miller ed., 1995); THE AUTHORITY OF THE CONSUMER (Russel Keat et al. eds., 1994); THE CONSUMER SOCIETY READER (Juliet B. Schor & Douglas B. Holt eds., 2000); DANIEL HOROWITZ, THE ANXIETIES OF AFFLUENCE: CRITIQUES OF AMERICAN CONSUMER CULTURE, 1939–1979 (2004); CELIA LURY, CONSUMER CULTURE (2d ed. 2011); THE OXFORD HANDBOOK OF THE HISTORY OF CONSUMPTION (Frank Trentmann ed., 2012); ROBERTA SASSATELLI, CONSUMER CULTURE: HISTORY, THEORY AND POLITICS (2007); DON SLATER, CONSUMER CULTURE & MODERNITY (1997).

61. The perhaps surprisingly common phenomenon of political consumerism is analyzed in LIZABETH COHEN, A CONSUMERS’ REPUBLIC: THE POLITICS OF MASS CONSUMPTION IN POSTWAR AMERICA (2003); THE EARTHSCAN READER IN SUSTAINABLE CONSUMPTION (Tim Jackson ed., 2006); ETHICS OF CONSUMPTION: THE GOOD LIFE, JUSTICE AND GLOBAL STEWARDSHIP (David A. Crocker & Toby Linden eds., 1998); THE ETHICAL CONSUMER (Rob Harrison et al. eds., 2005); MATTHEW HILTON, PROSPERITY FOR ALL: CONSUMER ACTIVISM IN AN ERA OF GLOBALIZATION (2009); MICHELE MICHELETTI, POLITICAL VIRTUE AND SHOPPING: INDIVIDUALS, CONSUMERISM, AND COLLECTIVE ACTION (2003); DARA O’ROURKE, SHOPPING FOR GOOD (2012); POLITICS, PRODUCTS,

farming and food to people generally, the nature of food consumerism, and the politicization of that consumption, is inevitably confusing and controversial.⁶²

B. *A Double Standard in “Sound Science”? The Example of Nutrition and Organic Food*

A common argument against farm and food movements is essentially that, if looked at scientifically, the benefits of the alternatives are either minimal or nonexistent. This is particularly true for claims regarding the health and safety of food, but also can be found regarding other claims as well.

To consider the importance of sound science criticism of farm and food movements, it may make sense to look more closely at a reasonably strong part of that argument against the movements and ask what seems like a basic question: Is organic food nutritionally superior to conventionally grown food? A new study on whether organic foods are safer and healthier has received considerable attention.⁶³ The authors attempted to survey the global scientific evidence of the proposition. The widely reported interpretation of the study was that organic foods are not more nutritious.⁶⁴ The caveats, however, are significant. First, the study concluded that the published literature lacks “strong evidence” that organic food is “significantly more nutritious” than conventional food.⁶⁵ This is somewhat different than saying that there are no nutritional benefits to organic. Second, the study concluded that consumption of organic food “may reduce exposure to pesticide residues and antibiotic-resistant bacteria.”⁶⁶ A number of qualified scholars criticized the article for omitting certain kinds of studies.⁶⁷ In addition, as noted above, for many people nutritional benefits are not among the primary reasons they purchase organic food.⁶⁸

AND MARKETS: EXPLORING POLITICAL CONSUMERISM PAST AND PRESENT (Michele Micheletti et al. eds., 2004).

62. The nature of food demand by consumers is discussed extensively in Rachel A. Ankeny, *Food and Ethical Consumption*, in *THE OXFORD HANDBOOK OF FOOD HISTORY* 461, 461–80 (Jeffrey M. Pilcher ed., 2012); Warren Belasco, *Food and Social Movements*, in *THE OXFORD HANDBOOK OF FOOD HISTORY*, *supra*, at 481, 481–98; Maria L. Loureiro, *Ethical Considerations and Food Demand*, in *FOOD CONSUMPTION AND POLICY*, *supra* note 57, at 869, 869–82; Mario F. Teisl, *Environmental Concerns in Food Consumption*, in *FOOD CONSUMPTION AND POLICY*, *supra* note 57, at 843, 843–68.

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

64. *Id.* at 357.

