2010

Bundling Public and Private Goods: The Market for Sustainable Organics

Margot J. Pollans
Elisabeth Haub School of Law at Pace University, mpollans@law.pace.edu

BUNDLING PUBLIC AND PRIVATE GOODS: THE MARKET FOR SUSTAINABLE ORGANICS

MARGOT J. POLLANS*

Modern agriculture has vast environmental externalities. The pesticides, fertilizers, and sediments in irrigation runoff pollute surface and groundwater; single-crop farms destroy biodiversity; and massive amounts of fossil fuels are burned in agricultural production, post-harvest processing, and shipping. Nevertheless, farming operations have largely escaped the post-1970 expansion of federal environmental regulation. Compounding the problem, federal farm policy has encouraged the very farming practices that most cause this degradation.

In 1990, Congress passed the Organic Foods Production Act (OFPA), which created an organic food certification and labeling system. While OFPA's primary purposes are to facilitate the growth of the organic sector and to protect consumers, this Note suggests that the Act's secondary purpose, underimplemented by the United States Department of Agriculture (USDA), is to foster sustainable farming practices. This Note explores whether the OFPA's organic labeling system does or could fill the regulatory gap described above.

This Note finds that under current standards the labeling program does not foster sustainable farming, not only because of shortfalls with the standards themselves but also because the market suffers from a freerider problem: Organic foods cost more, but consumers do not want to pay more for dispersed public benefits. Strengthening the standards would drive up production costs and exacerbate the freerider problem, but this Note argues that the USDA could mitigate the resulting decline in demand by taking advantage of the fact that organic products bundle sustainability, a public good for which people are not willing to pay much, with health, a private good for which many people are willing to pay more.

INTRODUCTION

Modern agriculture is unsustainable. The pesticides, fertilizers, and sediments in irrigation runoff pollute both surface and groundwater. Single-crop farms destroy biodiversity. Massive amounts of fossil fuels are burned in agricultural production, post-harvest processing, and shipping. Nevertheless, farming operations have largely escaped the post-1970 expansion of federal environmental reg-

 J.D. Candidate, 2010, New York University School of Law; B.A., 2004, Columbia University. I especially need to thank Vicki Been for her guidance, patience, and invaluable advice throughout the writing process. I am indebted to Oren Bar-Gill, Barry Friedman, and Lily Batchelder for all of their feedback and support. Thanks to the participants of the Furman and Milbank/Lederman Workshops, in particular Dan Deacon. I also want to thank all the editors on the journal for shepherding this Note through the publication process, especially Lisa Bennett, Kristen Richer, Shawn Ledingham, and Rebecca Talbott. Finally, thank you to my family for sparking my interest in this subject and for constant encouragement.

ulation. The command-and-control[1] environmental regulations that apply to most other American industries do not apply to farming. Compounding the problem, federal farm policy has encouraged the very farming practices that most cause this degradation.

In 1990, Congress passed the Organic Foods Production Act (OFPA or "the Act"), which created an organic food certification and labeling system—the National Organic Program (NOP).[2] While the OFPA's primary purposes are to facilitate the growth of the organic sector and to protect consumers, this Note suggests that the Act's secondary purpose, underimplemented by the United States Department of Agriculture (USDA), is to foster sustainable farming practices.[3] This Note explores whether the NOP organic labeling system—a form of information regulation[4]—does or could fill the regulatory gap described above. While other forms of regulation might address the problem more directly, they are less politically palatable to the agricultural sector.[5]

As a tool for sustainability, the NOP faces a serious freerider problem: Most consumers do not want to pay for sustainability, which is a public good.[6] In addition, the freerider problem impedes the

---

[1] Command-and-control regulation involves direct requirements for pollution reduction or mitigation such as emission caps or specific technology requirements. *See* Bruce A. Ackerman & Richard B. Stewart, *Reforming Environmental Law*, 37 STAN. L. REV. 1333, 1334–51 (1985) (describing command-and-control regulation and contrasting it with market tools for regulation); *see also* RICHARD L. REVESZ, ENVIRONMENTAL LAW AND POLICY 161–72 (2008) (evaluating Ackerman and Stewart's arguments and providing additional references).

[2] The OFPA was passed as Title XXI of the 1990 Farm Bill. Food, Agriculture, Conservation, and Trade Act of 1990, Pub. L. No. 101-624, §§ 2101–2123, 104 Stat. 3359, 3935–51 (codified at 7 U.S.C. §§ 6501–6522 (2006)). The NOP is administered by the United States Department of Agriculture (USDA).

[3] The primary purposes of the Act were market expansion, uniformity of standards, and consumer protection (the Act was in part a response to the existence of varying state requirements). *See* 7 U.S.C. § 6501 (2006) (listing purposes of Act); S. REP. NO. 101-357, at 289 (1990), *as reprinted in* 1990 U.S.C.C.A.N. 4656, 4943 (noting need for national uniformity). However, there was also an underlying concern with sustainability. *See infra* notes 167–69 and accompanying text (demonstrating this concern).

[4] Information regulation is regulation through disclosure or labeling requirements, as opposed to direct control. For a more thorough definition and a discussion of how information regulation operates, see *infra* Section II.A.

[5] *See generally* Warren A. Braunig, Note, *Reflexive Law Solutions for Factory Farm Pollution*, 80 N.Y.U. L. REV. 1505 (2005) (arguing that because of public-choice politics, information regulation is strong alternative to command-and-control regulation in farming context). The strength of the agricultural lobby is evidenced by the farming sector's extensive exemptions from environmental regulations. *See infra* Part I.B (describing these exemptions).

[6] A public good is non-exclusive and non-rivalrous; in other words, it "must be available to everyone if [it is] available to anyone." MANCUR OLSON, THE LOGIC OF COLLECTIVE ACTION: PUBLIC GOODS AND THE THEORY OF GROUPS 9–16 (1971) (describing public goods and explaining why rational economic actors are unwilling to pay for them).

ability of the USDA to improve enforcement and strengthen labeling requirements because such changes could increase the cost of organic products. This Note argues that one way to cope with the freerider problem is to take advantage of the fact that organic foods bundle sustainability (a public good) with health (a private good). It is the latter that has the largest impact on the willingness of consumers to pay more for organic products. By taking advantage of this bundling, the USDA could address the current shortfalls of the NOP and increase the environmental benefits of organic production without risking a decline in market share.

Part I defines sustainability and describes the ways in which modern farming is unsustainable. It then explores the framework of environmental laws, which almost entirely exempt the agricultural sector, and federal farm policy, which encourages destructive practices by rewarding certain types of production. Both the exemptions from environmental law and the destructive incentives contained in federal farm policy reflect the political power of the agricultural lobby. Part II introduces the OFPA as an alternative method of regulation. It evaluates the Act against a set of criteria for successful information regulation. This Part then examines the content of the statute and regulations, which have a number of shortcomings with regard to sustainability, and evaluates the market for organic foods, which is supported more by consumer interest in health than in sustainability. Part III argues that any environmental benefits created by the NOP are made possible by the bundling of public and private goods. It then examines how bundling works in the OFPA and other eco-labeling contexts and considers possible normative challenges to this approach before concluding that the bundling is normatively desirable. Finally, it considers how the USDA might take advantage of bundling to increase the sustainability benefits of the NOP.

I
SUSTAINABILITY AND MODERN AGRICULTURE

Sustainable agriculture has many definitions.[7] The common thread is an emphasis on long-term goals that consider the economic, social, and environmental dimensions of agricultural production.[8]

Classic examples include military defense and lighthouses. WILLIAM J. BAUMOL & ALAN S. BLINDER, MICROECONOMICS: PRINCIPLES AND POLICY 237 (9th ed. 2003).

[7] *See* Leo Horrigan et al., *How Sustainable Agriculture Can Address the Environmental and Human Health Harms of Industrial Agriculture*, 110 ENVTL. HEALTH PERSP. 445, 452 (2002) (listing several definitions).

[8] *See id.* (noting sustainable agriculture's long-term focus). Although it will occasionally touch on social and economic issues, this Note will focus primarily on environmental

Advocates of alternative agriculture argue that conventional modes of agricultural production are problematic because they ignore natural limits.[9]

The first step in devising a working definition of sustainability is articulating the goal: to farm in accordance with the structure of local ecosystems.[10] This "nature as standard" approach requires tailoring farming techniques to local soil and local climate;[11] in other words, farming methods (including crop choices) should be consistent with local ecosystems. It also requires acknowledging the complexity of ecosystems and attempting to work within their constraints rather than ignoring or attempting to control them.[12]

These broad definitions of sustainable agriculture must be transformed into "operational elements" to make them useful for policy purposes.[13] Crop selection is a good example: Crops can be selected based on local soil type and rainfall patterns, and crop diversity should be carefully planned to minimize the need to apply fertilizers and pesticides.[14] Other sustainable practices include crop rotation, use of

---

concerns. It is worth noting, however, that many advocates of sustainable agriculture view sustainability as more than a farming strategy; for them, it is a way of life. For a seminal account of the importance of agriculture to American society, see WENDELL BERRY, THE UNSETTLING OF AMERICA: CULTURE & AGRICULTURE 7 (1986). *See also* Wendell Berry, *The Agrarian Standard*, *in* THE ESSENTIAL AGRARIAN READER: THE FUTURE OF CULTURE, COMMUNITY, AND THE LAND 23, 23–33 (Norman Wirzba ed., 2003) (making plea for social importance of sustainable agriculture).

[9] *See, e.g.*, Wes Jackson, *The Agrarian Mind: Mere Nostalgia or a Practical Necessity?*, *in* THE ESSENTIAL AGRARIAN READER: THE FUTURE OF CULTURE, COMMUNITY, AND THE LAND, *supra* note 8, at 140, 141–53 (making this critique).

[10] *See generally, e.g.*, MICHAEL POLLAN, SECOND NATURE: A GARDENER'S EDUCATION (1991) (demonstrating this point through author's own attempts at gardening).

[11] This approach is celebrated by the Land Institute, a research center in Salina, Kansas, that has worked to develop agricultural systems that mimic the stability of the native prairie. *See* Wes Jackson, *Natural Systems Agriculture*, LAND REP., Summer 1996, at 60, 60–61 (describing history and methods of this approach), *available at* http://www.landinstitute.org/vnews/display.v/ART/1996/06/15/41ed7b3f7649c; The Land Institute, Introduction and Mission, http://www.landinstitute.org/vnews/display.v/ART/2000/08/10/37a747b43 (last visited Mar. 9, 2010).

[12] *See, e.g.*, Frederick Kirschenmann, Dir., Leopold Ctr. for Sustainable Agric., The Future of Agrarianism: Where Are We Now? (Apr. 25–27, 2002), *available at* http://www.leopold.iastate.edu/pubs/speech/files/042502-future_of_agrarianism.pdf (address at Georgetown University conference considering Wendell Berry's *The Unsettling of America* twenty-five years later) ("Farms . . . are ultimately micro-ecosystems that exist within macro-ecosystems. As such agriculture is . . . part of that complex, interdependent web of life that has evolved (and continues to evolve) over four billion years. We ignore that evolving complexity only at our peril.").

[13] Michael R. Taylor, *The Emerging Merger of Agricultural and Environmental Policy: Building a New Vision for the Future of American Agriculture*, 20 VA. ENVTL. L.J. 169, 187 (2001).

[14] The idea behind this latter approach is that certain plants drain nutrients that others provide, and certain plants ward off insects to which others are susceptible. G. TYLER

cover crops, low- or no-till practices, active soil management, polyculture, and nutrient management.[15] Any national policy must allow sufficient flexibility for practices to remain site-specific; there is no one-size-fits-all version of sustainable agriculture.

By the "nature as standard" definition, modern farming is not sustainable. Farming in accord with a sustainable approach would curb many of the environmental externalities of current methods.

A. Environmental Externalities of Agriculture

In the last sixty years, agricultural productivity has increased dramatically.[16] The changes to farming practice that allowed for this increase have "been extremely effective in divorcing agriculture from ecology by replacing internal controls on ecological processes such as nutrient delivery and pest suppression with external controls such as fertilizers and pesticides."[17]

This increased productivity has come at a price of increased environmental externalities, which economists estimate may cost society as much as forty percent of per acre farming profit,[18] or somewhere in the range of $5.7 to $16.9 billion per year.[19] These externalities include

---

MILLER, JR., LIVING IN THE ENVIRONMENT: PRINCIPLES, CONNECTIONS, AND SOLUTIONS 284 (13th ed. 2004).

[15] Horrigan et al., *supra* note 7, at 452.

[16] This increase is generally attributed to the industrialization of agricultural practices and the related "green revolution." *See* MILLER, *supra* note 14, at 281. There were two waves of the "green revolution." *Id.* The first wave, which took place in the 1950s and early 1960s, involved more widespread use of monoculture, more frequent use of pesticides, fertilizers, and genetically engineered crops, and increased intensity and frequency of planting. *Id.* The second wave, beginning in 1967, was jump-started by the improvement of crop breeding practices, which made it possible to grow more food on less land. *Id.* The "green revolution" had mixed environmental effects. On the one hand, these developments allowed for widespread protection of wild lands, which no longer needed to be converted to farmland. On the other hand, these practices required an increase in fossil fuel and fresh water inputs, resulting in increased pollution. *Id.*; *see also* G. Philip Robertson & Scott M. Swinton, *Reconciling Agricultural Productivity and Environmental Integrity: A Grand Challenge for Agriculture*, 3 FRONTIERS IN ECOLOGY & ENV'T 38, 38–39 (2005) (explaining that based on current knowledge of ecological function, this increase in production would have been impossible absent chemical inputs).

