ARTICLES

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Food Labeling and the Environment

INTRODUCTION

Despite its bucolic associations, agriculture—in its modern, industrialized form—has numerous and substantial negative impacts on the environment, including habitat loss; water pollution from fertilizer, animal waste, and pesticide runoff; soil erosion; depletion of water resources for irrigation; and air pollution, among others.[1] These harms are exacerbated in the United States by the numerous statutory exemptions from otherwise applicable environmental regulations that the agricultural industry enjoys.[2] More

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1 *See infra* notes 10–28 and accompanying text.

2 *See generally* J.B. Ruhl, *Farms, Their Environmental Harms, and Environmental Law*, 27 ECOLOGY L.Q. 263 (2000) (describing the many impacts of farms, the many

stringent regulation is clearly needed, but, in light of the formidable strength of the farm lobby, it is worth considering whether there are other ways of reducing agriculture's environmental harms that could be more readily implemented. This Article will propose one alternative: harnessing increased consumers' interest in the provenance of their food by creating a certification and labeling program for food produced in an environmentally responsible fashion.

Just as many consumers are willing to pay more for fair trade chocolate, pasture-raised beef, and shade-grown coffee, foods that have more comprehensive environmental attributes would likely command a price premium.[3] The promise of a higher selling price would thus reward producers who already engage in sustainable production and induce additional producers to do so.[4] Currently, however, no comprehensive environmental certification and labeling program exists. The National Organic Program, of course, has significant environmental dimensions,[5] but it is both under- and-overbroad in scope. An organic farm may, for example, have significant environmental impacts through its use of irrigation, while a conventional farm may excel at runoff prevention and provide significant wildlife habitat by leaving marginal land uncultivated. Scholars have proposed holistic environmental certification and labeling regimes,[6] but so far these have not been widely implemented.[7] And while the U.S. Department of Agriculture (USDA) does offer direct financial support for resource conservation

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regulatory "safe harbors" from regulation that they enjoy, and the proposals for alternatives to traditional command-and control regulation that could address agricultural impacts without excessive inefficiencies or burdens).

3 *See infra* notes 65–66 and accompanying text.

4 *But see* Barton H. Thompson Jr., *EcoFarming: A Realistic Vision for the Future of Agriculture?*, 1 U.C. IRVINE L. REV. 1167, 1187 (2011) ("Without evidence that consumers would pay significantly more for a broader EcoFarm label [than the National Organic Program], ecolabeling is unlikely to encourage farmers to invest the additional sums needed to be true EcoFarmers.").

5 *See, e.g.*, 7 C.F.R. § 205.203 (2019) (requiring "tillage and cultivation practices" that "minimize soil erosion" and management of plant and animal materials "in a manner that does not contribute to contamination of . . . soil, or water by plant nutrients, pathogenic organisms, heavy metals, or residues of prohibited substances").

6 *See infra* Part II for a discussion of other scholars' eco-labeling proposals for food.

7 Several limited, more holistic labels are emerging. *See, e.g.*, Alexia Brunet Marks, *Feeding the Eco-Consumer*, 42 VT. L. REV. 567, 602 (2018) (describing "Regenerative Organic Certification," which includes certification for "robust requirements for soil health and land management" in addition to animal welfare and worker and farmer fairness requirements and a pilot program to test other "Organic Plus" labeling systems).

in agriculture through the Environmental Quality Incentives Program, among other programs,[8] these initiatives do not include a corresponding labeling regime to capture consumer demand. This Article suggests that this type of regime, while far from being a comprehensive environmental label, might help spur participation in these voluntary programs and demonstrate the benefits to producers of becoming part of a more holistic certification program

Part I describes the substantial environmental harms caused by U.S. agriculture and the lack of effective regulation of these harms, while also introducing some of the USDA's many voluntary conservation programs. Part II then explores the potential for incentivizing better environmental practices in agriculture by harnessing consumer preferences for more responsible agricultural products and describes the price premiums associated with these preferences. This Part also documents the many labels that have recently become more prevalent, the general absence of environmental labels, and the existing environmental label proposals. Finally, Part III suggests creating a labeling regime for the USDA's existing voluntary programs and explores some of the issues surrounding this regime.

Given the proliferation of food labels in issue areas beyond environmental preservation, there is a risk that adding yet another labeling regime to the slate of "humane," "free-range," and "organic" products will crowd the labeling space, and participation in voluntary conservation does not necessarily mean that a given producer is, on the whole, especially "green." But in light of consumers' demonstrated preferences for certain types of green products (such as coffee), existing agricultural environmental programs that lack a labeling component and thus leave money on the table for farmers,

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8 *See* USDA, *Environmental Quality Incentives Program*, NAT. RESOURCES CONSERVATION SERV., https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/ (last visited Jan. 7, 2019) ("Through EQIP, NRCS provides agricultural producers with financial resources and one-on-one help to plan and implement improvements, or what NRCS calls conservation practices."); USDA, *Agricultural Conservation Easement Program (ACEP)*, NAT. RESOURCES CONSERVATION SERV., https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/easements/acep/ (last visited Jan. 7, 2019) ("The [ACEP] provides financial and technical assistance to help conserve agricultural lands and wetlands and their related benefits."); David E. Adelman & John H. Barton, *Environmental Regulation for Agriculture: Towards a Framework to Promote Sustainable Intensive Agriculture*, 21 STAN. ENVTL. L.J. 3, 37–38 (2002) (describing USDA's Conservation Reserve Program and Conservation Compliance Program).

and the need to mitigate the environmental impacts of agriculture, even the incremental expansion of environmental food labeling is a worthy endeavor.