65. *Id.* at 348.

66. *Id.*

67. See Charles Benbrook, *Initial Reflections on the Annals of Internal Medicine Paper “Are Organic Foods Safer and Healthier than Conventional Alternatives? A Systematic Review,”*

Let us grant, however, that alternative farm and food movements claim, or at least imply, that alternatives, such as organic, are healthier and of a better quality than conventionally produced food. For the sake of argument, let us also assume that nutritional benefits are part of the appeal of organic food, and assume a strong conclusion can be drawn from the study—that there is no confirmed basis for believing organic foods are more nutritious than conventional foods. Essentially, the argument would be that new farm and food movements rely on intuition, not science, and are deceiving people with false claims about food.

A close scrutiny of claims made by the sellers of alternatively produced and marketed food is certainly warranted. This is the country, after all, with a history of patent medicine and other dubious food and health-related products. Food has been an especially tempting target for con artists, shysters, and cheating entrepreneurs.

When thinking about science more generally, however, a central question is one of intellectual consistency. Are organic foods subjected to a closer criticism than other agricultural products when it comes to health benefits? How do the claims for nutritional benefits of organic food compare to the food industry's marketing efforts more generally?

A number of consumer health and safety issues pertaining to agriculture would seem to warrant significant concern. Millions of Americans are made sick by their food each year, tens of thousands go to the hospital, and thousands die.⁶⁹ More ominously perhaps, is that agriculture is the starting point for products known to be dangerous to health. The yearly death toll from tobacco consumption, for example, appears to be in the hundreds of thousands in the United States alone.⁷⁰ Tobacco remains a significant crop in the United States.⁷¹

WASH. STATE UNIV., 1 (Sept. 4, 2012), <http://www.tfrec.wsu.edu/pdfs/P2566.pdf>; see also David C. Holzman, *Organic Food Conclusions Don't Tell the Whole Story*, ENVTL. HEALTH PERSP. (Dec. 3, 2012), <http://ehp.niehs.nih.gov/120-a458/>.

68. See Brian Fung, *Organic Food Isn't More Nutritious, but That Isn't the Point*, ATLANTIC, Sept. 4, 2012, <http://www.theatlantic.com/health/print/2012/09/organic-food-isnt-more-nutritious-but-that-isn't-the-point/261929/> (describing concern for the environment and making a statement about public health among other reasons consumers purchase organic).

69. The Center for Disease Control and Prevention makes estimates regarding food-borne diseases. Each year, an average of roughly 48 million became sick, 128,000 are hospitalized, and 3000 die due to foodborne illness. *CDC Estimates of Foodborne Illness in the United States*, CTRS. FOR DISEASE CONTROL & PREVENTION (2011), http://www.cdc.gov/foodborneburden/PDFs/FACTSHEET_A_FINDINGS_updated4-13.pdf.

70. The Centers for Disease Control and Prevention estimates that in 2008, smoking caused about 443,000 deaths, including about 49,000 from secondhand smoke. See *Tobacco-Related Morality*, CTRS. FOR DISEASE CONTROL AND PREVENTION, http://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/tobacco_related_mortality/ (last updated Mar. 21, 2011).

Perhaps a more fair comparison concerns the nutritional benefits of food products. About half of the total energy intake for Americans comes from carbohydrates, and for many people about half of carbohydrate intake comes from simple sugar.⁷² Some sugar comes from foods thought to be healthful—such as fruit and milk.⁷³ Much sugar consumption, however, is added in processing or preparation. Soft drinks are the most common source of added sugar.⁷⁴ Americans drink about forty gallons per person per year, and each twelve ounce can contains more than thirty-eight grams of sugar.⁷⁵ There is more controversy about the role of sugar in diet than one might assume, but this sugar consumption certainly causes tooth decay and may contribute to weight gain.⁷⁶

Further, there are enormous marketing campaigns that promote sugar consumption. By the late 1970s, Coca-Cola's advertising budget alone equaled total federal government spending on nutritional education.⁷⁷ At present the food industry spends billions of dollars per year to advertise and promote products to children.⁷⁸ According to Juliet Schor, in her unsettling account of contemporary marketing efforts aimed at children, seventy percent of advertising spending is for "convenience foods, candy and snacks, alcoholic beverages, soft drinks, and desserts."⁷⁹ Vegetables, grains, and beans comprise about two percent of the advertising.⁸⁰ A study of children's television advertising observed that sixty-three percent of all ads were for food.⁸¹ Amazingly, in twenty-five years of food