[17] Robertson & Swinton, *supra* note 16, at 39.

[18] V. Kerry Smith, *Environmental Costing for Agriculture: Will It Be Standard Fare in the Farm Bill of 2000?*, 74 AM. J. AGRIC. ECON. 1076, 1077 (1992) (explaining that estimates vary because of uncertainty in valuing environmental impacts).

[19] Erin M. Tegtmeier & Michael D. Duffy, *The External Costs of Agricultural Production in the United States*, *in* EARTHSCAN READER IN SUSTAINABLE AGRICULTURE 64, 83 (Jules Pretty ed., 2005) (suggesting that this cost is covered by consumers in form of utility bills, taxes, health care, and unquantifiable environmental degradation).

land degradation, destruction of biodiversity, and pollution of air, soil, and water.[20]

Practices such as monoculture,[21] consolidation of farmland (which leads to elimination of borderlands), and use of fertilizers (which allows for farming of more marginal lands) have caused massive destruction of habitats and biodiversity.[22] Monoculture poses a substantial threat to biodiversity not only because it replaces diverse habitats, but also because it results in production of fewer crop varieties and necessitates use of pesticides that destroy natural immunities.[23]

In addition, farming is a substantial source of pollution. Runoff contains excess fertilizers, pesticides, and sediments that endanger aquatic biodiversity, threaten human health, and impair ecosystem functioning.[24] Agriculture is responsible for between sixty-five and

---

[20] They also include global warming: Farming is a substantial source of greenhouse gases, contributing about twenty percent globally. Horrigan et al., *supra* note 7, at 448. About seventeen percent of the fossil fuels used in the United States are used on farms. *Id.* Farming is incredibly inefficient: For the average crop it takes an input of three kilocalories of energy to produce one kilocalorie of food energy, not including energy expended in transportation. *Id.* While this Note will not explore the global warming issue further, it is important to note that the sustainability methods described below, including reduction of chemical inputs, could also reduce greenhouse gas emissions because the production and use of fertilizers emit substantial quantities of the greenhouse gas nitrous oxide. *See* Annika Carlsson-Kanyama, *Food Consumption Patterns and Their Influence on Climate Change: Greenhouse Gas Emissions in the Life-Cycle of Tomatoes and Carrots Consumed in Sweden*, 27 AMBIO 528, 530–31 (1998) (describing extent of greenhouse gas emissions from production and use of fertilizer and pesticides); *see also* Christopher L. Weber & H. Scott Matthews, *Food-Miles and the Relative Climate Impacts of Food Choices in the United States*, 42 ENVTL. SCI. & TECH. 3508, 3510 (2008) (showing division of fossil fuel emissions between farming production and transportation).

[21] Monoculture refers to the practice of farming a single crop on a large scale. Polyculture is the opposite of monoculture—it means interspersing different crops on the same plot of the land. Monoculture is typically less sustainable than polyculture because single crops drain soil nutrients and thus require more fertilizers and because single crops are more susceptible to pests and disease. *See* MILLER, *supra* note 14, at 284 (explaining how polyculture can reduce need for pesticides). Monoculture is also anathema to biodiversity. *See, e.g.*, Kirschenmann, *supra* note 12 (explaining that monoculture leads to biophysical degradation and elimination of biodiversity) (citing David Tilman, *The Greening of the Green Revolution*, 396 NATURE 211 (1998)); *see also* Tegtmeier & Duffy, *supra* note 19, at 64 (explaining that monocropping "threaten[s] diversity").

[22] J.B. Ruhl, *Farms, Their Environmental Harms, and Environmental Law*, 27 ECOLOGY L.Q. 263, 274–77 (2000).

[23] Horrigan et al., *supra* note 7, at 448.

[24] *See* Alfons Weersink et al., *Economic Instruments and Environmental Policy in Agriculture*, 24 CANADIAN PUB. POL'Y 309, 311 (1998) (noting that soil erosion creates sedimentation that is destructive to habitat and that excess nutrients in runoff cause eutrophication); David Zaring, Note, *Agriculture, Nonpoint Source Pollution, and Regulatory Control: The Clean Water Act's Bleak Present and Future*, 20 HARV. ENVTL. L. REV. 515, 516–21 (1996) (detailing impacts of agricultural runoff on both surface water and groundwater); *see also* John H. Davidson, *Factory Fields: Agricultural Practices, Polluted*

seventy-five percent of the pollution in United States waters.[25] That runoff includes over one billion tons of sediment and 447 million tons of dissolved solids.[26] In extreme cases, the resultant soil degradation, particularly when coupled with depletion of local water sources, can cause desertification.[27]

Agricultural runoff also includes the remnants of the 750 million pounds of pesticides that farmers apply every year to their crops.[28] Some scientists estimate that as little as 0.1 percent of the pesticides applied to crops reach their targets; the remainder ends up in water, soil, and air.[29] In addition to the threat they pose to human health, pesticides have been tied to, among other things, developmental abnormalities in amphibians and immune function problems in marine mammals.[30]

Fertilizer use increased ten-fold between 1950 and 1998, and crops absorb only between one-third to one-half of that fertilizer.[31] Particularly in still water such as lakes and ponds, excessive levels of nitrogen—a primary ingredient in fertilizer—can lead to surface algal blooms, which block sunlight and deplete oxygen, killing off much of the life below the surface.[32]

Applying the sustainable methods described above to modern farming could go a long way toward curbing these problems. For instance, crop rotation, intercropping, and crop selection based on

---

Water and Hypoxic Oceans, 9 GREAT PLAINS NAT. RESOURCES J. 1, 4–12 (2004) (providing overview of environmental harms from agricultural drainage).

25 Horrigan et al., *supra* note 7, at 447 (attributing this estimate to Environmental Protection Agency (EPA)). *See* John H. Davidson, *The Federal Farm Bill and the Environment*, 18 NAT. RESOURCES & ENV'T 3, 3 (2003) (explaining that runoff of irrigation waters is form of nonpoint source water pollution).

26 Ruhl, *supra* note 22, at 278. At these levels, sediment severely impairs water system functionality. *Id.*

27 Horrigan et al., *supra* note 7, at 447. Desertification is the process of transformation into desert—usually accompanied by a steep decline in soil productivity. It is typically a process that is far easier to set into motion than to reverse. *See* MILLER, *supra* note 14, at 356 (noting that desertification is compounded through positive feedback).

28 Davidson, *supra* note 25, at 3.

29 Horrigan et al., *supra* note 7, at 446.

30 *See* MARC O. RIBAUDO ET AL., ECON. RESEARCH SERV., U.S. DEP'T OF AGRIC., ECONOMICS OF WATER QUALITY PROTECTION FROM NONPOINT SOURCES: THEORY AND PRACTICE 13–14 (1999), *available at* http://www.ers.usda.gov/publications/aer782/aer782.pdf (noting harms to human health); Horrigan et al., *supra* note 7, at 446–47 (noting harms to amphibians and marine mammals).

31 Horrigan et al., *supra* note 7, at 446.

32 *See* RIBAUDO ET AL., *supra* note 30, at 6–8 (noting that as much as fifteen percent of fertilizers applied to cropland in Mississippi River Basin ends up in Gulf of Mexico); Davidson, *supra* note 25, at 3 (explaining that this has created massive dead zone in Gulf about size of state of New Jersey); *accord* Horrigan et al., *supra* note 7, at 446.

local conditions could obviate the need for high levels of fertilizers and pesticides.[33]

B. Public Choice and Agricultural Regulation

Most farmers do not adopt these sustainable methods because they increase the costs of production, whereas the costs of environmental impacts are external to agricultural operations.[34] This type of market failure has often justified governmental intervention; however, traditional environmental regulation, under both command-and-control regulation (including the Clean Water Act,[35] the Clean Air Act,[36] the Federal Insecticide, Fungicide, and

---

[33] *See* MILLER, *supra* note 14, at 571 (describing strategies for reduction of inputs).

[34] *See* Tegtmeier & Duffy, *supra* note 19, at 64 (describing why these environmental costs are externalities).

[35] The Clean Water Act (CWA) requires permits for all point sources of water pollution. *See* Clean Water Act § 301(a), 33 U.S.C. § 1311(a) (2006) (prohibiting pollutant discharge not in compliance with Act). After the 1977 amendments, agricultural runoff of soil, animal wastes, pesticides, and fertilizers are statutorily exempted from these permitting requirements. *See id.* § 402(l)(1), 33 U.S.C. § 1342(l)(1) (2006) (directing EPA not to require permits for "discharges composed entirely of return flows from irrigated agriculture"); *id.* § 502(14), 33 U.S.C. § 1362(14) (2006) (excluding "agricultural stormwater discharges and return flows from irrigated agriculture" from definition of point source). Prior to the 1977 amendments to the definition of "point source," the D.C. Circuit had overturned EPA regulations that had the same effect. *See* Natural Res. Def. Council, Inc. v. Costle, 568 F.2d 1369, 1379 (D.C. Cir. 1977) (holding that administrative difficulties do not allow Administrator to exempt these sources from permit requirement). In addition, the CWA contains permitting requirements for dredging and filling wetlands. Clean Water Act § 404, 33 U.S.C. § 1344 (2006). While these requirements extend to conversion of wetlands that have not previously been farmed, they do not extend to continued farming in wetlands or reclamation of historically farmed wetlands. *Id.* § 404(f), 33 U.S.C. § 1344(f) (2006); *see also* Ruhl, *supra* note 22, at 296–97 (explaining that this provision is "nation's principal vehicle for wetlands protection" and that agricultural exemptions have "accounted for substantial loss and degradation of wetland ecosystems since the enactment of the CWA"). Classified as nonpoint source pollution, agricultural runoff is regulated only through area-wide waste treatment management plans, statewide management plans, and total maximum daily load requirements—three programs that are underimplemented and underenforced. *See* REVESZ, *supra* note 1, at 545–53, 569–70 (describing each of these programs and roadblocks to their implementation). For a good overview of the CWA statutory scheme, see *id.* at 505–09.

[36] Because agricultural operations tend not to meet the minimum emission levels necessary to trigger Clean Air Act (CAA) restrictions, they are largely exempted from federal implementation of those restrictions. Ruhl, *supra* note 22, at 305 & n.236. While states may use state implementation plans to regulate air pollution from farms, the EPA has issued guidance documents recommending that states not do so. *See id.* at 305–06 & n.242 (describing EPA efforts to limit state regulation of farm air emissions, specifically with regard to particulate matter, which is emitted as result of tillage). Under sections 108 and 109 of the CAA, the EPA must list criteria pollutants and establish national ambient air quality criteria for them. Clean Air Act §§ 108–09, 42 U.S.C. §§ 7408–7409 (2006). But, for existing sources, and for sources not meeting certain "major" source criteria, states are free to allocate the burden of intrastate pollution reduction however they see fit. *Id.* § 110, 42 U.S.C. § 7410 (2006). In addition to regulating emission of the criteria pollutants desig-

Rodenticide Act,[37] the Toxic Substances Control Act,[38] and the Resource Conservation and Recovery Act[39]) and information disclosure regulation (including the Comprehensive Environmental Response, Compensation, and Liability Act[40] and the Emergency Planning and Community Right-To-Know Act[41]) treats agriculture with a light hand, often exempting it explicitly. In addition, right-to-farm laws, protecting farming operations from encroaching residential

---

nated under section 108, the CAA also regulates hazardous air pollutants designated under section 112. *Id.* § 112, 42 U.S.C. § 7412 (2006). These regulations require facilities using listed chemicals to create risk management plans, and, while farms are not generally exempted from this provision, the statute does allow the EPA to exempt substances used as agricultural nutrients. *Id.* § 112(r)(5), 42 U.S.C. § 7412(r)(5) (2006). The EPA has done so for ammonia when used in farming operations. 40 C.F.R. § 68.125 (2000).

37 The Federal Insecticide, Fungicide, and Rodenticide Act requires registration and labeling of pesticides. 7 U.S.C. § 136a(a) (2006) (prohibiting sale or distribution of unregistered pesticides); § 136a(c)(5)(C) (directing EPA administrator to approve application for registration if he finds that product will "perform its intended function without unreasonable adverse effects on the environment"); § 136a(c)(5)(B) (requiring labeling); § 123a(c)(1)(C) (requiring label to include instructions for use). Through the registration process, the EPA can impact farm pesticide use by conditioning registration approval. Ruhl, *supra* note 22, at 310 (citing J.W. Looney, *The Changing Focus of Government Regulation of Agriculture in the United States*, 44 MERCER L. REV. 763, 796–97 (1993)). However, the EPA's options are limited. Because permits are not required for pesticide use, the EPA has no direct control over on-farm use. *See* Ruhl, *supra* note 22, at 311 (arguing that Act takes "hands-off" approach to farms).

38 The Toxic Substances Control Act (TSCA), 15 U.S.C. § 2601 (1976), "provides [the] EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances." Envtl. Prot. Agency, Summary of the Toxic Substances Control Act, http://www.epa.gov/lawsregs/laws/tsca.html (last visited Mar. 8, 2010). While the TSCA "requires pre-manufacture registration of the chemical ingredients of fertilizers," it "imposes no use restrictions" on those fertilizers, largely exempting fertilizers from the regulatory scheme. *See* Ruhl, *supra* note 22, at 312 (explaining that TSCA has essentially no impact on farming practices).