I
ENVIRONMENTAL HARMS FROM AGRICULTURE

Agriculture is one of the primary causes of environmental harm; as David Adelman and John Barton note, it "may be the leading human influence on the global environment."[9] Yet beyond the somewhat successful, mostly voluntary programs implemented by the USDA, there is little regulation of these harms.

A. Impacts

A voluminous scientific and legal literature documents the substantial environmental harms associated with U.S. agriculture and the general lack of regulation to prevent or mitigate these harms. [10] Clearing land for crops, pastures, and massive feedlots fragments habitat and leads to widespread habitat loss.[11] Habitat loss and fragmentation, declines in plant diversity, and pesticide use appear to be several of the primary causes of recent, alarming drops in pollinator populations.[12] Habitat loss and fragmentation have also

9 Adelman & Barton, *supra* note 8, at 4.

10 *See, e.g.*, *id.* (listing environmental impacts of agriculture, including water consumption, displacement of other surface uses, contributions of nitrogen to the environment, species decline, and greenhouse gas and air quality impacts); Ruhl, *supra* note 2, at 274–93 (also listing harms); Mary Jane Angelo, *Corn, Carbon, and Conservation: Rethinking U.S. Agricultural Policy in a Changing Global Environment*, 17 GEO. MASON L. REV. 593, 603–13 (2010) (noting water, biodiversity, human health, and climate change impacts).

11 *See, e.g.*, Marcel T.J. Kok et al., *Pathways for Agriculture and Forestry to Contribute to Terrestrial Biodiversity Conservation: A Global Scenario-Study*, 221 BIOLOGICAL CONSERVATION 137, 142 (2018) (noting that "[l]and-use impacts from crop production, grazing and forestry" have substantially impacted species abundance); USDA, *Sandhills Project*, NAT. RESOURCES CONSERVATION SERV., https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/plantsanimals/fishwildlife/?cid=nrcseprd1315273 (last visited Jan. 7, 2019) ("The conversion of rangelands to cultivated crops and the spread of invasives like redcedar are causing habitat loss and fragmentation throughout the Sandhills."); *see infra* text accompanying note 13 (showing additional impacts).

12 *See, e.g.*, Simon G. Potts et al., *Global Pollinator Declines: Trends, Impacts and Drivers*, 25 TRENDS IN ECOLOGY & EVOLUTION 345, 348, 350 (2010) (noting "land-use change" and "loss and fragmentation of habitats" as the most important drivers of pollinator declines and also identifying "agrochemicals" as a cause of pollinator mortality); *Pollinators*, U.S. FISH & WILDLIFE SERV., https://www.fws.gov/pollinators/

caused dramatic declines in bird and other wildlife populations,[13] leading some scientists to describe monoculture as the "second Silent Spring."[14]

Fertilizer and manure that run off from crops and feedlots also pollute water, adding nutrients that cause rapid aquatic plant and algae growth and decomposition and therefore reduce oxygen levels in water.[15] In 2017, the "dead zone" in the Gulf of Mexico reached its largest size since recording began in 1985; it is approximately the size of New Jersey.[16] This low-oxygen area—which is largely caused by agricultural runoff into the Mississippi River—has much smaller populations of aquatic life than the rest of the Gulf, and those species that do survive within the zone tend to be smaller.[17] Agricultural runoff into water is also a primary contributor to deadly algae blooms in many other U.S. waters,[18] and this runoff has polluted groundwater

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pollinatorpages/threats.html (last updated June 7, 2018) ("The main threats facing pollinators are habitat loss, degradation and fragmentation.").

13 *See, e.g.*, John R. Krebs et al., *The Second Silent Spring?*, 400 NATURE 611, 611–12 (documenting bird losses in Britain associated with British monoculture); Michael T. Murphy, *Avian Population Trends Within the Evolving Agricultural Landscape of Eastern and Central United States*, 120 THE AUK 20, 30 (2003) ("Changes in farmland structure have had major effects on breeding birds that use grassland and shrub habitats within agricultural landscapes of the eastern and central United States."); Corina J. Rahmig et al., *Grassland Bird Responses to Land Management in the Largest Remaining Tallgrass Prairie*, 23 CONSERVATION BIOLOGY 420, 421 (2009) (observing that "[n]early 80% of prairie in the United States has been converted to other land uses," and noting population declines in Greater Prairie Chickens, which are associated with certain agricultural practices); James R. Herkert, *The Effects of Habitat Fragmentation on Midwestern Grassland Bird Communities*, 4 ECOLOGICAL APPLICATIONS 461, 468 (1994) (noting declines in bird species that depend on a certain area of land, need certain types of vegetation, or have other needs such as the existence of "edge" habitat (a transition from one habitat to another) and observing that urban and agricultural development have contributed to habitat fragmentation and loss and have affected this decline); Sean L. Maxwell et al., *Biodiversity: The Ravages of Guns, Nets and Bulldozers*, NATURE, 11 Aug. 2016, at 143, 143 (finding that overexploitation of wildlife species and agriculture are "by far the biggest drivers of biodiversity decline").