71. See Daniel A. Sumner & Julian M. Alston, *Economic Implications for U.S. Tobacco Farmers of Measures to Reduce Tobacco Consumption in the United States*, in AFTER TOBACCO: WHAT WOULD HAPPEN IF AMERICANS STOPPED SMOKING? 49, 49–75 (Peter Bearman et al. eds., 2011).

72. JANICE L. THOMPSON ET AL., *THE SCIENCE OF NUTRITION* 149 (Deirdre Espinoza et al. eds., 2008).

73. *Id.*

74. *Id.* at 150.

75. *Id.*

76. *Id.* at 150–51; Catherine S. Berkey et al., *Sugar-Added Beverages and Adolescent Weight Change*, 12 *OBESITY RESEARCH* 778 (2004) (commenting on the likely link between weight gain and the increased consumption of sugar-added beverages by U.S. adolescents).

77. LEVENSTEIN, *PARADOX OF PLENTY*, *supra* note 55, at 198.

78. According to a Federal Trade Commission report, a total of forty-eight food industry firms spent a total of \$1.79 billion in 2009 in marketing efforts targeting youth; \$1 billion targeted children (ages 2 to 11), \$1 billion targeted teens (ages 12 to 17), \$263 million overlapped between the two age groups, and a total of \$9.65 billion was spent for all audiences. FED. TRADE COMM'N, *A REVIEW OF FOOD MARKETING TO CHILDREN AND ADOLESCENTS: FOLLOW-UP REPORT 5* (2012).

79. JULIET B. SCHOR, *BORN TO BUY* 121 (2004); see also Margret Gamble & Nancy Cotugna, *A Quarter Century of TV Food Advertising Targeted at Children*, 23 *AM. J. HEALTH BEHAV.* 261, 262 tbl.1 (1999).

80. SCHOR, *supra* note 79, at 122; Gamble & Cotugna, *supra* note 79.

81. Gamble & Cotugna, *supra* note 79, at 263.

advertising on children's shows, "with the exclusion of some public service announcements, 'there have been no food advertisements for fruits or vegetables.'"⁸² Studies show advertising to children to be effective.⁸³

Alternative food marketers likely deserve criticism for some of their health claims. If so, however, the conventional food industry's dubious claims on behalf of the healthiness of its products would also seem to warrant attention.

C. Social Justice and Food Movement Elitism

A common criticism of the new farm and food movements is that they are elitist. One can divide this argument into three parts. Each, to a point, has merit. First, some say it is elitist because the food being promoted is more costly and, therefore, less available to those with less money. This seems almost inevitably true. It may require greater reliance on public programs and sophisticated efforts to make the sustainable farming and food movement available to a broader group of people.

Second, and perhaps more interesting, is the criticism that as a cultural phenomenon, food movements amount to a means of establishing one's superiority over others. It does not take a nineteenth century Marxist, or even a twentieth century Thorstein Veblen, to notice that consumer choice often hinges on the wealth of the customer, and that cultural factors, including an interest in standing out from others, affect consumer behavior.⁸⁴ It would be amazing if this tendency did not also affect food consumption in general and food movements in particular. Both seem to be the case. It is not clear, however, whether the classic steakhouse of 1975 was any less elitist than the food co-op of 2013. Some aspects of food culture aim, in theory, to be more egalitarian than the mainstream food industry, but close inspection shows that this has been unevenly accom-

82. SCHOR, *supra* note 79, at 120 (citing Gamble & Cotugna, *supra* note 79, at 264).

83. See Gamble & Cotugna, *supra* note 79, at 265; see also Sina Henningsen et al., *Determinants of Advertising Effectiveness: The Development of an International Advertising Elasticity Database and a Meta-Analysis*, 4 BUR BUS. RESEARCH J. 193 (2011) (gauging the effectiveness of advertising generally).