39 The Resource Conservation and Recovery Act, 42 U.S.C. § 6901 (1976), creates a cradle-to-grave scheme for disposal of solid waste, but agricultural return flows, containing fertilizers, pesticides, soil, and animal waste, are exempted from the definition of solid waste and thus from the regulatory scheme. *See id.* at 314 (listing agricultural exemptions from Act).

40 The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) "provide[s] for liability, compensation, cleanup, and emergency response for hazardous substances released into the environment and the cleanup of inactive hazardous waste disposal sites." Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Pub. L. No. 96-510, 94 Stat. 2767 (1980) (codified at 42 U.S.C. § 9601 (2006)). However, CERCLA exempts registered pesticides from its disclosure requirements. *Id.* § 103(e); 42 U.S.C. § 9603(e). It also excludes "normal application of fertilizer" from its definition of release, meaning farmers cannot be held liable for any cleanup costs or natural resource damages associated with such use. *Id.* §§ 101(22)(D), 107(a), 42 U.S.C. §§ 9601(22)(D), 9607(a) (2006).

41 Under the Emergency Planning and Community Right-To-Know Act (EPCRA), any substance in "routine agricultural operation[ ]" is exempted from emergency planning and storage notification requirements. 42 U.S.C. §§ 11021(e)(5), 11049(5) (2006). For a more detailed discussion of exemptions to the EPCRA, see Ruhl, *supra* note 22, at 313.

development, spare many farming operations from environmental controls that might be imposed by nuisance suits.[42]

These exemptions, which have forestalled the kind of environmental improvements that environmental laws have forced in other industries, are the result of both technical and political realities.[43] Technical difficulties stem from the fact that farms are nonpoint sources of pollution,[44] so it is nearly impossible to trace pollution to particular sources[45] and to monitor their outputs.[46] These difficulties create a roadblock to enforcement of environmental laws. For instance, efforts to use portions of the Clean Water Act to create water quality trading schemes to limit pollutant discharge[47] have resulted in few trades because of the technical difficulties of mea-

[42] These laws, which exist in almost every state, protect farmers from nuisance suits brought by residential neighbors. The main purpose of these laws is to "slow destruction of farmland as a result of expansion of urban areas into traditionally rural land." Alexander A. Reinert, Note, *The Right To Farm: Hog-Tied and Nuisance-Bound*, 73 N.Y.U. L. REV. 1694, 1695 (1998) (arguing that right-to-farm laws not only fail to achieve their stated goal but also interfere with property rights of farm neighbors). Typical farm-related nuisances include dust, noise, and odors. *See* Ruhl, *supra* note 22, at 316 (noting that right-to-farm laws are "a significant obstacle to the use of common law environmental remedies against farms"). While the ultimate impact of these laws is not entirely clear, some argue that they may contribute to environmental degradation by "freez[ing] existing inefficient, environmentally harmful land uses." Reinert, *supra*, at 1728. *But see* Terence J. Centner, *Nuisances from Animal Feeding Operations: Reconciling Agricultural Production and Neighboring Property Rights*, 11 DRAKE J. AGRIC. L. 5, 17 (2006) (noting that some nuisance protection for manure application, which generates substantial odor, may be desirable because manure application is typically sustainable practice).

[43] *See* Erin Morrow, *Agri-Environmentalism: A Farm Bill for 2007*, 38 TEX. TECH L. REV. 345, 373–76 (2006) (arguing that extension of command-and-control regulation to address environmental externalities of agriculture would be politically infeasible and logistically impractical).

[44] Nonpoint source pollution is pollution that comes from a diffuse source, such as stormwater runoff from city streets and irrigation runoff from fields. *See* U.S. ENVTL. PROT. AGENCY, PROTECTING WATER QUALITY FROM AGRICULTURAL RUNOFF 1 (2005), *available at* http://www.epa.gov/owow/nps/Ag_Runoff_Fact_Sheet.pdf (describing agricultural nonpoint source pollution).

[45] *See* Daniel C. Esty, *Toward Optimal Environmental Governance*, 74 N.Y.U. L. REV. 1495, 1528–29 (1999) (explaining complications with sourcing pollutants).

[46] *See* RIBAUDO ET AL., *supra* note 30, at 26 (describing difficulties involved with measuring pollutants in runoff).

[47] These can take the form of either cap-and-trade or credit trading systems designed to allow polluters to trade discharge permits. REVESZ, *supra* note 1, at 550–51 (describing how these schemes might work and why they are difficult to implement). In a cap-and-trade system, the government sets an emission cap for all pollution sources and distributes tradable permits for a portion of the cap to each current polluter. On the other hand, credit trading systems do not necessarily involve a cap on total emissions as each polluter instead would receive tradable "credits" as a reward for polluting below a preset legal limit. *Id.*

suring pollutants.[48] In addition to technical difficulties, the agricultural lobby is well organized and politically connected and has been very successful at preventing expansion of environmental regulations.[49]

The environmental externalities allowed by the exemptions described above are compounded by the Federal Farm Bills. The Farm Bills authorize a federal agricultural subsidy system to achieve three primary goals: to offer price and income supports to farmers, to keep commodity prices up by reducing production, and to incentivize soil conservation.[50] The Farm Bill programs have encouraged environmental degradation by favoring monoculture and overproduction.[51] In recent years, the Bills have tried to address the resulting environmental externalities, primarily through incentives-based programs. These efforts include the Conservation Reserve Program,[52] the volun-

---

[48] James S. Shortle & Richard D. Horan, *Water Quality Trading*, 14 PENN ST. ENVTL. L. REV. 231, 239 (2006); *see also supra* note 35 (describing other shortfalls in efforts to use CWA to regulate farming).

[49] *See* Braunig, *supra* note 5, at 1512–13 (2005) (explaining failure to regulate concentrated animal feeding operations through public choice theory); Esty, *supra* note 45, at 1530 ("Politically active and powerful, farm interests have succeeded in shaping the political debate in ways that have allowed farmers to duck responsibility for field runoff, irrigation return flows, and animal waste contamination."); Zaring, *supra* note 24, at 539–43 (describing role of agricultural lobby in passage of Clean Water Act and suggesting that Act's lax approach to nonpoint source pollution was at least in part response to its participation).

[50] Davidson, *supra* note 25, at 4–5. The first Farm Bills were passed during the New Deal in order to raise plummeting commodities prices and implement soil conservation efforts. *Id.* at 4. These subsidies are reauthorized about every five years. *Id. See generally* Taylor, *supra* note 13, at 172–75 (summarizing history of American agricultural policy).

[51] *See* Davidson, *supra* note 25, at 36–38 (criticizing federal farm legislation for emphasizing overproduction and asserting that programs in 2002 Farm Bill designed to incentivize more sustainable practices are unlikely to have substantial impact); Jesse Ratcliffe, *A Small Step Forward: Environmental Protection Provisions in the 2002 Farm Bill*, 30 ECOLOGY L.Q. 637, 639 (2003) (condemning Farm Bill for its income support provisions, which create "additional environmental harm"); Taylor, *supra* note 13, at 176–77 (chronicling negative impact of Farm Bills on landscape and environment). While outside the scope of this Note, it is important to note that many scholars believe that the Farm Bills, and American agricultural policy more broadly, have also had substantial negative impacts on economic stability in rural areas in both the United States and abroad. *See id.* at 177–78 (noting how U.S. farm policy has undercut agricultural markets in developing world); Horrigan et al., *supra* note 7, at 453 (explaining that farm policy has contributed to economic instability in rural areas of United States as farmer profit-share from food industry and number of farmers have declined); Morrow, *supra* note 43, at 359–60 (suggesting that consolidation of farmland has contributed to economic and social decline in American rural areas).

[52] The Conservation Reserve Program was established in the 1985 Farm Bill. The purpose of this program was to give farmers an incentive to reduce use of ecologically sensitive lands. Morrow, *supra* note 43, at 350–51. Another purpose of this program was to incentivize a reduction in production, and thus in supply, that would improve the agricultural economy by driving up commodities prices. *Id.* While this program was not the first to address soil conservation, it was the first to tie conservation program participation to participation in other subsidies programs. Davidson, *supra* note 25, at 5. The Conservation

tary working-lands programs,[53] alternative agricultural research funding,[54] voluntary farmland-protection programs,[55] and mandatory conservation and compliance programs.[56] Despite the expansion of these programs in recent years, they have failed to mitigate the overall destructive incentives of the Farm Bills' price and income supports.[57] Also, because participation in Farm Bill environmental protection programs is primarily voluntary, these programs will not necessarily have an impact on the most egregious offenders or protect the most sensitive lands.[58]

As with environmental regulation, there is little political will to rework the subsidies system. Indeed, the system itself has created a powerful constituency with an enormous financial stake in its perpetu-

---

Reserve Program placed environmental conditions on direct subsidies paid to farmers; these conditions focused on soil erosion and wetlands protection. Morrow, *supra* note 43, at 351. In 2002, several voluntary land retirement programs, including an update of the 1985 program, were added to the Bill. Davidson, *supra* note 25, at 5, 36. Only the most environmentally sensitive lands, including highly erodible lands, qualify for this program. *Id.*

[53] These programs offer subsidies and technical aid for conservation practices; one of the central programs in this category is the Environmental Quality Incentives Program (EQIP). Morrow, *supra* note 43, at 354–55. Farmers who participate in EQIP can get financial and technical support for complying with state and federal environmental laws from which they are otherwise exempt. Davidson, *supra* note 25, at 36. Another voluntary working-lands program is the Wildlife Habitat Incentives Program, which provides farmers with financial and technical assistance for setting aside and protecting wildlife habitats on their properties. *Id.*

[54] The 2002 Farm Bill set aside several million dollars for alternative agriculture research. Farm Security and Rural Investment Act of 2002, Pub. L. No. 107-171, §§ 7218, 10606, 116 Stat. 134, 449, 514 (codified as amended at 7 U.S.C. §§ 5925b, 6523 (2006)); A. Bryan Endres, *An Awkward Adolescence in the Organics Industry: Coming to Terms with Big Organics and Other Legal Challenges for the Industry's Next Ten Years*, 12 DRAKE J. AGRIC. L. 17, 57–58 (2007). The 2008 Farm Bill expanded these resources. RENÉE JOHNSON, CONGR. RESEARCH SERV., ORGANIC AGRICULTURE IN THE UNITED STATES: PROGRAM AND POLICY ISSUES 9–10 (2008), *available at* www.fas.org/sgp/crs/misc/RL31595.pdf.

[55] These programs are designed to prevent conversion of farmland to other uses. Morrow, *supra* note 43, at 355. The central program in this category is the Farm and Ranchlands Protection Act. For a critique of this program on the basis that it is unnecessary, see generally Michael R. Eitel, *The Farm and Ranch Lands Protection Program: An Analysis of the Federal Policy on United States Farmland Loss*, 8 DRAKE J. AGRIC. L. 591 (2003).

[56] These programs condition general subsidies on adherence to certain soil conservation practices. *See* Morrow, *supra* note 43, at 356 (describing that practices include plowing of highly erodible land and filling in of wetlands).

[57] *See* Davidson, *supra* note 25, at 37 (explaining that price support programs contribute to destructive environmental practices); *see also* Morrow, *supra* note 43, at 369 (suggesting that conservation programs remain underfunded).

[58] *See* Davidson, *supra* note 25, at 37 (arguing that these programs may have some marginal impact but "do not undertake to moderate the overall intensity of agricultural production").

ation. Efforts to change the system in the 1990s to rely on export markets rather than government subsidy for price support resulted in the doling out of massive emergency subsidies when prices remained too low.[59] While there has been considerable discussion of the harmful results of farm subsidies, most efforts at change have been minor or unsuccessful.

II
THE ORGANICS ALTERNATIVE

The OFPA is one of the few federal laws that regulates pollution from farms. The statute, a type of information regulation, creates standards for organic labeling. This Part describes how information regulation works in theory, then applies criteria for successful information regulation to the NOP. It finds that the program fails to secure sustainable farming, that the labeling program suffers from legitimacy problems, and that, in attempting to market a public good, the program suffers from a freerider problem. However, while the OFPA falls short as environmental regulation, its shortcomings lie not with its statutory framework but with the implementation of the program by the USDA.[60]

A. Theory of Information Regulation

Information regulation is any regulation that requires a company to disclose information to third parties, such as consumers or the government.[61] The theory behind information regulation is that it can "supply 'regulatory' pressure through market dynamics, private litiga-

---

[59] Morrow, *supra* note 43, at 351; Nathan R.R. Watson, *Federal Farm Subsidies: A History of Governmental Control, Recent Attempts at a Free Market Approach, the Current Backlash, and Suggestions for Future Action*, 9 DRAKE J. AGRIC. L. 279, 291–93 (2004) (describing motives behind and backlash to 1996 rollback of subsidies).

[60] See *infra* Section III.C for discussion of how the program could be improved without statutory amendment.