14 Krebs et al., *supra* note 13.

15 T.C. Daniel et al., *Agricultural Phosphorus and Eutrophication: A Symposium Overview*, 27 J. ENVTL. QUALITY 251, 252–54 (1998) (describing the eutrophication process, in which surface waters are over-enriched with nutrients, and describing how agricultural sources contribute to phosphorous run-off).

16 *Gulf of Mexico "Dead Zone" Is the Largest Ever Measured*, NAT'L OCEANIC & ATMOSPHERIC ADMIN. (Aug. 2, 2017), http://www.noaa.gov/media-release/gulf-of-mexico-dead-zone-is-largest-ever-measured.

17 *Id.*

18 *Nutrient Pollution: Harmful Algal Blooms*, U.S. EPA, https://www.epa.gov/nutrientpollution/harmful-algal-blooms#cause (last updated July 19, 2018).

in addition to streams, lakes, estuaries, and coastal waterways.[19] Nutrient losses from agriculture do not just pollute water; they also have atmospheric effects, contributing to acidification, ozone destruction, and climate change.[20]

Beyond nutrient losses, soil erosion from agriculture has long been a problem. Although the dramatic dust storms of the 1930s are a thing of the past,[21] the massive quantities of soil that still run off from farms[22] negatively impact water and aquatic species,[23] contribute to harmful particulate matter (an air pollutant),[24] and cause soil quality to decline,[25] among other problems.

The list of environmental woes associated with agriculture does not end here. Agricultural consumption of water for irrigation is a primary cause of short-term and long-term water scarcity, particularly in drier regions. The USDA estimates that agriculture accounts for

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19 G.W. Feyereisen et al., *Long-Term Stream Chemistry Trends in the Southern Georgia Little River Experimental Watershed*, 63 J. SOIL & WATER CONSERVATION 475, 475 (2008).

20 J.J. Schröder et al., *The Effects of Nutrient Losses from Agriculture on Ground and Surface Water Quality: The Position of Science in Developing Indicators for Regulation*, 7 ENVTL. SCI. & POL'Y 15, 17 (2004).

21 Stanley W. Trimble & Pierre Crosson, *U.S. Soil Erosion Rates—Myth and Reality*, 289 SCIENCE 248, 248 (2000) (noting that since the 1930s there have been improvements in curbing soil erosion and improving water quality). In 1934, Hugh Hammond Bennett, the director of the agency that was then called the Soil Erosion Service, described soil erosion as a "national menace," observing that "[a]t least three billion tons of soil material are washed out of the fields and pastures of America every year" and describing this as a $400 million annual loss to farmers in addition to impacts on streams and infrastructure like highways and railroads. *See* H.H. Bennett, *Soil Erosion—A National Menace*, 39 SCI. MONTHLY 385, 385 (1934).

22 *See, e.g.*, USDA, *Soil Erosion on Cropland 2007*, NAT. RES. CONSERVATION SERV., https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/home/?cid=stelprdb1041887 (last visited Jan. 8, 2019) ("In 2007, 99 million acres (28% of all cropland) were eroding above soil loss tolerance (T) rates.").

23 *See, e.g.*, David Pimentel et al., *Environmental and Economic Costs of Soil Erosion and Conservation Benefits*, 267 SCIENCE 1117, 1120 (1995) (noting "eutrophication of waterways," where previously clear waters become murky and experience more plant growth and associated decomposition and oxygen loss, and "loss of wildlife habitat and disruption of stream ecology," and observing that "[o]f the billions of tons of soil lost from U.S. cropland each year, about 60% is deposited in streams and rivers").

24 *See, e.g.*, *Particulate Matter (PM) Pollution: Particulate Matter Basics*, U.S. EPA, https://www.epa.gov/pm-pollution/particulate-matter-pm-basics#PM (last updated on Nov. 14, 2018) (noting that particulate matter can come directly from fields in addition to sources such as unpaved roads and fires).

25 *See, e.g.*, Pimentel et al., *supra* note 23, at 1118 (observing that erosion "adversely affects soil quality and productivity by reducing infiltration rates, water-holding capacity, nutrients, organic matter, soil biota, and soil depth").

