

**FOOD AND SUPERFOOD: ORGANIC LABELING
AND THE TRIUMPH OF GAY SCIENCE OVER
DISMAL AND NATURAL SCIENCE IN
AGRICULTURAL POLICY**

JIM CHEN

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FOOD AND SUPERFOOD: ORGANIC LABELING AND THE TRIUMPH OF GAY SCIENCE OVER DISMAL AND NATURAL SCIENCE IN AGRICULTURAL POLICY

JIM CHEN*

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History, said T.S. Eliot, “is a pattern / Of timeless moments.”¹ In its timeless search for meaningful patterns, law in turn often seizes on moments in history. In the making of contemporary agricultural policy, the nearly silent and seamless convergence of American and European standards for organic labeling represents one of those moments.

Effective June 1, 2012, the United States and the European Union have each agreed to treat the other jurisdiction’s system of organic certification as equivalent to its own.² Because organic labeling under the Organic Foods Production Act serves as the practical (if legally imperfect) vehicle by which American farmers and agribusinesses market food produced without resort to genetically modified organisms,³ the United States and European Union’s organic equivalence arrangement provides a quiet, partial solution to one of the longest, bitterest trade disputes dividing the dominant cultures of the North Atlantic.⁴ Beyond its impact in two of the world’s biggest markets for organic food, the Organic Equivalence Arrangement signals something even deeper within the

* Dean and Professor of Law, Louis D. Brandeis School of Law, University of Louisville. I appreciate comments from Christopher C. French, Paul J. Heald, Guy R. Knudsen, Patrick S. O’Donnell, Tracey M. Roberts, Susan A. Schneider, Andrew Torrance, and Katharine Van Tassel. Special thanks to Heather Elaine Worland Chen.

1. T.S. Eliot, *Little Gidding*, in COLLECTED POEMS 1909 – 1962 200, 208 (1963).

2. Press Release, European Comm’n, European Union and United States Agree to Historic New Partnership on Organic Trade (Feb. 15, 2012), http://ec.europa.eu/agriculture/organic/files/news/press-releases/IP-12-138_EN.pdf.

3. See Jim Chen, *Beyond Food and Evil*, 56 DUKE L.J. 1581, 1584 (2007).

4. See generally PEW INITIATIVE ON FOOD AND BIOTECHNOLOGY, U.S. v. EU: AN EXAMINATION OF THE TRADE ISSUES SURROUNDING GENETICALLY MODIFIED FOOD (2005), http://www.pewtrusts.org/uploadedFiles/www.pewtrustsorg/Reports/Food_and_Biotechnology/Biotech_USEU1205.pdf.

making of global agricultural policy. The silent substitution of organic labeling for transatlantic harmonization of policies on genetically modified organisms represents the triumph of aesthetics and environmental philosophy over the traditional drivers of agricultural policy and food and drug law in the United States: production costs, retail prices, consumer protection, and federal supervision of all aspects of science affecting food and agriculture. In a stunning reversal of the usual presumption that philosophical beauty should not dictate legal truth,⁵ transatlantic convergence on organic labeling gives the gay science of poetry a striking victory over the dismal science of economics and the natural sciences of plant and animal breeding.

Part I of this essay describes how labeling under the Organic Foods Production Act (OFPA) and the Department of Agriculture's National Organic Program has become the de facto vehicle in the United States for the marketing of foods not derived from genetically modified organisms. Part II describes the Organic Equivalence Arrangement. The arrangement contains two specific exceptions, both targeting the use of antibiotics in agricultural production. Acquiescence in these exceptions, which force both the United States and the European Union to raise their organic production standards in order to reach all corners of a unified North Atlantic market, foreshadows harmonization in favor of more, rather than less, restrictive measures regulating agriculture in these wealthy nations. In a sharp departure from most trade disputes over agriculture and environmental protection, the Organic Equivalence Agreement pushes both the United States and the European Union toward more aggressive environmental measures, even in the absence of a scientific consensus over their utility or necessity. Part III concludes that agricultural policy, in the United States and in the European Union, may be converging toward a philosophical consensus that favors aesthetic and precautionary preferences (such as those embodied in organic production) over other considerations that have traditionally commanded greater attention in American law, such as industrial organization and market structure in agriculture and the consumer protection mandate of the Food, Drug, and Cosmetic Act (FD&CA).