[61] Paul R. Kleindorfer & Eric W. Orts, *Informational Regulation of Environmental Risks*, 18 RISK ANALYSIS 155, 156 (1998); *see also* David W. Case, *Corporate Environmental Reporting as Informational Regulation: A Law and Economics Perspective*, 76 U. COLO. L. REV. 379, 383 n.16 (2005) (identifying three types of information regulation: first, technical assistance programs that are "designed to provide polluters with information about abatement technologies, or to help consumers avoid or limit exposure to certain pollutants"; second, corporate environmental reporting "designed to provide information on the environmental performance of a specific firm"; and third, environmental labeling or "eco-labeling" as "an . . . instrument for conveying to consumers information related to environmental implications of products in an effort to affect consumer (and eventually producer) behavior").

tion, or moral persuasion."[62] In other words, it can improve market efficiency by providing consumers access to information.[63] In the context of risk regulation, the informational approach can correct informational inadequacies in the market, and thereby reduce risk, without the need for direct regulation such as sales bans.[64]

In the last forty years, information regulation has become increasingly popular as an alternative to command-and-control regulation.[65] Supporters celebrate information regulation because it is flexible and less intrusive into private actions.[66] Another advantage of information regulation is that it tends to shift the burden of information production from government agencies to private parties; rather than impose the high information costs generated by governmental standard-setting, information regulation relies on regulated entities to produce information and share it with agencies and the market.[67]

Unlike risk warning labels, which provide negative information, the organic label is an example of eco-labeling—labeling that identifies positive environmental attributes of a product.[68] The theory of eco-labeling is that "information creates demand in favor of environmentally friendly products. Such demand will provide incentives for

---

[62] Kleindorfer & Orts, *supra* note 61, at 157 (adding that informational regulation "opens up the traditional bilateral relationship between the regulator and the regulated to include other social institutions, most importantly, economic markets and public opinion").

[63] *See* Jeff Leslie & Cass R. Sunstein, *Animal Rights Without Controversy*, 70 LAW & CONTEMP. PROBS. 117, 124–25 (2007) (arguing that access to information allows consumers to act on their preferences).

[64] This is particularly true where consumer action plays a strong role in outcomes. For instance, consider a labeling requirement that a table saw company include instructions for safe use: Instead of preventing injuries by barring sale of table saws, the label prevents injuries by teaching consumers how to use the saws safely. *See* WESLEY A. MAGAT & W. KIP VISCUSI, INFORMATIONAL APPROACHES TO REGULATION 3–4 (1992) (studying information provision in hazard warnings and energy audits and providing specific guidelines for graphic design and syntax of labels).

[65] *See* Cass R. Sunstein, *Informational Regulation and Informational Standing:* Akins *and Beyond*, 147 U. PA. L. REV. 613, 613 (1998) (referring to rise of information regulation as "one of the most striking developments in the last generation of American law"). Some prominent examples of information regulation include the Emergency Planning and Community Right-To-Know Act, the National Environmental Policy Act, the Freedom of Information Act, and the Federal Election Campaign Act. *Id.* at 614.

[66] *See* MAGAT & VISCUSI, *supra* note 64, at 4–5 (noting that information regulation protects consumer choice); Sunstein, *supra* note 65, at 614 n.7 (suggesting that existence of information regulation may reflect fact that powerful interest groups wish to "minimize government's presence in their lives"); *see also* Braunig, *supra* note 5, at 1525 (suggesting that because information regulation "does not place rigid controls on businesses, it engenders less litigation and may not face the same risks of industry capture").

[67] *See* Braunig, *supra* note 5, at 1524–25 (identifying this burden shifting as important advantage of information regulation).

[68] *See* Richard B. Stewart, *A New Generation of Environmental Regulation?*, 29 CAP. U. L. REV. 21, 136 (2001) (describing concept of eco-labels).

producers to produce environmentally friendly products to gain a larger market share."[69] The choice between positive and negative information is not necessarily straightforward. A negative label may induce strong consumer reactions,[70] but it will also create a constituency that will oppose the program—in this case, a constituency that has successfully evaded most other environmental regulation.[71] Thus, while it is possible that the negative labeling system would be more effective, adoption of a positive labeling system is far more feasible. Two successful examples of eco-labeling, both of which use positive information, are the Energy Star program,[72] in which electronics are labeled based on their energy efficiency, and the Dolphin Safe program,[73] in which cans of tuna are labeled to indicate that the product

---

[69] *Id.* at 135. If this type of regulation were successful, the number of producers engaged in sustainable practices would increase. *Id.* This type of regulation also facilitates efforts of environmentally conscious consumers to reduce their own environmental impacts through purchasing decisions. *See* Braunig, *supra* note 5, at 1532 (suggesting that eco-labels can "provide a meaningful consumer mechanism for rewarding more environmentally friendly products"); *cf.* Stewart, *supra* note 68, at 134–35 (arguing that information regulation relies on environmental socialization so that labels can facilitate existing consumer preference). *See generally* Peter S. Menell, *Structuring a Market-Oriented Federal Eco-information Policy*, 54 MD. L. REV. 1435 (1995) (discussing best public policy tools to provide information to consumers on environmental issues in order to change consumer decisionmaking).

[70] Consider the differences between "full of pesticides" or "damaging to the environment" and "organic" or "eco-friendly." Negative labels can generate outrage against particular companies. For instance, under the Emergency Planning and Community Right-To-Know Act (EPCRA) certain companies are required to list releases of certain toxic chemicals. 42 U.S.C. § 11023(a)–(c) (2006). Certain listings have angered neighbors, shareholders, and consumers to the extent that, embarrassed by the negative publicity, companies have changed their behavior. *See* Braunig, *supra* note 5, at 1525–26, 1532 (giving examples of information regulation, including EPCRA, that have had positive impacts).

[71] *See supra* Part I.B (describing limited environmental regulation of agriculture).

[72] The Energy Star program, administered by the Department of Energy and the Environmental Protection Agency (EPA), allows appliance makers to label their products based on federally set energy efficiency standards. Energy Star, About Energy Star, http://www.energystar.gov/index.cfm?c=about.ab_index (last visited Mar. 2, 2010). According to a recent EPA study, the program prevented emission of seventy-eight million metric tons of greenhouse gases and saved consumers seventeen billion dollars in 2007 alone. U.S. ENVTL. PROT. AGENCY, ENERGY STAR AND OTHER CLIMATE PROTECTION PARTNERSHIPS: 2007 ANNUAL REPORT 2–3 (2008), *available at* http://www.energystar.gov/ia/partners/publications/pubdocs/2007%20Annual%20Report%20-%20Final%20-11-10-08.pdf.

[73] There are multiple dolphin-safe tuna labeling programs. The Dolphin Safe label is governed by the National Oceanic and Atmospheric Association, pursuant to the Dolphin Protection Consumer Information Act, 16 U.S.C. § 1385 (2006). The non-profit EarthTrust administers a separate and more stringent program using "The Flipper Seal of Approval." EarthTrust, Flipper Licensing Requirements, http://www.earthtrust.org/fsareq.html (last visited Mar. 2, 2010) (listing requirements for Flipper program). *See generally* Mario F. Teisl et al., *Can Eco-labels Tune a Market? Evidence from Dolphin-Safe Labeling*, 43 J. ENVTL. ECON. & MGMT. 339, 342 (2002) (describing dolphin problem and development of

has been made without harming dolphins. Both programs have changed consumer buying habits and have had substantial environmental benefits.

Criteria for a successful information regulation program can be formulated by identifying first the goals of eco-labeling and second the potential problems that such a program will need to overcome.

Eco-labeling should do two things. It should convey information about product production to consumers.[74] Additionally, it should provide behavior-altering incentives, first to consumers to change purchasing habits, and subsequently to producers to change production to meet these new patterns of demand.[75]

Eco-labeling should also avoid two pitfalls.[76] First, provision of information might cost more than it is worth.[77] One substantial cost in the sustainable farming context would be the selection of requirements meriting the organic label, as there is no consensus about what types of practices make a given product sustainable.[78] Second, provision of information might be counterproductive or ineffectual, particularly if consumer bias or lack of knowledge prevents proper interpretation.[79] In the agricultural context, the tendency of consumers to undervalue future risks may limit the effectiveness of information.[80] Consumer purchasing decisions tend to be motivated by present health risks; thus, changing the labeling system to emphasize

---

labeling programs). The dolphin-safe labels helped stabilize sales of canned tuna, which declined substantially after a wave of press about harm to dolphins from tuna fishing. *See id.* at 351 (describing results of study to determine effectiveness of labeling program).

74 *See* Teisl et al., *supra* note 73, at 340–41 (distinguishing eco-labeling from other types of labeling such as nutrition information).

75 *See* Braunig, *supra* note 5, at 1532–33 (describing how successful information regulation might alter behavior).

76 Because of these problems, even strong advocates argue that information regulation cannot be a cure-all. *See, e.g.*, Case, *supra* note 61, at 387 ("[D]isclosure strategies are imperfect substitutes for direct legal controls on environmental conduct."). As discussed in Section II.C, *infra*, information regulation is not an optimal solution to deal with the environmental problems caused by agriculture, but because of the political and technical difficulties of more comprehensive solutions, information regulation is the best feasible option.

77 *See* Sunstein, *supra* note 65, at 626 (describing potential costs).

78 *See supra* notes 7–15 and accompanying text (discussing difficulties of defining sustainability).

79 Sunstein, *supra* note 65, at 626–27; *see also* Stewart, *supra* note 68, at 141 (noting that success of information regulation is limited because people have limited time and energy to understand implications of that information); *cf.* Alexander Volokh, *The Pitfalls of the Environmental Right-To-Know*, 2002 UTAH L. REV. 805, 807 (noting that because information requires context and processing, more information is not always better).

80 *See* Christine Jolls et al., *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1541–42 (1998) (explaining that people tend to underestimate future risk).

environmental impacts, which have much longer and less direct risk horizons, might not substantially impact consumer demand.[81]

With these goals and potential pitfalls in mind, creators of a labeling program must pay careful attention to the selection of information to highlight and to the contours of consumer knowledge and demand.[82] Creators should thus use the following criteria to guide and evaluate program development. First, the information selected for display in the label must correspond with the goal of the regulation.[83] Second, consumers must trust the label[84] and must know what it means.[85] These two criteria relate to the structure of the information program—they address the quality of the public good promised by the label and the credibility of the label. The last criterion for developing a labeling program relates to the nature of the market for the regulated good: The success of an eco-labeling program is tied to consumer preferences for environmental protection[86] and consumer capacity to opt for environmental protection. These factors govern whether the

---

[81] *See infra* Part II.C.3 (indicating that consumer focus on health, rather than sustainability, is primary consumer motivation to purchase organic goods).

[82] The following criteria are drawn from the literature on information regulation best practices. *See generally* MAGAT & VISCUSI, *supra* note 64; Kleindorfer & Orts, *supra* note 61; Menell, *supra* note 69; Stewart, *supra* note 68; Sunstein, *supra* note 65.

[83] *See* Stewart, *supra* note 68, at 137 (explaining that label should convey information about environmental impacts of entire life-cycle of product); Case, *supra* note 61, at 386 (noting challenge of linking "components of disclosure strategy" to "environmental performance improvement").

[84] Stewart, *supra* note 68, at 137; *see* Kleindorfer & Orts, *supra* note 61, at 167 (discussing importance of equity and credibility in public perception of regulation legitimacy). Credibility is especially important given the fact that consumers will typically not have any way to independently verify the information contained in the label. *See* Charles F. Mason, *Certification of Socially Responsible Behavior: Eco-labels and Fair-Trade Coffee*, J. AGRIC. & FOOD INDUS. ORG., Dec. 2009, Article 2, at 1–2, http://www.bepress.com/jafio/vol7/iss2/art2 (observing this phenomenon and suggesting that as result certification is likely to be noisy process).

[85] Stewart, *supra* note 68, at 137; *see also* Menell, *supra* note 69, at 1446 (calling this criteria "comprehensibility"). Other scholars point to the prominence of the label on the package and the legibility of the label as critical factors. *See* MAGAT & VISCUSI, *supra* note 64, at 8 (emphasizing importance of prominence of label to consumer response). A related issue to legibility is recognizability. Stewart, *supra* note 68, at 137. However, because neither of these factors are specific to the NOP's success in seeking environmental protection as opposed to regulation for market growth and consumer protection, this Note will not discuss them further.

Another central element of this knowledge criteria is understandability. Consumers must be able to contextualize and process the information. In other words, the following two factors are also important: "universality," or the ability of the consumer to use the label to comparison shop, and "prioritization," or the ability of the consumer to use the label to "make judgments about the importance of choosing one option relative to others." Menell, *supra* note 69, at 1446.

[86] *See* Stewart, *supra* note 68, at 135 (explaining that effect of eco-labeling program is "dependent on environmental socialization").

market will face a freerider problem and whether the market will have a low enough price elasticity of demand to sustain increases in production costs.[87]

B. NOP Structure

Before applying the criteria developed above to the organics scheme, it is necessary to lay out the critical elements of the OFPA and the NOP. The OFPA establishes a federal program through which farmers and food processors can opt to label their products as "organic" if the production process meets certain standards.[88] The Act addresses some elements of sustainability, including inputs of fertilizers and pesticides and a narrow range of farming practices. To be certified organic,[89] an agricultural product must have been produced without the use of synthetics other than those included on a National List.[90] Second, production and handling must have complied with an

---

[87] Elasticity is a measure of how much either the supply of or demand for a good will respond to a change in price of the good. Assuming that participating in an eco-labeling program increases production costs, the success of information regulation is premised on the following empirical assumptions about elasticity: First, the price elasticity of demand is sufficiently low that the increase in price will not substantially reduce demand. Second, the price elasticity of supply is sufficiently high that any increase in price will draw more producers into the industry. *See* Stephen K. Swallow & Roger A. Sedjo, *Eco-labeling Consequences in General Equilibrium: A Graphical Assessment*, 76 LAND ECON. 28 (2000) (describing market dynamics of eco-labeling and explaining why overall result of program may be decline in environmental benefits if elasticity of demand is too high); *cf.* LYDIA OBERHOLTZER ET AL., U.S. DEP'T OF AGRIC., PRICE PREMIUMS HOLD ON AS U.S. ORGANIC PRODUCE MARKET EXPANDS/VGS-308-01 (2005), *available at* http://www.ers.usda.gov/publications/vgs/may05/vgs30801/vgs30801.pdf (describing supply and demand dynamics of organic food markets and explaining sources of increased production costs).