"approximately 80 percent of the Nation's consumptive water use and over 90 percent in many Western States."[26] The resulting water scarcity in some regions not only affects other water users, such as domestic and industrial users; it also has severe impacts on wildlife. Farmers have been some of the primary parties in ongoing Endangered Species Act litigation that has often forced water users to leave more water in lakes and rivers so that species threatened by low water levels could potentially survive.[27] Further, agriculture contributes to approximately nine percent of U.S. greenhouse gas emissions.[28]

B. Regulation and Voluntary Programs

The United States has several environmental regulations that make at least a feeble attempt to address these impacts, but there has been little progress since scholars such as J.B. Ruhl documented the impacts and noted the dearth of adequate governmental controls nearly two decades ago.[29] The Clean Water Act (CWA) places basic limits on surface water pollution from large concentrated animal feeding operations (CAFOs)[30] but exempts most other farming

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26 USDA, *Irrigation & Water Use*, ECON. RESEARCH SERV., https://www.ers.usda.gov/topics/farm-practices-management/irrigation-water-use/ (last updated Dec. 14, 2018).

27 *See, e.g.*, Baley v. United States, 134 Fed. Cl. 619, 625, 680 (2017) (holding that a federal requirement to retain more water within the Lost River in order to protect shortnose suckers and coho salmon was not a taking of farmers' water rights); Holly Doremus & A. Dan Tarlock, *Fish, Farms, and the Clash of Cultures in the Klamath Basin*, 30 ECOLOGY L. Q. 279, 312–13 (noting cases in which protection of endangered species at least partially overrode irrigation interests); John H. Minan, *The Clash Between Farmers and the Endangered Species Act: "Whose Water Is It?"*, 37 URB. LAW. 371, 371 (2005) (noting some cases in which water was withheld but farmers were compensated for a taking); Cori S. Parobek, *Of Farmers' Takes and Fishes' Takings: Fifth Amendment Compensation Claims When the Endangered Species Act and Western Water Rights Collide*, 27 HARV. ENVTL. L. REV. 177, 177–78 (2003) (noting some farmer successes in the courts).

28 *See* U.S. EPA, EPA 430-R-18-003, INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS 1990-2016, at ES-19 (2018), https://www.epa.gov/sites/production/files/2018-01/documents/2018_complete_report.pdf.

29 *See* Ruhl, *supra* note 2, at 267–68.

30 33 U.S.C.A. § 1362(14) (West 2018) (including "concentrated animal feeding operation" in the definition of a regulated "point source" under the CWA). *But see* Nat'l Pork Producers Council v. U.S. EPA, 635 F.3d 738, 750–51 (5th Cir. 2011) (invalidating an EPA rule that required a "CAFO designed, constructed, operated, and maintained in a manner such that the CAFO will discharge" to obtain a permit under the Clean Water Act and finding that the EPA could only regulate CAFOs that already are discharging pollutants); Ruhl, *supra* note 2, at 318 (noting the relatively high threshold for a farm to

practices from its limits on the discharge of pollutants into surface waters.[31] The portions of the CWA that are most relevant to agriculture—sections 208[32] and 319,[33] which address "nonpoint" sources of pollution that tend to run over the land rather than through a discrete source like a pipe—have only rarely led to actual mandatory controls on pollution from farms.[34] The Clean Air Act (CAA), in turn, does not directly control particulate matter from crop burning or dust from agricultural fields, although some states regulate

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qualify as a CAFO under the Act and the few CAFOs that are required to receive a permit under the Act).

31 § 1362 (exempting "agricultural stormwater discharges and return flows from irrigated agriculture" from the definition of a regulated "point source" under the CWA).

32 33 U.S.C.A. § 1288 (West 2018).

33 33 U.S.C.A. § 1329 (West 2018).

34 §§ 1288, 1329. Note that section 208 applies to both point and nonpoint sources; it addresses areas that have "substantial water quality control problems," § 1288(a), as a result of point and nonpoint source pollution, directs states to identify these areas and appoint an organization, "including elected officials from local governments," § 1288(a)(2), to write an areawide waste treatment management plan. This plan must include, among other provisions, "a process to . . . identify . . . agriculturally and silviculturally related nonpoint sources of pollution, including return flows from irrigated agriculture, and their cumulative effects, runoff from manure disposal areas, and from land used for livestock and crop production, and . . . set forth procedures and methods (including land use requirements) to control *to the extent feasible* such sources," § 1288(b)(2)(F) (emphasis added). Although Section 208 remains formally within the CWA, it is largely irrelevant. *See* Jan G. Laitos & Heidi Ruckriegle, *The Clean Water Act and the Challenge of Agricultural Pollution*, 37 VT. L. REV. 1033, 1042 (2013) ("Because Section 208 proved to be such an unreliable and ineffective tool to influence state activity addressing NPS pollution, including from agricultural sources, the EPA and Congress largely abandoned Section 208 in the 1980s. Although Section 208 remains 'on the books,' all federal funding for the program ended in 1981."). Under section 319 of the Act, states must identify waters that do not meet CWA water quality requirements, identify the nonpoint sources that are contributing to these problems, and identify "best management practices" for reducing pollution from these nonpoint sources, among other requirements established for states. § 1329(a). But the EPA has few tools to ensure that the states are doing their jobs; the Act does not authorize the EPA to establish best management practices if the states fail to do so, and "[e]ven if a state adopts agricultural nonpoint source management plans, Section 319 does not require that the plans contain enforceable measures." Laitos & Ruckriegle, *supra* note 34, at 1044. This portion of the Act "has continued to rely on an ineffective voluntary approach to agricultural nonpoint source pollution that has failed to reduce pollution levels." *Id.* at 1044–45. For rare instances of enforceable controls on nonpoint agricultural pollution, but noting that even these are somewhat weak. *See, e.g.*, Zdravka Tzankova, *The Difficult Problem of Nonpoint Nutrient Pollution: Could the Endangered Species Act Offer Some Relief?*, 37 WM. & MARY ENVTL. L. & POL'Y REV. 709, 712 ("Even states with binding and comprehensive regulatory controls over agricultural nonpoint discharges, such as California, have continued to emphasize cooperative and voluntary means of implementation, scrupulously avoiding enforcement against agricultural dischargers.").