I. ORGANIC LABELING AS THE DE FACTO VEHICLE FOR MARKETING FOODS NOT DERIVED FROM GENETICALLY MODIFIED ORGANISMS

Despite intense interest among farmers, consumers, and some state regulators, the United States Food and Drug Administration (FDA) has never unequivocally endorsed the marketing of food as "GM free," "biotech free," or otherwise lacking ingredients derived from genetically modified organisms. The FDA's *Coordinated Framework for the Regula-*

5. Cf. Kenji Yoshino, *The City and the Poet*, 114 YALE L.J. 1835, 1839 (2005) ("Banished from law as a polluted discourse, literature keeps surfacing in the wake of its enforced departure.").

*tion of Biotechnology*⁶ and *Statement of Policy: Foods Derived from New Plant Varieties*⁷ emphasize the compositional and nutritional attributes of foods derived from genetically modified organisms, relative to their substantial equivalents among foods not so derived.⁸ This emphasis on substantial equivalence pays little or no special regard to the use of genetically modified organisms as a process or a production method warranting special regulatory attention. At most the FDA has provided draft guidance through a policy statement, *Voluntary Labeling Indicating Whether Foods Have or Have Not Been Developed Using Bioengineering*, counseling vendors who do attach a label such as “GM free” or “biotech free” that this claim must be accompanied by a statement clarifying that foods so labeled are not safer than or nutritionally superior to foods lacking such a label.⁹

The FDA’s position on the labeling of foods not derived from genetically modified organisms is consistent with its position that milk and dairy products labeled as having been derived from cows not treated with recombinant bovine somatotropin (rbST) should carry a further disclaimer that “[n]o significant difference has been shown between milk derived from rbST-treated and non-rbST-treated cows.”¹⁰ Litigation over state-law efforts to compel or to forbid this sort of labeling has reached an effective stalemate. A single dairy industry group, the International Dairy Foods Association (IDFA), has waged winning litigation on both sides of the issue. In 1996 the IDFA successfully sued to invalidate a Vermont statute requiring disclosure of rbST use on dairy cows.¹¹ In 2010 the IDFA won a suit to invalidate an Ohio statute prohibiting labels that promote other dairy products as having been derived from cows not treated with rbST.¹²

The seeming contradiction in the IDFA’s litigation strategy is readily reconciled. As a broad-based industry group, the IDFA has a stake in preserving what it perceives as competing commercial interests of different groups within its membership. Some dairy farmers wish to use rbST to stimulate milk production. Others wish to tap markets consisting of consumers who want to avoid milk and dairy products derived from cows treated with rbST. The IDFA’s success in vindicating the constitutional interests of both groups of farmers against legal coercion at either extreme—compelled disclosure or a ban on voluntary labeling—suggests that current FDA policy has reached an equilibrium as unhap-

6. 51 Fed. Reg. 23,302 (June 26, 1986).

7. 57 Fed. Reg. 22,984 (May 29, 1992).

8. See Regulation of Biotechnology, 51 Fed. Reg. at 23,302; New Plant Varieties, 57 Fed. Reg. at 22,985.

9. 66 Fed. Reg. 4839 (Jan. 18, 2001).

10. Interim Guidance on the Voluntary Labeling of Milk and Milk Products from Cows That Have Not Been Treated with Recombinant Bovine Somatotropin, 59 Fed. Reg. 6279, 6280 (Feb. 10, 1994). On the rbST controversy and its broader implications for agricultural policy, see generally Jim Chen, *The American Ideology*, 48 VAND. L. REV. 809, 863–73 (1995).

11. See *Int’l Dairy Foods Ass’n v. Amestoy*, 92 F.3d 67 (2d Cir. 1996).

12. See *Int’l Dairy Foods Ass’n v. Boggs*, 622 F.3d 628 (6th Cir. 2010).

py as it is stable. Producers and agribusinesses may voluntarily label their foods as not having been derived from genetically modified organisms, but only if they disclaim any claim to greater safety or nutritional superiority.