Evaluation of the current NOP standards assumes a static market (i.e. the price is unchanging), because the standard has already been applied so there is no price change to which to respond. Thus this Note's evaluation, *infra* subsection II.C.3, focuses only on the freerider problem. The elasticity problem will arise again in Section III.C *infra* in connection with discussion of possible program changes that would increase production costs.

[88] The OFPA directs the Secretary of Agriculture to create a National Organic Program (NOP), 7 U.S.C. § 6503(a) (2006), as well as a National Organic Standards Board to advise the Secretary on standards. *Id.* § 6518(a). The Act applies to all producers and handlers of organic goods who gross over five thousand dollars per year. *Id.* § 6505(d).

[89] The certification process can be costly for applicants, but in 2002 Congress added a cost-share program to the Act. Farm Security and Rural Investment Act of 2002, Pub. L. No. 107-171, § 10606, 116 Stat. 514 (codified at 7 U.S.C. § 6523 (2006)). However, other costs remain, including start-up costs for the certifier. Any state or private person or entity can apply to become an accredited certifier. 7 U.S.C. § 6514(a) (2006). To earn accreditation, certifiers must have sufficient knowledge of organic farming, *id.* § 6514(b)(2), and must have undergone a peer review. *Id.* § 6516(a); *see also* 7 C.F.R. §§ 205.500–.510 (2009) (elaborating on accreditation process and requirements).

[90] 7 U.S.C. § 6504(1) (stating that organic good must be produced and handled without use of synthetics except as provided elsewhere in Act); *id.* § 6517(a) (directing Secretary to create National List of permitted and prohibited substances). To include a synthetic on the National List, the Secretary must find that it is necessary to organic production or han-

Organic Plan agreed to by the producer or handler and the certifying agent.[91] This plan must include a soil management strategy for use of manure and maintaining fertility.[92] Finally, the land on which the product was grown must not have been treated with any prohibited substances for three years preceding harvest and must have had distinct buffer zones (to prevent unintended application of prohibited substances).[93]

Organic producers and handlers are also subject to annual on-site inspections[94] and periodic residue testing.[95] Finally, the Act bars certain farming practices such as use of natural poisons like arsenic and lead,[96] and use of plastic mulches unless they are removed at the end of the season.[97] The USDA has banned several additional practices, including use of genetically modified organisms,[98] sewage sludge,[99] and ionizing radiation.[100] Only goods produced and handled in compliance with the Act may use the organic label.[101]

---

dling, that a natural substitute is not available, that the substance is not harmful to human health or the environment, and that its use is not inconsistent with organic practices. *Id.* § 6517(c)(1)(A)(i)–(iii). The Act also spells out a notice-and-comment procedure in § 6517(d)(4) for changing the list and contains a sunset provision in § 6517(e).

91 *Id.* § 6504(3).

92 *Id.* § 6513(b)(1)–(2). This plan must aim to minimize soil erosion and to manage soil nutrients. 7 C.F.R. § 205.203(a)–(b) (2009). The USDA also imposes crop rotation requirements. *Id.* § 205.205. These provisions give the certifier substantial leeway to add requirements. It is this feature of the OFPA that makes it possible to tailor the national program to local conditions, thereby addressing the flexibility element of sustainability described in Part I *supra*. See *infra* Section III.C for further discussion of this issue.

93 7 C.F.R. § 205.202(b)–(c).

94 7 U.S.C. § 6506(a)(5).

95 *Id.* § 6506(a)(6).

96 *Id.* § 6508(c)(1).

97 *Id.* § 6508(c)(2).

98 7 C.F.R. § 205.2 (excluding "methods used to genetically modify organisms or influence their growth and development by means that are not possible under natural conditions or processes").

99 *Id.* § 205.105(g).

100 *Id.* § 205.105(f).

101 7 U.S.C. § 6505(a)(1)(A)–(B) (implying that even products produced organically violate law if using organic label without complying with regulation); 7 C.F.R. § 205.300(a) (prohibiting use of word "organic" to modify ingredient in product name if that particular ingredient has not been certified as organic). For processed foods, the USDA has created four labeling tiers, based on the amount of organic content by weight. First, products may be labeled "100 percent organic" if they contain one hundred percent organic ingredients by weight or fluid volume. *Id.* § 205.301(a). Salt and water are excluded. *Id.* Second, products may be labeled "organic" if they contain, by weight or fluid volume, ninety-five percent organic ingredients; remaining ingredients may be nonorganic if they appear on the National List and are not available in organic form. *Id.* § 205.301(b). This provision was at issue in the *Harvey* case in which the First Circuit struck down an allowance for nonorganic, synthetic ingredients. *See infra* note 107 (describing *Harvey* decision). Third, products may be labeled as "made with organic (specified ingredients or food group(s))" if seventy percent of ingredients, by weight or fluid volume, are organic. 7 C.F.R.

As market regulation, the OFPA has been successful by a number of measures. Primarily, the USDA measures its own success by the growth of the number of certified organic producers; indeed, the organic market has seen steady growth.[102] The USDA appears to have achieved its and Congress's stated goal of developing the nascent organic industry, a goal lobbied for by the organic trade organizations.[103]

C. Measuring the NOP Against the Criteria for Successful Information Regulation

In light of the pressing need for environmental regulation of farming and the public choice problem in passing command-and-control legislation or closing the loopholes in existing statutes, it is imperative that the USDA implement the secondary sustainability goal of the OFPA. Nevertheless, application of the criteria for successful information regulation developed above reveals that the USDA has underimplemented the sustainability goal.[104] First, there is only a weak relationship between the requirements of the organics program and the goal of sustainability. Second, the legitimacy of the program is threatened by consumer misperceptions and mistrust. Third, even if both of these structural issues were addressed, the OFPA would still face numerous hurdles because of the state of consumer preferences.

1. Alignment of Label and Purpose

As applied to the sustainability goal, the organic label does not score highly on the first criteria identified in Section II.A: The information contained in the label does not match the operational ele-

§ 205.301(c). This label may not list more than three ingredients, *id.* § 205.304(a)(1)(i), and the ingredient list must specify which ingredients are organic. *Id.* § 205.304(b)(1). In the first proposed rule, the requirement was only fifty percent, but after receiving numerous comments demanding an increase of this floor, the USDA changed the number to seventy. National Organic Program, 65 Fed. Reg. 80,548, 80,663 (Dec. 21, 2000) [hereinafter Explanation of NOP Final Rule] (final rule with commentary). Finally, products that are less than seventy percent organic by weight or fluid volume may label specific ingredients as organic in the ingredient list. 7 C.F.R. §§ 205.301(d), 205.305(a)(1).

[102] Econ. Research Serv., U.S. Dep't of Agric., Data Sets: Organic Production, tbl.2, http://www.ers.usda.gov/data/organic/ (last visited Mar. 2, 2010) (identifying forty percent increase in number of certified operators between 1992 and 1997, forty-six percent increase between 1997 and 2002, and sixteen percent increase between 2002 and 2005).

[103] *See infra* notes 162–63 and accompanying text (describing push for uniform national standards by organic industry organizations).

[104] *See supra* Part I (describing environmental externalities of modern farming and describing failure to regulate these externalities); *infra* notes 167–69 and accompanying text (explaining that sustainability goal is included in Act).

ments of sustainability, so the organic label is not currently synonymous with sustainable production.

First, the organic label conveys information about only a narrow subset of sustainable agriculture practices.[105] The label offers a process guarantee: The product was produced without the use of certain inputs. Inputs are the central focus of the NOP. To be certified organic, a product must be produced and handled without the use of synthetic chemicals.[106]

Second, the standards for certification are insufficiently stringent even within the input context. Farmers may use certain synthetics in production, processing, and handling, and there are numerous exceptions for ingredients that are not commercially available in organic form.[107] Some commentators have asserted that this concession was necessary only for large organic farms trying to produce organic food cheaply and in large quantities by bypassing more labor-intensive polyculture practices.[108] The amendment allowing use of synthetics permitted such non-organic substitutes for non-commercially available organic ingredients only if those substitutes were on the National List, but added a provision giving the Secretary of Agriculture the power to make emergency additions to that list.[109] While these additions are made on an emergency basis for one-year periods, they appear to be renewable.[110] In addition, once ingredients are on the list

---

105 *See* Laura B. DeLind, *Transforming Organic Agriculture into Industrial Organic Products: Reconsidering National Organic Standards*, 59 HUM. ORG. 198, 200 (2000) (explaining that USDA standards "reduc[e] organic food and farming to a single, manageable dimension—the presence or absence of particular chemicals and technologies").

106 7 U.S.C. § 6504(1). This section notes that synthetics are banned unless otherwise provided for in the Act or in the regulations, and the regulations include a list of synthetics, the National List, that may be used. 7 C.F.R. § 205.601.

107 In *Harvey v. Veneman*, 396 F.3d 28 (1st Cir. 2005), the First Circuit struck down portions of the 2000 Final Rule, which allowed the use of synthetic, non-organic ingredients and processing aids in the handling of certified organic foods. *Id.* at 35–36, 39; *see* 7 C.F.R. § 205.600(a)–(b) (describing standards for inclusion on National List). After this decision, Congress amended the OFPA to reestablish the original USDA regulation and overturn the First Circuit decision. This amendment was passed without a hearing and without a floor debate. Endres, *supra* note 54, at 23–24. While the Organic Consumer Association strongly objected to this amendment, the Organic Trade Association voiced support. *Id.* This sequence of events highlights the public choice dilemma faced by environmental advocates: Congress will act quickly to protect the farming sector.

108 *See, e.g.*, A. Christine Green, Commentary, *The Cost of Low-Price Organics: How Corporate Organics Have Weakened Organic Food Production Standards*, 59 ALA. L. REV. 799, 819 (2008) (arguing that government's concession of allowing synthetic inputs is unnecessary and suggesting alternative methods of reducing production costs). This is another example of the strength of the agricultural lobby.

109 7 U.S.C. § 6517(d)(6). Generally, to make additions to the list the USDA must publish a notice in the Federal Register and allow for public comment. *Id.* § 6517(d)(4).

110 Endres, *supra* note 54, at 38–39.

on a permanent basis, removal is very slow—even if the organic version becomes commercially available.[111]

Specific regulatory requirements focus primarily on inputs, while requirements regarding other farming practices are left to the discretion of certifiers.[112] Certified organic products must be produced in compliance with an organic systems plan, which is to be "negotiated, enacted, and amended through an informed dialogue between certifying agent and producer or handler, and it must be responsive to the unique characteristics of each operation."[113] Despite the potential for tailoring requirements to local geographic constraints, certifiers have little incentive to impose stringent standards. Certification is done by USDA-accredited state officials or private parties.[114] Because there is widespread competition among certifiers, who are paid by farmers rather than by the USDA, certifiers have an incentive to minimize costs to producers and reduce oversight; in other words, they compete by adopting less stringent standards.[115]

In sum, the NOP overemphasizes inputs, for which it establishes loose standards, and underemphasizes other sustainable practices, for which it establishes few specific requirements. But these problems are not an inevitable result of the form of the statute. Instead, many stem from implementation decisions made by the USDA, which at the time of the NOP rulemaking placed a substantial emphasis on the goal of growth of the organic sector rather than on the development of sustainable agriculture.[116]

---

111 *See id.* at 39–40 (giving example of lecithin, which remains on list despite ready availability for several years of organic version).

112 For specific statutory requirements, see *supra* Section II.B.

113 Explanation of NOP Final Rule, *supra* note 101, at 80,558 (explaining how organic system plan rule is meant to operate); *see also* 7 C.F.R. § 205.201 (2009) (listing plan requirements).

114 7 U.S.C. § 6514(a); *see also supra* note 89 (explaining accreditation standards).

115 *See* Endres, *supra* note 54, at 32 (describing how structuring certification system in this way creates bad incentives).

116 *See id.* at 21 (arguing that USDA's implementation of OFPA "overwhelming[ly] focus[ed]" on mass marketing of organic label rather than promoting sustainability); *see also infra* Part III.C (arguing that USDA could shift its focus and improve sustainability elements of NOP without any statutory amendment). Ultimately, a formidable problem with the OFPA has been the lack of USDA buy-in on the goal of sustainability; indeed, the USDA is "the historical and administrative epicenter of conventional agriculture." Donald T. Hornstein, *The Road Also Taken: Lessons from Organic Agriculture for Market- and Risk-Based Regulation*, 56 DUKE L.J. 1541, 1545 (2007) (noting that it is "ironic" that Congress delegated implementation of OFPA to USDA because of this consideration).

2. *Legitimacy and Knowledge*

Consumers commonly cite lack of trust in the label as a reason not to pay the price premium for organic products.[117] This is a criterion that is not directly tied to sustainability but is essential to developing a successful regulation program. Insufficient enforcement poses a serious threat to program legitimacy and effectiveness. Publicity about lack of enforcement may thus depress demand.