agricultural emissions under their plans for implementing the CAA—particularly in areas with relatively poor air quality.[35] The Endangered Species Act perhaps has the most teeth with respect to limiting certain agricultural operations; farmers and ranchers may not "take" endangered species without approval of the Fish and Wildlife Service, and this includes a prohibition on harming the habitat of these species.[36] This can serve to limit agricultural land conversion, pollution, and water use, among other practices.[37] But this regulation is not an across-the-board limit on agricultural impacts; it applies only if a species is listed and agricultural practices happen to "take" that species.

The most significant quasi-regulatory efforts to address the agricultural environmental impacts are implemented by the USDA and are voluntary. In exchange for grants or other support authorized by various farm bills, farmers agree to implement specific conservation practices, set aside land, or otherwise reduce their environmental impacts. For example, through the Environmental Quality Incentives Program (EQIP) noted above, the USDA's Natural Resources Conservation Service works with farmers to identify a farm specific conservation plan that includes conservation measures that are selected from a menu of approximately 200 measures and are tailored to the specific region in which the farm is located.[38] These measures are typically aimed at air, water, and soil quality and the improvement of wildlife habitat.[39] To participate in EQIP, farmers must already meet the requirements of other USDA voluntary

35 *See, e.g.*, Safe Air for Everyone v. EPA, 488 F.3d 1088, 1101 (9th Cir. 2007) (vacating EPA's approval of an amendment to Idaho's CAA State Implementation Plan, which allowed and regulated crop residue burning, due to a finding that the EPA had erroneously found that Idaho's pre-existing SIP did not ban field burning).

36 *See* 16 U.S.C.A. § 1538(a) (West 2018) (prohibiting a take); Babbitt v. Sweet Home Chapter of Cmtys. for a Great Or., 515 U.S. 687, 703 (1995) (affirming the EPA's interpretation of the prohibition of a take as including a prohibition on modifying the habitat of an endangered species).

37 Ruhl, *supra* note 2, at 321–22 (noting that "[t]he Endangered Species Act . . . is a rare example of an environmental law with sharp teeth and no safe harbor for farms").

38 U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-17-225, AGRICULTURAL CONSERVATION: USDA'S ENVIRONMENTAL QUALITY INCENTIVES PROGRAM COULD BE IMPROVED TO OPTIMIZE BENEFITS 12 (Apr. 2017), https://www.gao.gov/assets/690/684073.pdf ("For fiscal years 2009 through 2015, NRCS distributed almost $5.7 billion in obligations for EQIP contracts for 219 different conservation practices addressing water quality, grazing land degradation, and other environmental concerns.").

39 *See* USDA, *Environmental Quality Incentives Program*, NAT. RESOURCES CONSERVATION SERV., https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/ (last visited Jan. 10, 2019).

environmental programs, including protecting highly erodible lands and wetlands; EQIP involves efforts that go above and beyond these measures.[40] EQIP also has special programs that focus specifically on one area of environmental quality, such as its Air Quality Initiative.[41] Further, the USDA operates shorter, targeted grant programs authorized by various farm bills, and many of the initiatives of these shorter programs are later folded into the long-running EQIP program. For example, Congress repealed the Wildlife Habitat Incentive Program, which previously paid farmers to "develop and improve wildlife habitat" on their land, but EQIP now includes aspects of this wildlife conservation program.[42] Under EQIP, the USDA enters into a contract with the farmer receiving funds once a conservation plan has been established. The farmer receives federal financial assistance under the contract, and farmer "agree[s] to implement the planned conservation practices to [Natural Resources Conservation Service] standards and specifications as scheduled."[43]

The USDA also oversees the Conservation Stewardship Program (CSP), which is "the largest conservation program in the United States," encompassing more than seventy million acres of land.[44] Through this program, farmers enter into five-year CSP contracts with the USDA and receive annual payments for implementing specific