This stalemate arises from the competing interests of the Food, Drug, and Cosmetic Act (FD&CA). If the use of genetically modified organisms renders a particular food unfit for consumption by the human population at large, the only appropriate remedy under the FD&CA is an outright ban. The FDA holds not only the authority but also the affirmative obligation to ban all adulterated food¹³ and all nonapproved food additives.¹⁴ Compulsory labeling is the appropriate remedy for bio-engineered foods deemed safe for the population at large, but treacherous for consumers with food allergies or other unusual vulnerabilities. The Food Allergen Labeling and Consumer Protection Act of 2004¹⁵ would presumably compel the FDA to require the labeling of foods whose genetic engineering may introduce a protein associated with one or more of the eight major allergen classes covered by the 2004 Act: milk, eggs, fish, crustacean shellfish, tree nuts, peanuts, wheat, and soybeans.¹⁶ Genetic engineering that introduces an otherwise undisclosed sulfite would also fall within the reach of the FDA's rules on mandatory labeling.¹⁷

Voluntary labeling, by stark contrast, encounters severe statutory obstacles under federal food and drug law. The FDA must treat food as "misbranded" if "its labeling is false or misleading in any particular."¹⁸ The prohibition on misbranding serves two distinct purposes. First, the prohibition on misbranding reinforces the FD&CA's ban on adulteration by preventing the consumption of foods (or, for that matter, drugs) in excess or in the wrong combination.¹⁹ Second, the ban on misbranding strives to protect consumers against false advertising.²⁰ This statutory mandate to protect consumers from fraudulent and misleading food labels prevents the FDA from giving unequivocal, full-throated support for claims that a food is not produced by resort to recombinant genetic modification of plant or animal life. Having concluded under section 402 of the Food, Drug, and Cosmetic Act that a particular food is not adulterated by its inclusion of genetically modified ingredients, and having approved under section 409 any food additive derived from a genetically

13. See 21 U.S.C. § 342(a)(1) (2006); *id.* § 331(a).

14. See *id.* § 348; see also *id.* § 321(s) (defining "food additive" and exempting food additives that are generally recognized as safe from the otherwise mandatory baseline of FDA approval for all food additives).

15. Pub. L. No. 108-282, 118 Stat. 905 (2004).

16. See 21 U.S.C. §§ 321(qq), 343(w).

17. See 21 C.F.R. § 101.100(a)(4) (2012).

18. See 21 U.S.C. §§ 321(n), 343(a)(1).

19. See *United States v. Sullivan*, 332 U.S. 689, 695-97 (1948).

20. See, e.g., *United States v. 95 Barrels of Vinegar*, 265 U.S. 438, 442-43 (1924); *cf. United States v. An Article of Food . . . "Manischewitz . . . Diet Thins"*, 377 F. Supp. 746, 749 (E.D.N.Y. 1974) ("Purchasers of diet products are often 'pathetically eager' to obtain a more slender figure.").

modified organism, the FDA cannot permit a contrary claim that another food, not produced with this technology, has superior value or may even confer affirmative health benefits—at least not without committing an arguably incipient violation of its obligation under section 403 to prevent the misbranding of food.

For all practical purposes, organic labeling under the OFPA²¹ has filled the legal vacuum created by the internal contradictions of the FD&CA and the FDA's unwillingness to breach its scientific mandate by condemning foods derived from genetically modified organisms, at least in the absence of evidence that such foods are dangerous or compositionally different from other foods. The OFPA, unlike the FD&CA, is enforced by the United States Department of Agriculture (USDA).²² The USDA, unlike the FDA, has no statutory obligation to protect consumers from the economic consequences of believing, even without evidence, that organic foods are safer than or nutritionally superior to their conventional counterparts. Just as the precautionary principle invites policymakers to place the burden of overcoming scientific uncertainty on new technologies, the USDA's organic program embraces a conservative attitude toward agricultural technology. Even in the absence of firm evidence of harm from chemical or transgenic inputs in agriculture, organic production abjures these techniques in advance.

How the USDA came to incorporate avoidance of genetically modified organisms into its organic production and labeling standards is an epic story in its own right. In its effort to implement a comprehensive National Organic Program under the OFPA, the USDA in 1997 issued a notice of proposed rulemaking that would have permitted the then-pending definition of organic production to allow irradiated foods, foods produced using human waste as fertilizer, and bioengineered foods.²³ Under intense pressure, the USDA withdrew all three of these categories of foods from the National Organic Program.²⁴ The exclusion of genetically modified organisms from the USDA's organic production standards gave American producers and agribusinesses a lawful way to communicate their avoidance of genetically modified organisms without risking sanctions under the FD&CA. In the ensuing years, American consumers seeking to avoid foods derived from genetically modified organisms have used organic labeling as a surrogate for the "GM free" and "biotech free" labels that the FDA has never unequivocally endorsed.