84. See Aviv Nevo, *Empirical Models of Consumer Behavior*, 3 ANN. REV. ECON. 51 (2011), see also THORSTEIN VEBLÉN, *THE THEORY OF THE LEISURE CLASS: AN ECONOMIC STUDY IN THE EVOLUTION OF INSTITUTIONS* (1899) (suggesting that people might consume with the aim of impressing others). See generally Laurie Simon Bagwell & B. Douglas Bernheim, *Veblen Effects in a Theory of Conspicuous Consumption*, 86 AM. ECON. REV. 349 (1996) (acknowledging a century later that conspicuous consumption could create a market imperfection); PIERRE BOURDIEU, *DISTINCTION: A SOCIAL CRITIQUE OF THE JUDGMENT OF TASTE* (Richard Nice trans., 1984).

plished in practice.⁸⁵ One point to be made about the cultural phenomenon of conspicuous consumption is that it could, in theory, be used to push people toward better (in the eyes of the farm and food movements) consumer behavior, and therefore, have a function other than exclusivity in itself.

Third, there has been more discussion as of late regarding the extent to which new movements fail to move beyond traditional agriculture when it comes to labor, race, and ethnicity. The movements—by both farmers and consumers—are overwhelmingly white. Some alternatives, such as organics, seem to do very little for agricultural workers (besides reducing pesticide exposure), and the movements seem unable to move past the traditional assumption that white culture is the default for food and agriculture.⁸⁶

D. *Feeding the World*

A common criticism of the new farm and food movements is that, while they essentially sound nice, they compromise the ability of the United States to do its part to feed the world. The basic premise is that, to the extent that alternative practices leave us with lower yields, this will hurt the global food effort.

If we assume that sustainable food production results in lower yields, there is a plausible logic to this argument.⁸⁷ Certainly, there are hundreds of millions of people without enough food.⁸⁸ The world's population is expected to

85. See JOSÉE JOHNSTON & SHYON BAUMANN, *FOODIES: DEMOCRACY AND DISTINCTION IN THE GOURMET FOODSCAPE* (2010) (discussing the tension between food democracy and distinction).

86. See, e.g., Rachel Slocum, *Whiteness, Space and Alternative Food Practice*, 38 *GEOFORUM* 520 (2006) (discussing “how whiteness is embedded within the spaces of US alternative food practices”). For typical journalism, see Sarah Newman, *The Ugly Truth Behind Organic Food*, *ALTERNET* (May 13, 2009), http://www.alternet.org/print/story/140001/the_ugly_truth_behind_organic_food. Academic discussions include *FOOD FOR THE FUTURE: CONDITIONS AND CONTRADICTIONS OF SUSTAINABILITY* (Patricia Allen ed., 1993) and JULIE GUTHMAN, *AGRARIAN DREAMS: THE PARADOX OF ORGANIC FARMING IN CALIFORNIA* (2004).

87. Organic production, for example, at present likely results in yield decreases in the western industrialized world of roughly twenty percent. Verena Seufert et al., *Comparing the Yields of Organic and Conventional Agriculture*, 485 *NATURE* 229 (2012). A more optimistic assessment of yields is Catherine Badgley et al., *Organic Agriculture and the Global Food Supply*, 22 *RENEWABLE AGRIC. & FOOD SYS.* 86, 91–92 (2007) (“In some instances, organic-intensive methods resulted in higher yields than conventional methods for the same crop in the same setting . . .”).

88. An interesting account of world poverty and hunger that also reviews a number of remedies is ABHIJIT V. BANERJEE & ESTHER DUFLO, *POOR ECONOMICS: A RADICAL RETHINKING OF THE WAY TO FIGHT GLOBAL POVERTY* (2011). For an unconventional view, see *AGRICULTURE AND FOOD IN CRISIS: CONFLICT, RESISTANCE, AND RENEWAL* (Fred Magdoff & Brian Tokar eds., 2010).

increase by at least two billion over the next few decades.⁸⁹ Meanwhile, people in several countries, notably China and India, are eating more meat. Thus, we need even more food production from the United States.