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40 USDA, *Environmental Quality Incentives Program*, NAT. RESOURCES CONSERVATION SERV. IOWA, https://www.nrcs.usda.gov/wps/portal/nrcs/ia/programs/financial/eqip/ (last visited Jan. 10, 2019) [hereinafter Iowa EQIP]. Farmers must also comply with Highly Erodible Land Conservation (HELC) and Wetland Conservation USDA "requirements" before they may receive variety of other USDA benefits beyond EQIP, including, for example, "disaster assistance payments" and crop subsidies. To comply with HELC and Wetland Conservation, farmers must not "[p]lant or produce an agricultural commodity on highly erodible land without following an NRCS approved conservation plan or system," "[p]lant or produce an agricultural commodity on a converted wetland," or "[c]onvert a wetland which makes the production of an agricultural commodity possible." USDA, *Highly Erodible Land Conservation Compliance Provisions*, NAT. RESOURCES CONSERVATION SERV., https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/alphabetical/camr/?cid=nrcs143_008440 (last visited Jan. 10, 2019).

41 USDA, *Air Quality Initiative*, NAT. RESOURCES CONSERVATION SERV., https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/air/ (last visited Jan. 10, 2019).

42 USDA, *Wildlife Habitat Incentive Program*, NAT. RESOURCES CONSERVATION SERV., https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/whip/ (last visited Jan. 10, 2019).

43 Iowa EQIP, *supra* note 40.

44 USDA, *Conservation Stewardship Program*, NAT. RESOURCES CONSERVATION SERV., https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/csp/ (last visited Jan. 10, 2019).

practices approved by the USDA.[45] The payments are made based on the "resource concerns" that the farmer's practice addresses, such as soil erosion or inadequate habitat for fish and wildlife.[46] Payments also take into account the acres of different types of farmland, such as crop or pasture, on which conservation practices are implemented.[47] Practices adopted under this program include, for example, establishing monarch butterfly habitat by planting butterfly plants on crop borders, preventing erosion by improving crop rotation, establishing no-till systems to reduce particulate matter emissions, maintaining parts of grain crops in fields over the winter to feed wildlife, and fencing out livestock from plant-based buffers along waters.[48]

These and other USDA programs, although voluntary, have been successful in many respects. The USDA has long embarked upon a widespread effort to measure and document the effects of its conservation programs,[49] and the analysis suggests promising results. For example, in one of the watersheds in which the USDA has funded conservation practices since 1980, total phosphorous levels over thirty years "decreased significantly" in four of the five major parts of the watershed studied, even though conservation practices were implemented in only eleven percent of the watershed.[50] Although some of this decline might have resulted from a reduction in "animal agriculture" during this time period, researchers also hypothesized that some of it was likely attributable to reduced erosion.[51] A study of

45 USDA, *CSP Payments*, NAT. RESOURCES CONSERVATION SERV., https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/programs/financial/csp/?cid=nrcseprd1297344 (last visited Jan. 10, 2019).

46 *Id.*; USDA, *FY 2018 CSP Activity List for Participants*, NAT. RESOURCES CONSERVATION SERV. 1, 16 (JAN. 2018), https://www.nrcs.usda.gov/wps/PA_NRCSConsumption/download?cid=nrcseprd1378494&ext=pdf [hereinafter *CSP Activity List*].

47 *CSP Activity List*, *supra* note 46.

48 *Id.*

49 *See, e.g.*, Deanna L. Osmond, *USDA Water Quality Projects and the National Institute of Food and Agriculture Conservation Effects Assessment Project Watershed Studies*, 65 J. SOIL & WATER CONSERVATION 142A, 142A (2010) (describing USDA involvement in the Rural Clean Water Program, which funds farmer implementation of practices to reduce water quality; the Management Systems Evaluation Area project, which documented the water quality effects of improved agricultural practices; and the Conservation Effects Assessment Project, which similarly aims to link specific practices with improved water quality and educate farmers accordingly).

50 Feyereisen et al., *supra* note 19, at 477, 484.

51 *Id.* at 484 (noting chloride levels rose over this time period, perhaps due to "below-normal precipitation" during some years, but nutrient loads did not show significant differences among the five major portions of the watershed studied).

another watershed, in which the Conservation Reserve Program caused approximately one-third of the cropland to be converted from crop to forest land, showed that the Program "reduced the sediments leaving the watershed by an order of magnitude" and improved the quality of the lake within the watershed.[52] In still another watershed, best management practices implemented by approximately 190 farmers through the Conservation Reserve Enhancement Program and EQIP reduced total phosphorous by seventeen percent over a five-year period as compared to a five-year baseline.[53]

Despite these types of gains, the impacts of agriculture on the environment remain large, and much progress remains to be made. The Gulf's dead zone continues to grow,[54] and irreplaceable ecosystems like the Chesapeake Bay are impaired despite widespread cooperative efforts to reduce agricultural pollution and other pollution sources.[55] Given the unlikely scenario of more stringent regulation or enhanced funding for farm conservation programs in the modern deregulatory climate—one in which the farm lobby remains strong—other measures are needed. One approach is to harness consumer demand through improved labeling. Although market-based pressures do not always induce meaningful outcomes, even modest improvements in agricultural practices, potentially induced by these pressures, could prevent significant environmental harm. As explored below, however, despite scholarly calls for expanded environmental food labeling regimes, few domestic programs exist beyond the highly successful National Organic Program.