21. 7 U.S.C. §§ 6501–22.

22. *See id.* § 6502(19) (OFPA); *cf.* 21 U.S.C. § 393 (FD&CA).

23. *See* Donald T. Hornstein, *The Road Also Taken: Lessons from Organic Agriculture for Market- and Risk-Based Regulation*, 56 *DUKE L.J.* 1541, 1552–53 (2007).

24. *See* National Organic Program, 65 *Fed. Reg.* 80,548 (Dec. 21, 2000).

II. ORGANIC HARMONIZATION AS A BRIDGE BETWEEN CULTURES DIVIDED OVER GENETICALLY MODIFIED ORGANISMS

Resort to organic production and uniform labeling of organic foods has enabled American farmers and agribusinesses to market foods on the basis of avoidance of genetically modified organisms, without directly rebutting a strong legal and scientific consensus that these products may be safely introduced into the human food chain. Likewise, global harmonization of organic production standards offers one way of bridging a legal chasm that has divided American and European agriculture. From 1998 to 2003, the European Union imposed a de facto moratorium on the licensing of genetically modified organisms for agricultural use and on the marketing of foods derived from such organisms. The Regulation on Novel Foods and Novel Food Ingredients required the disclosure of the use of genetically modified organisms on all foods marketed within the European Union.²⁵ This requirement had the effect of closing Europe to many conventional farmers in the United States. In 2003 the United States, Argentina, and Canada challenged the European moratorium before the World Trade Organization (WTO).²⁶ In 2006 the WTO ruled against the European Union.²⁷

By contrast, global standards on organic agriculture have converged. The United States Department of Agriculture's National Organic Program defines "organic production" as "[a] production system that is managed in accordance with the [Organic Foods Production] Act" and its implementing regulations "to respond to site-specific conditions by integrating cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity."²⁸ The National Organic Standards Board has adopted an even more extensive definition:

Organic agriculture is an ecological production management system that promotes and enhances biodiversity, biological cycles and soil biological activity. It is based on minimal use of off-farm inputs and on management practices that restore, maintain and enhance ecological harmony The principal guidelines for organic production are to use materials and practices that enhance the ecological balance of natural systems and that integrate the parts of the farming system into an ecological whole. Organic agriculture practices cannot ensure that products are completely free of residues; however, methods are used

25. Council Regulation 258/97, 1997 O.J. (L 43) art. 8 (EC).

26. See Panel Report, *European Communities—Measures Affecting the Approval and Marketing of Biotech Products*, at 1, WT/DS291/R, WT/DS292/R, WT/DS293/R (Sept. 29, 2006). Australia, Brazil, Chile, China, Colombia, El Salvador, Honduras, Mexico, New Zealand, Norway, Paraguay, Peru, Chinese Taipei, Thailand, and Uruguay "reserved their rights to participate in the Panel proceedings as Third Parties." *Id.* at 2.

27. *Id.* at 1068.

28. 7 C.F.R. § 205.2 (2012).

to minimize pollution from air, soil and water. Organic food handlers, processors and retailers adhere to standards that maintain the integrity of organic agricultural products. The primary goal of organic agriculture is to optimize the health and productivity of interdependent communities of soil life, plants, animals and people.²⁹

The European Union has defined organic agriculture in similar terms:

Organic production is an overall system of farm management and food production that combines best environmental practices, a high level of biodiversity, the preservation of natural resources, the application of high animal welfare standards and a production method in line with the preference of certain consumers for products produced using natural substances and processes. The organic production method thus plays a dual societal role, where it on the one hand provides for a specific market responding to a consumer demand for organic products, and on the other hand delivers public goods contributing to the protection of the environment and animal welfare, as well as to rural development.³⁰

The European Union takes special pains to stipulate that “[g]enetically modified organisms (GMOs) and products produced from or by GMOs are incompatible with the concept of organic production and consumers’ perception of organic products.”³¹ European policy explicitly provides that genetically modified organisms “should . . . not be used in organic farming or in the processing of organic products.”³² Indeed, Europe has adopted “[t]he aim” of “hav[ing] the lowest possible presence of GMOs in organic products,” tolerating no more than “the adventitious and technically unavoidable presence of GMOs.”³³

In principle, the United States and the European Union have adopted definitions of organic agriculture and labeling that converge toward a global standard. The American and European definitions are readily reconciled with the aspirational global definition of organic agriculture in the United Nations Food and Agriculture Organization’s Codex Alimentarius:

Foods should only refer to organic production methods if they come from an organic farm system employing management practices which seek to nurture ecosystems which achieve sustaina-

29. Final Minutes of Meeting, National Organic Standards Board, Agricultural Marketing Service 50 (April 24–28, 1995) (italics omitted), <http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRDC5057442>.