The notion, however, that increased U.S. grain and meat production will feed more people is perhaps deceptively simple. First, as is well known, there is enough food in the world to feed everyone. For those that buy their food, the central problem is that they cannot afford to buy it. It is difficult to find anyone who believes that the United States can produce enough grain to drive down the prices of food so far that the very poorest in the world will be able to eat. For the very poorest, the question is primarily one of an ability to buy the food that already exists. In a place like India, where there are actually food surpluses but millions of hungry people, the benefits of increased U.S. production would seem to be minimal.⁹⁰

Second, there seems to be an assumption that the desperately hungry people in the world live in cities and buy food. Thus, any slight change in world food prices affects their ability to survive. This is certainly true for many millions of people. Three-fourths of the poor in the developing world, however, are rural and most depend on agriculture for a living.⁹¹ This amounts to about 2.1 billion people.⁹² In light of this fact, the question of whether food prices should be higher or lower is perhaps surprisingly complicated.⁹³ It means that producing the maximum amount of food possible in the United States does not necessarily do anything to feed the poorest people in the world.

Third, the United States raises and exports food products and these are consumed abroad. If, however, the logic of maintaining the maximum food production here—despite environmental and other costs—is to make sure that Indian and Chinese middle class has cheap meat, the moral component of the “feed the world” argument is less dramatically compelling.

89. Press Release, United Nations, World Population to Increase by 2.6 Billion Over Next 45 Years, with All Growth Occurring in Less Developed Regions, U.N. Press Release POP/918 (Feb. 24, 2005), available at <http://www.un.org/News/Press/docs/2005/pop918.doc.htm>.

90. See Vikas Bajaj, *As Grain Piles Up, India's Poor Still Go Hungry*, N.Y. TIMES (June 7, 2012), http://www.nytimes.com/2012/06/08/business/global/a-failed-food-system-in-india-prompts-an-intense-review.html?pagewanted=all&_r=0.

91. WORLD BANK, WORLD DEVELOPMENT REPORT 2008, at 26 (2007).

92. *Id.* at 45.

93. An influential account is C. PETER TIMMER, *GETTING PRICES RIGHT: THE SCOPE AND LIMITS OF AGRICULTURAL PRICE POLICY* (1986). Other useful discussion on this point are Johan F.M. Swinnen, *The Right Price of Food* (LICOS Ctr. for Insts. and Econ. Performance, Discussion Paper No. 259, 2010) and Maros Ivanic & Will Martin, *Implications of Higher Global Food Prices for Poverty in Low-Income Countries* (World Bank Dev. Research Grp., Policy Research Working Paper No. 4594, Apr. 2008).

Fourth, to the extent that the world has the opportunity to increase global food production, the most likely areas for gain seem to be elsewhere. With more intensive and sustainable practices, areas like Africa, Asia, Latin America, and Eastern Europe seem to be the most likely areas for significant increases in food production.⁹⁴

In sum, if the cost of alternative farm and food movements in the United States was to increase hunger abroad, this would be an extremely important and damaging critique of the movements. At this point, however, it is not clear that something less than maximum United States food production will hurt individuals in the world desperate for food.

V. CONCLUSION

The new food and agriculture movements respond to real problems. The movements may be awkward and sometimes confused, but they make an effort to deal with the environmental, animal welfare, and social equality problems that conventional agriculture and agricultural lawyers have sought to avoid or dismiss. Increasingly, society seems to be moving along with the movements. For farming, and for agricultural law, to retain its higher calling, agriculture must adjust. Equality of opportunity must be a fundamental starting point for those who hope to farm, and alternative ways of farming, and the farmers that embrace them, must be acknowledged and supported. Included among the supporters of these basic principles should be agricultural lawyers.

94. See Jonathan A. Foley et al., *Solutions for a Cultivated Planet*, 478 NATURE 337, 339 (2011). See generally LINDA COLLETTE ET AL., FOOD AND AGRIC. ORG., SAVE AND GROW: A POLICYMAKER'S GUIDE TO THE SUSTAINABLE INTENSIFICATION OF SMALLHOLDER CROP PRODUCTION (2011); THE ROYAL SOC'Y, REAPING THE BENEFITS: SCIENCE AND THE SUSTAINABLE INTENSIFICATION OF GLOBAL AGRICULTURE (2009).