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52 R.F. Cullum et al., *Effects of Conservation Reserve Program on Runoff and Lake Water Quality in an Oxbow Lake Watershed*, 5 J. INT'L ENVTL. APPLICATION & SCI. 318, 328 (2010).

53 R.B. Bryant et al., *Cannonsville Reservoir and Town Brook Watersheds: Documenting Conservation Efforts to Protect New York City's Drinking Water*, 63 J. SOIL & WATER CONSERVATION 339, 343 (2008). *But see* Margot Pollans, *Regulating Farming: Balancing Food Safety and Environmental Protection in a Cooperative Governance Regime*, 50 WAKE FOREST L. REV. 399, 410 (2015) (noting low participation in some voluntary USDA conservation programs, such as only "five percent of total farm acreage enrolled" in the Conservation Stewardship Program).

54 NAT'L OCEANIC & ATMOSPHERIC ADMIN., *supra* note 16.

55 Peter J. Tango & Richard A. Batiuk, *Chesapeake Bay Recovery and Factors Affecting Trends: Long-Term Monitoring, Indicators, and Insights*, 4 REGIONAL STUD. MARINE SCI. 12, 12 (2016).

II
FOOD LABELING AND PROCESS PREFERENCES

Much of the promise of a well-executed environmental labeling regime for food stems from the fact that there seems to be consumer demand for sustainably produced food. There is a growing consumer focus on the origins of food and the processes used to raise food, including concerns about humane treatment of animals, local sourcing, and, relatedly, the environmental impacts of farming and ranching.[56] For example, many consumers buy local food as a proxy for purchasing food that they believe has fewer environmental harms and, in the case of animal products, has been raised more humanely.[57] There may be some dilution of consumer interest in a label for environmental attributes due to other concerns, such as humane practices, food health and safety, but the level of interest in, and commitment to, organic foods suggests that there is further room for eco-labeling. Demand for organics has persisted despite studies suggesting few differences in health impacts associated with consuming organic and non-organic foods,[58] although many consumers still likely purchase organic foods with a belief that they are healthy[59] in addition to a preference for environmental quality.[60]

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56 *See* Samuel R. Wiseman, *Localism, Labels, and Animal Welfare*, 13 NW. J. L. & SOC. POL'Y 66, 79–80 (2018) (noting that shoppers and diners increasingly pay attention to the "environmental attributes" of food and, more generally, the "origin and production" of their food and providing sources); *cf.* Peter S. Menell, *Structuring a Market-Oriented Federal Eco-Information Policy*, 54 MD. L. REV. 1435, 1435 (1995) (noting a poll finding that " more than ninety percent of consumers look for 'environmentally safe' products or packaging and are willing to pay more for them."); Douglas A. Kysar, *Preferences for Processes: The Process/Product Distinction and the Regulation of Consumer Choice*, 118 HARV. L. REV. 525, 529 (2004) (arguing that consumers "often have 'preferences for processes'" in terms of the processes followed in producing a consumer good); *Id.* at 561 (noting that in 1997, when the USDA proposed the federal organic standards, "more than 500,000 individuals signed a petition demanding that the FDA require labeling of GM [genetically modified] foods"); *Id.* at 583 (noting in 2004 that "spurred by increasing consumer awareness and the development of a uniform federal labeling program, the organic food movement has expanded from a little-understood fringe element to the fastest growing segment of American agriculture").

57 Wiseman, *supra* note 56, at 79–80.

58 *See, e.g.*, Crystal Smith-Spangler et al., *Are Organic Foods Safer or Healthier Than Conventional Alternatives?: A Systematic Review*, 157 ANNS. INTERNAL MED. 348 (2012) (finding few health benefits in organics).

59 *See, e.g.*, Cary Funk & Brian Kennedy, PEW RES. CTR.: INTERNET & TECH., *Americans' Views About and Consumption of Organic Foods* (Dec. 1, 2016), http://www.pewinternet.org/2016/12/01/americans-views-about-and-consumption-of-organic-foods/ ("More than half (55%) of the public says that organic fruits and vegetables are better for one's health than conventionally grown produce.").

A. Existing Labels and Potential Expansions

A growing labeling movement attempts to give consumers more of a direct option to send signals to growers about the specific values they look for in the processes behind food, with labels such as "humane," "grass fed," and "free range" now regularly appearing on grocery store shelves.[61] But the ability of consumers to directly express a preference for farms that actively engage in environmental conservation is more limited. Aside from a small number of foods, notably coffee,[62] fish,[63] bananas,[64] and chocolate[65] (and, well beyond the food realm, a large array of products like paper, electronic appliances, lumber, and buildings[66]), few food products have direct

60 *Id.* (noting that 33% of organic food consumers say that they purchase organic foods for environmental reasons).