30. Council Regulation 834/2007, 1997 O.J. (L 189) 1, ¶ 1 (EC), *as amended*, Council Regulation 967/2008, 2008 O.J. (L 264) 1 (EC).

31. *Id.* ¶ 9.

32. *Id.*

33. *Id.* ¶ 10.

ble productivity, and provide weed, pest and disease control through a diverse mix of mutually dependent life forms, recycling plant and animal residues, crop selection and rotation, water management, tillage and cultivation.³⁴

With clarity comparable to that of the European Union's organic standards, the Codex Alimentarius deems "[a]ll materials and/or the products produced from genetically engineered/modified organisms (GEO/GMO)" to be "not compatible with the principles of organic production (either the growing, manufacturing, or processing)."³⁵

With the adoption of their Organic Equivalence Arrangement of February 15, 2012, the United States and the European Union have eliminated most barriers to harmonization of their legal schemes for organic production and labeling. By their February 15 letter to Dacian Ciolos of the European Commission, deputy USDA secretary Kathleen Merrigan and Islam Siddiqui of the office of the United States Trade Representative determined "that agricultural products produced and handled in accordance with the EU's organic system, as in effect on June 1, 2012, are produced and handled under an organic certification program that provides safeguards and guidelines . . . that are at least equivalent to the requirements" of the United States' Organic Foods Production Act.³⁶ For its part, the European Union has determined that American "rules governing the production and controls of organic agricultural products are equivalent to those laid down in" the European Union's organic standards.³⁷

The Organic Equivalence Arrangement is subject to a uniform limitation binding both parties and to an offsetting pair of limitations, each of which projects one jurisdiction's more restrictive practices onto the other jurisdiction. The United States and the European Union have both agreed to exclude aquacultural products from their arrangement.³⁸ This exclusion is consistent with the United States' historic practice of assigning responsibility over seafood safety to the FDA rather than the Department of Agriculture, which exercises jurisdiction over meat, poultry, and egg products.³⁹

34. Joint FAO/WHO Food Standards Programme, Codex Alimentarius Comm'n, Codex Alimentarius: Organically Produced Foods, CAC/GL 32-1999, § 2.1 (2001), <ftp://ftp.fao.org/docrep/fao/005/Y2772E/Y2772e.pdf>.

35. *Id.* § 1.5.

36. Letter from Kathleen Merrigan, Deputy Sec'y, U.S. Dep't of Agric. & Islam Siddiqui, Chief Agric. Negotiator, Office of the U.S. Trade Representative, to Decian Ciolos, Member, European Commission (Feb. 15, 2012) [hereinafter Merrigan-Siddiqui Letter], <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5097168>.

37. Commission Implementing Regulation 126/2012, 2012 O.J. (L 41) 1, 5 (EU).

38. *Id.* at 9 (excluding "aquaculture products" and "processed aquaculture products" from the scope of Europe's commitments under the Organic Equivalence Arrangement); Merrigan-Siddiqui Letter, *supra* note 36, at app. 1 ("Aquatic animals (*e.g.*, fish, shellfish) are not included within the scope of this determination.").

39. Seafood falls within the FDA's presumptive authority to regulate food safety. See 21 U.S.C. § 393(b) (2006). The Department of Agriculture implements the Federal Meat Inspection Act, *id.* §§ 601–24; the Poultry Products Inspection Act, *id.* §§ 451–71; and, the

Of greater interest is the Organic Equivalence Arrangement's exchange of provisions targeting differences in acceptance of antibiotic use in organic agriculture in Europe and the United States. The American reservations from the coverage of the Organic Equivalence Arrangement include a provision that "[a]gricultural products derived from animals treated with antibiotics cannot be marketed as organic in the United States."⁴⁰ Meanwhile, the European Union has required that any imports of apples or pears, raw or processed, in order to be marketed as "organic," must include "the presentation of specific certification . . . that no treatment with antibiotics to control fire blight (such as tetracycline and streptomycin) has occurred during the production process."⁴¹