There is substantial evidence that the USDA has been ineffective at enforcement.[118] Specifically, the USDA has fallen short on enforcement of import requirements. For example, the USDA authorized the importation of organics from China without conducting the requisite audit of the goods' production.[119] In addition, the USDA does not provide sufficient oversight of certifiers.[120]

---

117 *See* Renée Shaw Hughner et al., *Who Are Organic Food Consumers? A Compilation and Review of Why People Purchase Organic Food*, 6 J. CONSUMER BEHAV. 94, 104 (2007) (finding that this motive, along with high prices and lack of availability, is prominent reason why people choose not to buy organic). These findings give credence to the idea that improving legitimacy would increase willingness to pay and could counteract the effects of decline in demand resulting from slightly increased prices.

For many consumers, legitimacy problems also stem from the proliferation of "big organics." Critics of the USDA's enforcement of the OFPA point to the rise of big organics as a cause of dilution of the term "organic." *See* Green, *supra* note 108, at 820–26 (describing criticism of "corporate organics," such as Wal-Mart's organic brand, as disappointing consumer expectations that organics should be "chemical free, environmentally-friendly, or small domestic farmer-friendly"); Endres, *supra* note 54, at 24–31 (describing "Wal-Mart Effect" of "large industrial-scale organic farms" driving out "local small-scale family farms" and reducing value of organic brand to those who value latter). While many consumers who buy organic believe they are supporting small family farms, large agribusiness corporations, such as ADM, General Mills, Dole, and Tyson, actually dominate the organics industry. Kate L. Harrison, Comment, *Organic Plus: Regulating Beyond the Current Organic Standards*, 25 PACE ENVTL. L. REV. 211, 224–25 (2008) (citing study in which "almost half of consumers identified supporting small farmers as an essential attribute of organic food," but noting many organic products do not come from small producers). Organic watchdogs argue that these farms tend to be less organic than smaller operations. *See* Green, *supra* note 108, at 800 (citing Press Release, Cornucopia Institute, Organic Watchdog, USDA Headed to Court (Feb. 20, 2007), http://www.cornucopia.org/2007/02/organic-watchdog-usda-headed-to-court/) (stating that corporate farms that produce fewer organic products may undermine standards for organic food production); Harrison, *supra*, at 224 (noting environmental advantages of smaller farms); *see also* Endres, *supra* note 54, at 26 (expressing concern that large-scale organic operations will force small farmers out of business).

118 One scholar points to a rise in media coverage of violations as evidence of this. *See* Endres, *supra* note 54, at 34 (describing news coverage of "organic fraud"). While news coverage may not necessarily indicate insufficient enforcement, it certainly contributes to mistrust in the organic label.

119 Green, *supra* note 108, at 821.

120 *See* Endres, *supra* note 54, at 33–34 (noting that this lack of oversight compounds problem that certifiers have little incentive to maintain tough standards).

Consumers also have insufficient knowledge about the meaning of the current organic label and the environmental impacts of organic farming.[121] Many consumers unjustifiably believe that organic foods are better for the environment and have substantial health benefits.[122]

Ultimately, many consumers believe that the organic label offers a product quality guarantee, when it actually conveys information solely about production processes.[123] For example, most consumers believe that organic means pesticide free.[124] In fact, while organic products are produced without the use of pesticides, many organic goods contain pesticide residue by the time they reach the market due to drift (via both air and water).[125] The OFPA mandates periodic residue testing,[126] but USDA regulations only require such testing where the certifier has "reason to believe that the . . . product has come into contact with a prohibited substance or has been produced using excluded methods."[127] Because certifiers are required to do site inspections only at the time of certification and annually thereafter,[128]

---

121 *See* Timothy A. Park & Luanne Lohr, *Supply and Demand Factors for Organic Produce*, 78 AM. J. AGRIC. ECON. 647, 647, 653 (1996) (suggesting that lack of consumer knowledge of meaning of certification status creates uncertainty about demand, which, in turn, creates hesitancy among producers to expand production); Hughner et al., *supra* note 117, at 104 (finding that "[c]onsumers' lack of organic food knowledge, the dearth of organic food promotion, and ineffective retailing strategies (merchandising and displays) have negatively influenced consumers"). Very little research has been done on sources of information on organics. *See id.* at 105 (calling for more research).

122 *See* Mikael Klintman, *Ambiguous Framings of Political Consumerism: Means or End, Product or Process Orientation?*, 30 INT'L J. CONSUMER STUD. 427, 434 (2006) (citing study finding that fifty-seven percent of consumers believe in environmental benefits of organic food and forty-five percent believe it has better nutritional value); *cf.* Gemma C. Harper & Aikaterini Makatouni, *Consumer Perception of Organic Food Production and Farm Animal Welfare*, 104 BRIT. FOOD J. 287, 289 (2002) (noting that British consumers widely believe that organic means "natural" and "not intensively" produced). While it is true that organic foods may, in fact, have some of these qualities, the data is uncertain, and organic food might be neither as environmentally beneficial nor as healthy as many believe. Klintman, *supra*, at 434. There is also some evidence that these beliefs have resulted from deliberate obfuscation by organic food promoters. *Id.* at 434, 436.

123 Klintman, *supra* note 122, at 434.

124 *See* Michelle T. Friedland, *You Call That Organic?—The USDA's Misleading Food Regulations*, 13 N.Y.U. ENVTL. L.J. 379, 403 (2005) (citing A. Elizabeth Sloan, *The Natural and Organic Foods Marketplace*, 56 FOOD TECH. 27, 34 (2002)) (describing 2000 survey finding that sixty-nine percent of consumers believed organic to mean free of synthetic pesticide residues).

125 *Id.* at 399–400.

126 7 U.S.C. § 6506(a)(6) (2006).

127 7 C.F.R. § 205.670(b) (2009). Certifiers have substantial discretion in ordering testing. *See* Friedland, *supra* note 124, at 394 (observing that regulations specify that certifiers "may" require testing, not that they "must"). In addition, because, as described in subsection II.C.1 *supra*, certifiers are hired by farmers, they have little incentive to find a reason to test. *Cf. id.* at 394–95 (suggesting that testing is rarely done).

128 7 C.F.R. § 205.403(a)(1).

they have little occasion to find such reason. Certifiers also must conduct residue testing at their own expense,[129] so they are unlikely to do so unless they have a strong reason to believe that contamination has occurred. The purpose of the testing requirement is to preserve both the "honesty of the system" and consumer expectations,[130] but, as implemented by the USDA, the requirement does not achieve those goals.

These problems of enforcement, even more so than the disjunction between sustainability goals and the requirements of the current organic label described above,[131] reflect a failure of the USDA rather than a failure of the underlying framework for organic labeling.

3. *Consumer Preferences: The Freerider Shortfall*

While the preceding discussion of the meaning of the organic label[132] and public perception of that label[133] indicates that the OFPA could have a greater impact on achieving sustainability goals, this subsection reveals a more fundamental limit to the program. Success of information regulation is measured by the extent to which it changes consumer behavior. For example, information regulation designed to improve the safety of a table saw is effective only if the user of the saw reads the safety warning and follows the instructions that it provides. Similarly, an information regulation program designed to incentivize sustainable agriculture must increase the demand for those products (thereby inducing more producers into the market); it will do so only if consumers are willing to pay for the benefits of those products.

Consumers currently are not willing to pay for sustainability.[134] Sustainability is a public good. Like other public goods, it is subject to

---

129 *Id.* § 205.670(b).

130 *See* Friedland, *supra* note 124, at 392 (quoting S. REP. NO. 101-357, at 300 (1990), *reprinted in* 1990 U.S.C.C.A.N. 4656, 4954) (noting two primary reasons to conduct residue testing).

131 *See supra* Part II.C.1 (arguing that current law imposes input requirements but ignores other sustainable practices).

132 *Id.* (explaining that current label information does not reflect product's sustainability level).

133 *See supra* Part II.C.2 (describing lack of consumer confidence in organic label).

134 One problem in measuring willingness to pay is the existence of a gap between stated willingness to pay and actual willingness to pay. A 1991 study found that the majority of people who express concern about pesticide residues and other health issues still do not purchase organic goods regularly. *See* Ramu Govindasamy et al., *An Evaluation of Consumer Willingness To Pay for Organic Produce in the Northeastern U.S.*, J. FOOD PRODUCTS MARKETING, Jan. 2006, at 3, 4. In part, this gap is the result of the magnitude of the price premium; theoretical willingness to pay does not always match actual capacity to pay. *See id.* at 15 (finding, after conducting survey of 563 households, that two-thirds of respondents "would buy organic produce if it were cheaper"); Hughner et al., *supra* note 117, at 103 (finding that price was preeminent factor in deterring organic purchases). *But see*

a freerider problem. A rational consumer would not pay the price premium for sustainability because the benefits accrue to everyone, not just those who pay for them. If all consumers recognize that they can freeride, then only the consumers with altruistic motives will pay.

Willingness to pay for sustainability may also be hindered by cognitive biases.[135] Environmental externalities impose collective costs, harms that consumers do not directly feel. Individual consumers may overvalue the cost of the organic premium and undervalue the benefits of improved environmental practices—public benefits that accrue in the future.

Why then has the organic market share grown so rapidly? In making food-purchasing decisions, consumers are motivated by a number of different values that govern willingness to pay.[136] Although consumer studies find that strong environmental concerns do correlate with willingness to pay higher prices for organic foods,[137] environmental interests fall far behind the other motivating values of health, including safety and nutrition, taste, and price.[138] Health is consistently identified as the primary factor.[139] A consumer may be willing to

---

Sylvette Monier et al., *Organic Food Consumption Patterns*, J. AGRIC. & FOOD INDUS. ORG., Dec. 2009, Article 12, at 18 http://www.bepress.com/jafio/vol7/iss2/art12 (finding that actual willingness to pay was tied to education level but not to income level). Average price premiums range from twenty-five to thirty-five percent over conventional prices. Park & Lohr, *supra* note 121, at 647. But the average consumer was only willing to pay about a ten percent price premium for organic products as of 1993. Govindasamy et al., *supra*, at 6.

[135] *See* Antoine Beretti et al., *How Cognitive Biases Can Affect the Performance of Eco-labeling Schemes*, J. AGRIC. & FOOD INDUS. ORG., Dec. 2009, Article 10, http://www.bepress.com/jafio/vol7/iss2/art10 (identifying loss aversion, optimism, attribution bias, and cognitive dissonance as cognitive biases that may hinder success of eco-labeling program). *See generally* STEPHEN BREYER, BREAKING THE VICIOUS CIRCLE: TOWARD EFFECTIVE RISK REGULATION (1993) (discussing cognitive biases in perception of risk and role public perceptions should play in regulation of risk).

[136] *See* Jayson L. Lusk & Brian C. Briggeman, *Food Values*, 91 AM. J. AGRIC. ECON. 184, 187 (2009) (identifying values of naturalness, taste, price, safety, convenience, nutrition, tradition, origin, fairness, appearance, and environmental impact). *See generally id.* (studying consumer prioritization of identified values).

[137] *E.g.*, Efthimia Tsakiridou et al., *Employing a Dichotomous Choice Model To Assess Willingness To Pay (WTP) for Organically Produced Products*, J. FOOD PRODUCTS MARKETING, Aug. 2006, at 59, 65; Lusk & Briggeman, *supra* note 136, at 193.

[138] *See* Lusk & Briggeman, *supra* note 136, at 187, 191 (describing results of consumer survey ranking motive of safety as most important, followed by nutrition, taste, and price). It is, of course, important to note that some altruistic consumers (albeit a small number) are willing to pay the price premium solely for environmental concerns. This author, despite the information revealed about the low correlation between organic and sustainability benefits discussed in subsection II.C.1, is one of them.

[139] *See* Govindasamy et al., *supra* note 134, at 4 (stating that American consumers have "strong risk aversion to pesticide residues"); Hughner et al., *supra* note 117, at 101 (surveying other studies on motives for purchasing organic food and finding that health was by far primary motive); Lusk & Briggeman, *supra* note 136, at 192 (finding that safety was about twice as important as next-ranked motives, nutrition and taste). Health is an impor-

pay for a combination of reasons, or a consumer may pay for health alone. Because the product bundles environmental benefits with health benefits, pure altruism is not required for consumers to be willing to buy organic.

III
BUNDLING PUBLIC AND PRIVATE GOODS

This Part argues that the USDA could transform the OFPA and mitigate its current shortfalls by taking advantage of the fact that organic products inherently contain both public and private goods. This Part begins by analyzing how this bundling of public and private goods works in the environmental context. It argues that, despite some possible criticisms, bundling is a normatively desirable approach to achieving environmental sustainability in general and agricultural sustainability in particular. Finally, it explores precisely how bundling can be used to overcome the problems with the OFPA described in Part II.

A. Bundling in Practice

Bundling falls into two general categories. First, all eco-labeling involves bundling of a public good with a private intangible benefit. For instance, post–consumer product toilet paper both benefits the ten-thousand year old forests in Northern Canada[140] and provides the consumer a sense of satisfaction from having done something good for the environment. This latter private benefit—what I will call a "trend benefit"—can have two parts: the good feeling the consumer experiences from upholding a social norm ("self-conception" benefit) and the good feeling he experiences in being seen doing so ("reputational" benefit).[141] This trend benefit is important for organic foods; many people derive pleasure from being seen at the farmers' market or in the organics aisle. With some environmental benefits there may even

tant motivation to buy organic for consumers who believe that organic means that foods are pesticide-free and more nutritious. Interestingly, no study has ever proven that organic food actually has more nutritional value than conventional food. *Id.*

[140] These forests are currently being cut to make conventional toilet paper. Natural Res. Def. Council, Paper Industry Laying Waste to North American Forests, http://www.nrdc.org/land/forests/tissue.asp (last visited Mar. 9, 2010).