These exceptions to the Organic Equivalence Arrangement shed harsh light on the subtherapeutic and therapeutic use of antibiotics in agriculture, including production methods otherwise deemed to be "organic." The United States' stand against European products derived from animals treated with antibiotics coincided with a federal district court order directing the FDA to continue proceedings, originating in 1977, that could result in the removal of broad-spectrum antibiotics from animal feeds in the United States.⁴² For its part, Europe's insistence on avoiding antibiotics in apple and pear cultivation will probably change horticultural practices in the United States. American farmers have long combated fire blight, a bacterial disease that is particularly destructive of apple and pear trees, with antibiotics such as streptomycin and tetracycline.⁴³ Although that technique has led to the emergence of antibiotic resistant strains of *Erwinia amylovora*, the bacterium that causes fire blight,⁴⁴ the National Organic Standards Board voted 7-4 in 2006 to retain the antibiotics streptomycin and tetracycline on its list of synthetic substances allowed in organic crop production.⁴⁵ The European Union's refusal to confer organic status on apples and pears treated with these antibiotics will probably accelerate the United States' decertification of streptomycin and tetracycline for use in organic agriculture. Although the subtherapeutic use of antibiotics in animal husbandry is much more widespread and will therefore resist reform through regulatory pressure, the Organic Equivalence Agreement nudges both the

Egg Products Inspection Act, *id.* §§ 1031–56. Congress has also excluded catfish from FDA jurisdiction and directed the Department of Agriculture to regulate them. *See id.* § 625; 7 U.S.C. § 1622(n)(1) (Supp. IV 2010).

40. Merrigan-Siddiqui Letter, *supra* note 36, at app. 1.

41. Commission Implementing Regulation 126/2012, 2012 O.J. (L 41) 9 (EU).

42. *See* Natural Res. Def. Council, Inc. v. U.S. Food & Drug Admin., 2012 U.S. Dist. LEXIS 39457 (S.D.N.Y. 2012).

43. *See, e.g.*, V.O. Stockwell et al., *Integrated Control of Fire Blight with Antagonists and Oxytetracycline*, 793 ACTA HORTICULTURA 383 (2008).

44. *See* Alan L. Jones & Elise L. Schnabel, *Streptomycin-Resistant Strains of Erwinia Amylovora*, in FIRE BLIGHT: THE DISEASE AND ITS CAUSATIVE AGENT, *ERWINIA AMYLOVORA* 235, 235 (Joël L. Vanneste ed., 2000).

45. *See* Formal Recommendation by the Nat'l Organic Standards Bd. to the Nat'l Organic Program (Jun. 6, 2006), <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRD3456156>.

United States and the European Union toward excluding the administration of antibiotics to animals as a practice deemed compatible with organic agriculture.

III. THE TRIUMPH OF GAY OVER DISMAL AND NATURAL SCIENCE IN AGRICULTURAL POLICY

Interest in organic agriculture has grown from a sense, often more vague than completely documented, that chemical intervention in the production of food, feed, fiber, or fuel for putative human benefit has disrupted ecological systems and imperiled both human and nonhuman life. The coalescence of organic standards in the United States and the European Union against the use of genetically modified organisms and antibiotics is neither coincidental nor inherently ill-conceived. Both sets of practices strike fear that conventional agriculture, especially if enhanced by resort to technologies using recombinant DNA, will accelerate the evolutionary clock. Because nonhuman organisms have much shorter lifespans and reproductive cycles, they evolve at rates that outstrip human efforts at pest control and yield management.⁴⁶ Whether bioengineering through transgenic techniques poses this sort of evolutionary threat, and if so, to what extent, remain questions beyond the power of contemporary agricultural science (let alone agricultural law and policy) to answer.⁴⁷ What we do know, right now, is that these are top-level environmental risks transcending the questions of food safety and animal welfare that American regulators have consistently resolved in favor of allowing the deployment of rDNA-based technology in agriculture. It is equally noteworthy that American and European trade negotiators have used the Organic Equivalence Agreement to push both sides' agricultural standards toward more rather than less stringency. It is hard to imagine a more striking departure from the "race to the bottom" narrative accompanying international conflicts such as the dolphin-tuna and shrimp-turtle controversies.⁴⁸

A commitment to producing and consuming food according to organic ideals arises from little more than a philosophical or aesthetic sense that resort to chemical pesticides or fertilizers, to say nothing of genetically modified organisms, poses risks beyond the current ability of science to quantify. We may regard this instinct as an expression of "biophilia," the innate human love of nature and the living world.⁴⁹ Nature at its best reveals the lightest possible human touch. To a great extent in Europe and to a lesser extent in America, political support for man-

46. See generally Mary Jane Angelo, *Regulating Evolution for Sale: An Evolutionary Biology Model for Regulating the Unnatural Selection of Genetically Modified Organisms*, 42 WAKE FOREST L. REV. 93 (2007).

47. See generally Guy R. Knudsen, *Where's the Beef? How Science Informs GMO Regulation and Litigation*, 48 IDAHO L. REV. 225 (2012).

48. See generally Daniel A. Farber, *Stretching the Margins: The Geographic Nexus in Environmental Law*, 48 STAN. L. REV. 1247 (1996).

49. See generally EDWARD O. WILSON, *BIOPHILIA* (1984).

datory disclosure of GMO use draws much of its power from a fear that the government will not respond with competence and with honesty to actual or perceived threats to food safety. It cannot be described, let alone defended, as an exercise in rational policymaking. If indeed the release of genetically modified organisms imperils the environment—whether through gene flow among related species, negative impact on nontarget organisms, or the acceleration of herbicide or pesticide resistance—then consumer warnings represent a woefully inadequate regulatory response. At the very least, these concerns demand production-level controls. If the environmental threats are that substantial, the only proper remedy is parallel to the remedy that American food and drug law prescribes for any agent that adulterates food: an outright ban. As a tool for managing the risks that may arise from the use of genetically modified organisms, labeling effectively abdicates responsibility over serious questions of environmental protection and public health to the basest of instincts among uninformed consumers: ignorance, fear, and distrust.

Despite these failings, organic labeling serves an important aesthetic function in agricultural policy. American-European convergence on harmonized organic production and labeling standards represents the closest thing to an official endorsement by the United States government of embracing the precautionary principle in matters affecting American agricultural exports.⁵⁰ The Organic Equivalence Arrangement belongs to that category of legal documents, decisions, and principles that “rank[] other values higher than [economic] efficiency.”⁵¹ Behold the law: American agricultural policy traditionally emphasizes economic returns to farmers’ labor.⁵² Food and drug law in the United States is driven by the FDA’s quest for consumer protection and insistence on scientifically rigorous decision making. Organic agriculture generally, and the specific instance of American-European coordination through the Organic Equivalence Arrangement, demonstrate the potential of philosophical and aesthetic considerations to override both economics and natural science in agricultural law and policy. In the dialectic dance among C.P. Snow’s three competing cultures—the literary, the scientific, and the bureaucratic⁵³—the poetic ethos that Friedrich Nietzsche

50. Compare U.N. Gen. Assembly, Rio Declaration on Environment and Development, annex I, princ. 15, U.N. Doc. A/CONF.151/26 (Vol I) (Aug. 12, 1992), <http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm> (“Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”), with Knudsen, *supra* note 47, at 241 (describing the United States’ preference for a standard rooted in “scientific evidence” or “sound scientific knowledge”).

51. *INS v. Chadha*, 462 U.S. 919, 959 (1983).

52. See generally Chen, *supra* note 10.

53. Compare C.P. SNOW, *THE TWO CULTURES: AND A SECOND LOOK* 22 (2d ed. 1964) (decrying the cultural divide between the literary and scientific cultures of contemporary society), with *id.* at 70 (identifying “something like a third culture,” a community of social scientists “concerned with how human beings are living or have lived”). See generally Jim Chen, *The Midas Touch*, 7 MINN. J.L. SCI. & TECH. i (2006).

called the gay science has seized the upper hand.⁵⁴ Human, all too human: In this clash over food and evil, the gay science has prevailed over the dismal science of economics and the natural sciences that enable humanity to harness and harvest nature for its own purposes. When no party or nation can lay firm claim to the truth, a sense of beauty—a yearning for poetic justice, for poetry as justice—lays bare the path to power.

54. *See generally* FRIEDRICH NIETZSCHE, *THE GAY SCIENCE* (Walter Kaufmann trans., 1974).