[141] Cass R. Sunstein, *Social Norms and Social Roles*, 96 COLUM. L. REV. 903, 916 (2006) (discussing roles of social norms and social meanings in shaping behavior and preferences). Advertisers often focus on a product's "consequences for self-conception—making the purchaser seem smart, sophisticated and in control of the situation." *Id.* at 926.

be a sense of shame associated with not taking the environmentally friendly action.[142]

Of course, because of price premiums and other disincentives (such as inconvenience) to environmentally sound behavior, this private good—reputation—is unlikely to be enough, on its own, to make eco-labeling successful.[143] The extent to which social norms can transform the public good of sustainability into the private good of reputation is limited.[144] A more valuable, and perhaps more tangible, private good is required. Thus, the second type of bundling combines a public good with a different private good, such as financial savings or health benefits.

For instance, the Energy Star program offers consumers an opportunity to make environmentally sound decisions and save money at the same time.[145] The program bundles reduced fossil fuel emissions with savings on energy bills.[146] In addition to certifying individual appliances, Energy Star also certifies buildings, and recent evi-

---

142 *See id.* at 945 (discussing example of wealthy people recycling in East Hampton and suggesting that "even affluent people may recycle if prevailing norms make it shameful to refuse to do so").

143 *See* Ann E. Carlson, *Recycling Norms*, 89 CAL. L. REV. 1231, 1231 (2001) (using example of recycling to suggest that social norms will never be enough on their own to "resolve 'large-number, small-payoff' problems of collective action" where required action is inconvenient); Michael P. Vandenbergh, *Order Without Social Norms: How Personal Norm Activation Can Protect the Environment*, 99 NW. U. L. REV. 1101, 1133–34 (2005) (noting that in loose-knit group situations, ability of norms to influence individual environmental behavior is often quite low).

144 Social norms offer a mechanism for the transformation of a public good into a private good. Indeed, it is not entirely clear that public and private goods are discrete. The successful dolphin-safe tuna labeling programs described in note 73, *supra*, bundle a public good, ecosystem integrity, with the dolphins' existence value, which has both public and private elements. Existence value is commonly used as a method for valuation of natural resources in cost-benefit analysis; the method relies on how much people are willing to pay to ensure the continued existence of a species or ecosystem. *See* RICHARD L. REVESZ & MICHAEL A. LIVERMORE, RETAKING RATIONALITY: HOW COST-BENEFIT ANALYSIS CAN BETTER PROTECT THE ENVIRONMENT AND OUR HEALTH 119, 128–29 (2008) (detailing best practices for using existence value in cost-benefit analysis). Though people may rarely see dolphins, their existence is important to many people. People often place a higher existence value on charismatic species like dolphins and polar bears. *Cf.* Allison L. Westfahl Kong, Note, *Improving the Protection of Species Endangered in the United States by Revising the Distinct Population Segment Policy*, 85 N.Y.U. L. REV. 358, 362 (2010) (noting that such megafauna generate tourism revenue, specifically that "Americans spent $38.4 billion on wildlife watching in 2001" (citing U.S. FISH & WILDLIFE SERV., U.S. DEP'T OF THE INTERIOR, 2001 NATIONAL SURVEY OF FISHING, HUNTING, AND WILDLIFE-ASSOCIATED RECREATION 37 (2002), *available at* http://www.census.gov/prod/2002pubs/FHW01.pdf)).

145 See *supra* note 72 for a brief overview of the program.

146 *See* Michael A. Livermore, *Reviving Environmental Protection: Preference-Directed Regulation and Regulatory Ossification*, 25 VA. ENVTL. L.J. 311, 328–29 (2007) (noting that Energy Star labels often emphasize these cost savings).

dence on marketability suggests that consumers are willing to pay more for these buildings than for conventional buildings.[147] In contrast, LEED certification,[148] which also promotes "green" construction but in which the accompanying private benefits are less clear, has no statistically significant impact on sales prices.[149] This disparity in willingness to pay suggests that where the product, in this case the building itself, does not provide as obvious a private good, consumers are less willing to spend more solely to support the public good.

From the perspective of producers, bundling is a mechanism for competition. A producer can lure a customer away from a comparable (and similarly priced) product by promising the customer an environmental benefit from the purchase.[150] The environmental benefit is used to distinguish a product from a competitor, and this insight suggests why producers may obtain a private benefit from purveying a public good. Thus, for both producers and consumers, bundling offers a private reason to invest in a public good—pure altruism is not required.

B. A Normative Evaluation

Given, as Part I demonstrates, that sustainability is an important goal, the question becomes whether bundling is a normatively desirable way to achieve it. Consumers have a growing interest in buying organic.[151] Despite misinformation about and mistrust in the organic label,[152] the market share of organic foods continues to grow. The alternative to bundling is to create a separate labeling system specifi-

---

147 *See* Piet Eichholtz et al., *Doing Well by Doing Good? Green Office Buildings* 30 (Berkeley Program on Hous. & Urban Policy, Working Paper No. W08-001, 2009), *available at* http://urbanpolicy.berkeley.edu/pdf/EKQ_green_buildings_090809.pdf (identifying price premium of up to sixteen percent depending on location and characteristics of building).

148 LEED certification reflects a wide variety of green building characteristics including, inter alia, energy efficiency, water efficiency, and presence of bike racks. Buildings can receive certification for establishing a wide range of combinations of these features. *See* Eichholtz et al., *supra* note 147, at 9 (describing LEED certification requirements and stating that they are "substantially more complex" than Energy Star certification requirements); *see also* U.S. Green Building Council, Project Certification, http://www.usgbc.org/DisplayPage.aspx?CMSPageID=64 (last visited Mar. 2, 2010) (describing LEED certification process).

149 Eichholtz et al., *supra* note 147, at 20.

150 *See* Mark Bagnoli & Susan G. Watts, *Selling to Socially Responsible Consumers: Competition and the Private Provision of Public Goods*, 12 J. ECON. & MGMT. STRATEGY 419, 420 (2003) (describing this tactic as "strategic corporate social responsibility").

151 *See, e.g.*, Hughner et al., *supra* note 117, at 95 (pointing out U.S. market growth of about twenty-four percent per year in 1990s).

152 See *supra* subsection II.C.2 for a discussion of consumer understanding of and attitudes toward the label.

cally for environmental benefits. However, a dual system that separates organic from sustainable would splinter the current organic market. Those interested in health (the majority of organic purchasers) would stick with organic, while only those interested in the environment would switch over to sustainable.

It is possible that two separate systems would maximize opportunity for consumer choice, but the benefits gained by allowing such choice would be outweighed by lost efficiency. First, these two groups of consumers overlap. Splintering the program might force some people to choose for which benefit—their own health or the health of the environment—they would prefer to pay. Second, unbundling may not be entirely possible. While they are not completely in sync, often changes to farming that produce environmental benefits also produce health benefits. For example, reduction of pesticides is good for the environment because it reduces pollution of ground water from runoff[153] and may also be good for health because it reduces exposure to potentially harmful chemicals.[154] In other words, bundling increases the values of both the public and private goods.

In addition, two further characteristics of the NOP mitigate any possible normative concerns about bundling. First, consumers are getting what they pay for; that is, the private benefit is real. So long as the private benefit is present, there is no reason to be concerned that consumers are also getting a public sustainability benefit (which many consumers would agree is desirable, even if they do not want to pay a premium for it). There is evidence that organic foods have health benefits,[155] although the extent of the benefit often depends on the particular type of produce and the extent to which that type of produce

---

153 See *supra* notes 28–30 and accompanying text for a discussion of harms caused by pesticides in agricultural runoff.

154 *See, e.g.*, Alberto Finamore et al., *Novel Approach for Food Safety Evaluation. Results of a Pilot Experiment To Evaluate Organic and Conventional Foods*, 52 J. AGRIC. & FOOD CHEMISTRY 7425, 7429 (2004) (finding that conventional foods may lead to increased immune system risks).

155 Some studies have found health benefits related to reduced risk of pesticide exposure. *See* Ben Harder, *Organic Choice: Pesticides Vanish from Body After Change in Diet*, SCI. NEWS, Sept. 24, 2005, at 197 (discussing study that evaluated impacts on body levels of pesticides in children from switch to organic foods); Hornstein, *supra* note 116, at 1557–62 (describing health risks of pesticides to children and pointing out that these risks were previously under-accounted for in risk assessments of switch from conventional to organic farming). However, there is little evidence that organic production provides nutritional benefits. Alan D. Dangour et al., *Nutritional Quality of Organic Foods: A Systematic Review*, 90 AM. J. CLINICAL NUTRITION 680, 680 (2009) (reviewing existing literature and finding scientific consensus that no substantial difference in nutritional quality exists between organic and conventional foods).

absorbs pesticides that are applied to it.[156] This element is especially important where environmental and health benefits are totally in sync (i.e., where unbundling is completely impossible). Under this circumstance, the entire price premium is applied to cover the health benefits, while the environmental benefits are a free bonus.

The less environmental and health benefits are in sync, the more the producer will face increased costs solely for the purpose of provision of the primarily public good.[157] Under this circumstance, a second characteristic—transparency of the public good—is extremely important. Producers and marketers must be honest about the existence of the public benefit. There is no question that organics have been marketed as sustainable products; the public good is not hidden. Organic producers emphasize environmental benefits in their packaging: A tour of the organics aisle reveals advertising highlighting the environmental benefits of organic produce, in everything from product names and descriptions to package graphics. For example, consider the company name "Nature Valley" or take a look at the scenic farm pictured on boxes of Familia Muesli. These names and images inspire thoughts of thriving pastoral landscapes. In addition, organic trade associations emphasize these benefits in their literature.[158] Consumers are likely well aware that the goods they are purchasing may have sustainability benefits.

Transparency is also important because it fosters choice; consumers can opt out of the organic market and seek health benefits elsewhere if they do not want their private health benefits bundled with public sustainability benefits. In this light, bundling also appears as a favorable alternative to other types of environmental regulation. For instance, a command-and-control system, while advantageous from the perspective of making greater environmental strides more quickly, eliminates choice: Consumers would not be able to opt out.[159]

---

156 *See* Press Release, Envtl. Working Group, People Can Reduce Pesticide Exposure by 80 Percent Through Smart Shopping and Using the Guide (Mar. 10, 2009), *available at* http://www.ewg.org/newsrelease/EWG-New-Pesticide-Shoppers-Guide (advising consumers as to which foods absorb more pesticides and offering iPhone application for consumers to carry list with them).

157 Where producer costs increase to cover that provision, there may be a concern that the consumer must pay extra, beyond what the consumer would otherwise be willing to pay, for the value of the private good. Under this circumstance, the reputational effect may be important to induce increases in willingnesss to pay. *See* Bagnoli & Watts, *supra* note 150, at 421 (noting that this has been called "warm-glow altruism").

158 *See, e.g.*, Organic Trade Ass'n, Benefits of Organic, http://www.ota.com/organic/benefits.html (last visited Mar. 9, 2010) (providing information about benefits to soil, biodiversity, and marine ecosystems, inter alia).

159 *Cf.* RICHARD H. THALER & CASS R. SUNSTEIN, NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS 186–88 (2008) (arguing that cap-and-trade or

Ultimately, bundling is an effective strategy for funding public goods and, as will be addressed below, can be used to overcome some of the shortfalls of the NOP that are described in Part II. Bundling also leaves consumers with choice.

C. *A Better Approach to the NOP*

While bundling facilitates development of the organic sector and thereby theoretically allows for increased production of a public good, overall environmental benefits currently generated by the NOP are minimal.[160] But, by taking advantage of the potential of bundling, the USDA could improve the program's sustainability effects.

Because sustainability was not the primary goal of the program and has never been directly implemented, bundling is an unintended characteristic of the NOP. The OFPA resulted from public demand for national standards for organic labeling.[161] Prior to the OFPA, a muddled regulatory environment created confusion for consumers and imposed costs on producers; in response, a number of organic organizations pushed Congress to create a uniform national program.[162] Uniformity, in turn, was intended to allow for market expansion and to protect consumers.[163] Indeed, many of the sustainability

---

pollution tax schemes are compatible with authors' libertarian worldview, especially when compared to alternative of command-and-control regulation).

[160] The precise extent of these benefits is an empirical question that is beyond the scope of this Note.

[161] Before 1990, twenty-two states had organic certification laws, each with its own standards. S. REP. NO. 101-357, at 4943 (1990); *see also* Harrison, *supra* note 117, at 213–15 (describing wide variations among state programs). Some states allowed use of synthetic additives while others did not; some states allowed for private certification, while others required public certification. *Id.* In the twenty-eight states without organic standards, producers were free to make any organic claims. *Id.*

[162] S. REP. NO. 101-357, at 4944 (1990) (noting that proponents of federal legislation included National Association of State Departments of Agriculture, American Farm Bureau Federation, and several organic industry trade associations); *cf.* E. Donald Elliott et al., *Toward a Theory of Statutory Evolution: The Federalization of Environmental Law*, 1 J.L. ECON. & ORG. 313, 326, 330–31 (1995) (arguing that auto manufacturers lobbied for federal auto emission standards to preempt variable state standards).

[163] 7 U.S.C. § 6501 (2006) (listing following purposes of OFPA: (1) "to establish national standards governing the marketing of certain agricultural products as organically produced products"; (2) "to assure consumers that organically produced products meet a consistent standard"; and (3) "to facilitate interstate commerce" in organic food); S. REP. NO. 101-357, at 4943–94 (1990) (describing goals of market expansion and consumer protection, and pointing to concern about "dishonest traders looking to cash in on the premium prices organic food commands"). Congress also noted that uniform standards might improve availability of organic produce. S. REP. NO. 101-357, at 4944 (suggesting that retailers would market organic produce if labeling claims were verifiable). Both Congress and the USDA also cited concerns that, in the absence of national standards, American organic producers were disadvantaged in foreign markets where standards may be required. *Id.* ("[I]n absence of national standards, American businesses are finding it increasingly diffi-

shortfalls discussed above[164] result from the fact that the USDA conceives of the OFPA primarily as a tool for market development.[165] As a result, the USDA has had little interest in establishing more stringent and comprehensive standards.[166]

The USDA should explicitly adopt sustainability as an essential purpose of the organic program. This shift is statutorily permissible because of the Act's secondary sustainability purpose. In the legislative history, the Senate explicitly expressed a desire to promote sustainability, for example to "encourage environmental stewardship through the increased adoption of organic, sustainable farming methods."[167] The USDA has acknowledged this intent in its own rulemaking processes.[168] It is also possible because of the flexible language of the OFPA.[169] In addition, in light of growing environmental consciousness among Americans, the shift may eventually be mandated by the marketing mission of the statute.[170] The shift is normatively desirable because of the need to address the environmental externalities of agriculture and the lack of other regulatory options.[171] Bundling makes the shift economically feasible.[172]

---

cult to negotiate in foreign markets."); Explanation of NOP Final Rule, *supra* note 101, at 80,668 (noting that one expected primary benefit of rule is improved access to organic markets).

164 *See supra* Part II.C (discussing NOP's failure to meet sustainability goals).

165 Indeed, the USDA was so focused on marketing that it delegated primary responsibility for development and administration of the NOP to the Agricultural Marketing Service, an office within the USDA that has little experience with organic agriculture. *See* Hornstein, *supra* note 116, at 1550 (describing history and function of OFPA and NOP).

166 *See* Endres, *supra* note 54, at 20–21 (noting that USDA delegated implementation to Agricultural Marketing Service and pointing to introductory language in OFPA and implementing regulations that support USDA's focus on marketing rather than environmental concerns).

167 H.R. REP. NO. 101-916, at 1174 (1990) (Conf. Rep.), *as reprinted in* 1990 U.S.C.C.A.N. 5286, 5699 (discussing Senate purposes).

168 Explanation of NOP Final Rule, *supra* note 101, at 80,548, 80,550 (explaining choice of word "conserve" instead of "preserve" "because it reflects a more dynamic, interactive relationship between the operation and biodiversity over time"); *id.* at 80,562 (explaining that soil management plan requirement "addresses the impact of a production operation on the natural resource base that sustains it").

169 The remainder of this subsection discusses potential regulatory changes that demonstrate the open-ended nature of the statutory language. There is also reason to believe that this shift is more politically feasible than it might have been when the NOP rule was first implemented ten years ago.

170 *See supra* notes 161–66 and accompanying text (describing marketing-focused goals of OFPA). This argument posits a much more dramatic shift in consumer demand for green products than has occurred to date.

171 *See supra* Part I (describing environmental externalities and difficulties with command-and-control regulation).

172 *See supra* Part III.A (explaining why and how bundling works); *supra* Part III.B (showing how bundling is effective in this context).

Having adopted this goal, the USDA should make at least some of the following changes to the program. Several essential changes could be implemented without any statutory amendments. First, the USDA should improve enforcement practices. The Secretary has substantial discretion to enforce the Act more stringently.[173] To do so, the USDA would need to increase the accountability of certifiers, who are the critical liaison between the USDA and organic farmers and are in a unique position to tailor requirements to local circumstances—an element that is essential to sustainability.[174] Certifiers currently have broad discretion to shape Organic Plans and to hold farmers accountable for adherence to those plans, but certifiers currently have little incentive to develop stringent plans.[175] The USDA could promulgate national regulations that would require certifiers to have knowledge of sustainable farming practices[176] and would expand the circumstances under which the USDA would revoke certifier accreditation.[177]

Second, the USDA could bolster standards for inclusion of synthetics on the National List. The statute is open-ended with regard to these standards, so the Secretary could develop narrower inclusion requirements. In particular, the statute requires that prior to listing, the Secretary find use of the substance to be "consistent with organic farming and handling."[178] This phrase is not defined in the Act, and the Secretary could develop a quite stringent definition that would demand exclusion of those synthetics that pose the greatest threat to natural resources.

Finally, the Secretary could strengthen requirements for Organic Plans. While the Act contains several specific requirements for the content of the Plans, it does not limit the content to those requirements.[179] The law also allows the Secretary of Agriculture to identify

---

173 7 U.S.C. § 6506(a)(7) (2006) (directing Secretary to "provide for appropriate and adequate enforcement procedures, as determined by the Secretary to be necessary and consistent with this chapter").

174 *See supra* notes 10–12 and accompanying text (noting need for local tailoring).

175 *See supra* note 89 (describing certifier accreditation requirements); *supra* notes 114–15 and accompanying text (describing current incentives of certifiers). Under the Act, certifiers have enormous flexibility in establishing Organic Plan requirements. 7 U.S.C. § 6513(b)(1)–(2) (2006) (listing broad requirements for Plans).

176 7 U.S.C. § 6514(b)(2) (establishing that certifying agent must "have sufficient expertise in organic farming and handling techniques as determined by the Secretary [of Agriculture]").

177 *Id.* § 6515(j)(1) (giving Secretary broad discretion to revoke accreditation when "certifying agent is not properly adhering to the provisions of this chapter").

178 *Id.* § 6517(c)(1)(A)(iii).

179 *Id.* § 6513(g) (mandating that Organic Plans "not include any production or handling practices . . . inconsistent with this chapter" but not stating explicit limitations on Plans' content).

"necessary" conditions for program participation.[180] The USDA could add greater stringency to the certification process by adding a requirement that farming methods be consistent with local ecosystems. This requirement would ensure that organic farming aligns with local ecosystems and adheres to a "nature as standard" approach—the definition of sustainable farming set out in Part I.[181] A farm's Organic Plan should reflect the specific environmental context of the specific farm and require farming techniques suited to that context. The requirement could read: "The certifier must require that the Organic Plan reflect farming practices that, if used over time, could continue without substantially impairing the local environment."[182] Such a requirement is flexible enough to account for a wide range of farming conditions[183] but specific enough to ensure organic farming would have fewer negative environmental externalities.[184]

Changes to the program requirements would close the gap between organic and sustainable[185] and increasing enforcement would give the label more legitimacy.[186] However, making these changes would also increase the cost of organic production and the price premium on organic products; therefore these changes might also reduce demand and exacerbate the freerider problem.[187] Thus, before making any or all of these changes, the USDA should consider how they would impact consumer demand for organic products.[188] To ensure

---

180 *Id.* § 6506(a)(11) ("A program established under this chapter shall . . . require such other terms and conditions as may be determined by the Secretary to be necessary.").

181 See *supra* notes 10–12 and accompanying text for discussion of this definition.

182 This provision should be accompanied by a list of guidelines from which certifiers could draw, including guidelines as to which crops can be grown in which parts of the country and which crops should be grown together. Guidelines should aim to minimize the use of monoculture and promote the other sustainable farming techniques described in Part I.

183 This requirement allows for flexibility by not mandating particular practices. As the definition of sustainability suggests, flexibility is extremely important because what constitutes a sustainable practice changes depending on place and time of year.

184 Specificity is important because it is essential to enforceability. The requirement is specific in that it demands that farming practices be sustainable. An expert could evaluate any set of farming practices relative to this criterion to determine if the certifier and the farmer had adhered to the requirement.

185 *See supra* Part II.C.1 (identifying this gap).

186 *See supra* Part II.C.2 (describing legitimacy problems).

187 *See supra* note 87 and accompanying text (articulating price elasticity problem); *supra* Part II.C.3 (laying out freerider problem). Whether or not the scope of the freerider problem increases as a result of these price increases is a function of the magnitude of the price change and the individual's demand elasticity.

188 While many studies have connected consumer willingness to pay for organics to product prices, few studies have focused directly on elasticity. *See supra* notes 134–39 and accompanying text (discussing research on willingness to pay). Studies that have looked at this question have had varied results; some have found demand to be relatively inelastic, while others have found demand to be highly elastic. *See* FRANK BUNTE ET AL., AGRIC.

that making these changes would not decrease the NOP's net environmental benefits, the USDA should take advantage of bundling. A decrease in net benefits could occur because an increase in price might drive down demand and, ultimately, supply. Before making any changes, the USDA should attempt to answer the empirical question of whether a decrease in production accompanied by an improvement in sustainability of the remaining production would lead to a net gain or net loss in overall sustainability. In addition, the USDA should make these changes incrementally, paying close attention to market responses so as not to exceed the market's tolerance for regulatory change.[189]

In deciding which changes to prioritize, the USDA should mitigate the freerider problem through bundling. It should analyze the extent to which these recommended changes would also improve the quality of the private health benefits associated with organic produce[190] and thus offset declines in demand resulting from increased prices. For instance, the USDA could consider the extent to which changes to standards for the National List would improve the health value of organics by reducing quantities of potentially dangerous

---

ECON. RESEARCH INST., LIMITS TO GROWTH IN ORGANIC SALES: PRICE ELASTICITY OF CONSUMER DEMAND FOR ORGANIC FOOD IN DUTCH SUPERMARKETS 43 (2007), *available at* http://www.lei.wur.nl/UK/publications+en+products/LEI+publications/default.htm?id=774 (noting that elasticity for organic products is higher than that for conventional products but also finding that organic demand increases as conventional price increases); Monier et al., *supra* note 134, at 15, 18 (studying purchases of organic eggs and milk in France and finding that marginal decreases in price do not lead to "significant enlargement of the organic markets to new consumers"); Lewrene K. Glaser & Gary D. Thompson, Demand for Organic and Conventional Frozen Vegetables, 11 (Aug. 8–11, 1998) (paper presented at annual meeting of American Agricultural Economics Association), *available at* http://ageconsearch.umn.edu/bitstream/21583/1/sp99gl01.pdf (studying elasticity of demand for frozen organic products in American supermarkets and finding high elasticity but noting that extent of elasticity diminished over time).

189 The USDA might also mitigate decline in demand by marketing organics to particular consumers who are less sensitive to price changes. Specifically, corporate customers might be better able to absorb the cost increases and might face pressure from stockholders to make socially (and not just financially) responsible purchasing decisions. *See generally* Robert Heinkel et al., *The Effect of Green Investment on Corporate Behavior*, 36 J. FIN. & QUANTITATIVE ANALYSIS 431, 431 (2001) (describing influence of socially responsible investing on corporate environmental choices). It might also be useful to focus such marketing efforts on corporate consumers with large buying power, such as Wal-Mart. *Cf.* Corby Kummer, *The Great Grocery Smackdown*, ATLANTIC MONTHLY, Mar. 2010, at 38 (describing how Wal-Mart has begun directly contracting with farmers for locally grown organic produce and suggesting that this development benefits both farmers and consumers).

190 Another private good associated with sustainable agriculture, albeit one far less quantifiable than health, is protection and development of social networks. *See* Hornstein, *supra* note 116, at 1548 (noting that sustainability has "social and organizational dimensionality" and thus that "core norms . . . might simultaneously deliver both private goods and public *beneficial* externalities").

chemicals used in their production. Such an increase in private benefits may increase willingness to pay, despite increased cost of production. Similarly, improvements to standards for certifiers and changes to Organic Plan requirements to increase the extent to which products are tailored to local environments might increase the trend benefit[191] for consumers who value local products.[192] By evaluating possible changes through the bundling framework, the USDA could minimize loss of market share that might result from increased prices.

In making and promoting these changes, the USDA can also contribute to a positive feedback loop. Information regulation can increase consumer awareness, which may in turn foster a higher willingness to pay for organics.[193] Further, to the extent that environmental consciousness becomes a more prevalent social norm, the reputational effects of environmentally friendly decisions will be stronger, and the private good element of sustainability may also become stronger. As trend benefits increase, the line between the public and private goods associated with a product becomes fuzzier; the public good *itself* begins to offer a private benefit. As that happens, the organic standards could be strengthened without fear that the resulting increase in the price premium would drive down demand.

CONCLUSION

Organic labeling should be a tool for promotion of sustainability, and bundling of public and private goods could make it effective as such. Bundling makes it possible to overcome the freerider problem associated with the marketing of pure public goods. In the future, greater environmental consciousness may make sustainability a private as well as a public good, augmenting (and perhaps eventually replacing) the bundled-in private goods such as health benefits. In the meantime, the latter type of bundling is essential to the success of organic labeling as a tool for fostering sustainability.

---

191 *See supra* text accompanying note 141 (describing trend benefit as personal satisfaction in upholding social norm as well as reputational benefit from doing so publicly).

192 A quick glance at a foodie magazine such as *Bon Appetit*, which runs a monthly "At the Market" column featuring a locally in-season food or an examination of the growing popularity of food writers such as Michael Pollan and Mark Bittman, reveals that an increasing number of consumers value foods that are seen as more natural, that is, foods that are produced in a manner in tune with local environments.

193 *See generally* Livermore, *supra* note 146, at 327–31.