61 This marks a growing private labeling trend toward revealing the "process" behind products, in addition to the more common governmentally-required labels, which focus more on the safety or other attributes of the product itself. For a discussion of this process/product distinction and the tendency for the government to only require labeling or similar information relating to product attributes, see Kysar, *supra* note 56, at 536–38.

62 *See, e.g.*, Bethany Gullman, *Rescuing the Future of the International Coffee Trade with a Voluntary Certification and Labeling Scheme*, 46 GEO. WASH. INT'L L. REV. 647, 657 (2014) ("Labels include fair trade, shade-grown, bird friendly, organic, and rainforest alliance certified.").

63 Michael P. Vandenbergh, *Private Environmental Governance*, 99 CORNELL L. REV. 129, 149–50 (2013) (describing Marine Stewardship Council certification of sustainable fisheries and certification of aquaculture, and the associated labeling of fish produced under these programs).

64 STEERING COMM. OF THE STATE-OF-KNOWLEDGE ASSESSMENT OF STANDARDS & CERTIFICATION, TOWARD SUSTAINABILITY: THE ROLES AND LIMITATIONS OF CERTIFICATION 21 (June 2012), https://www.resolv.org/site-assessment/files/2012/06/Report-Only.pdf (noting the Sustainable Agriculture Network of the Rainforest Alliance and its certification of bananas, as well as a total of more than twenty-five tropical crops also certified).

65 *See, e.g.*, *Rainforest Alliance Certified Cocoa*, RAINFOREST ALLIANCE (Sept. 14, 2016), https://www.rainforest-alliance.org/articles/rainforest-alliance-certified-cocoa.

66 There are "more than 400" ecolabeling systems globally, much of which build from the Forest Stewardship Council's certification of the sustainability of wood products. Vandenbergh, *supra* note 63, at 148; Klaus G. Grunert et al., *Sustainability Labels on Food Products: Consumer Motivation, Understanding and Use*, 44 FOOD POL'Y 177, 177 (2014) (noting approximately 432 global labeling systems, "of which 147 include standards for food/beverage"); *see also* STEERING COMM. OF THE STATE-OF-KNOWLEDGE ASSESSMENT OF STANDARDS & CERTIFICATION, *supra* note 64, at 75 (providing the examples of EnergyStar, which certifies the efficiency of appliances; Leadership in Energy and Environmental Design, which certifies green buildings; and "forest product legality verification," as labeling examples); JASON CZARNEZKI, EVERYDAY ENVIRONMENTALISM: LAW, NATURE & INDIVIDUAL BEHAVIOR 144 (2011) (providing examples of LEED, EnergyStar, and USDA organic labeling).

"environmental" labels.[67] And even the limited types of foods that do contain environmental labels tend to focus on only one (albeit important) environmental attribute, such as rainforest protection.[68]

Several commonly used food labels indirectly capture certain environmental attributes. In the grocery aisle, labels like "free range" and "pasture raised" on meat products signal to consumers that the livestock were not raised at a CAFO-type facility—which has particularly large environmental impacts. But they do not guarantee that the producer maintained the rangeland in a conservation-oriented manner, such as avoiding soil compaction and manure and soil runoff to surface waters. Country of Origin Labeling allows consumers to purchase food that is grown closer to the United States, thus generating fewer carbon emissions for transport, but does not directly capture other environmental characteristics.[69] Similarly, labels indicating that a product is not (or does not contain) a genetically modified organism (GMO) only indirectly address environmental attributes, such as the effects of GMO crops on wildlife and pollinators,[70] and the "organic" label is both over- and under-broad, as introduced above.[71] Further, obtaining certification under the National Organic Program is expensive and complicated,[72] thus driving away

67 Other food eco labels exist but are less prominent, such as "ECO Apple" and "ECO Stone Fruit," among others. *See ECO apple*, IPM INST. OF N. AM., http://ipminstitute.org/projects/northeast-eco-apple/ (last updated April 3, 2018); Marks, *supra* note 7, at 602 (noting these and other labels).

68 *See* STEERING COMM. OF THE STATE-OF-KNOWLEDGE ASSESSMENT OF STANDARDS & CERTIFICATION, *supra* note 64; *see also* Jason J. Czarnezki, *The Future of Food Eco-Labeling: Organic, Carbon Footprint, and Environmental Life-Cycle Analysis*, 30 STAN. ENVTL. L.J. 3, 5 (noting that "carbon footprint labeling does not address ecological concerns beyond greenhouse gas emissions").

69 *See* Czarnezki, *supra* note 68, at 21–22 (discussing Country of Origin Labeling).

70 *See, e.g.*, Mary Jane Angelo, *Embracing Uncertainty, Complexity, and Change: An Eco-Pragmatic Reinvention of a First-Generation Environmental Law*, 33 ECOLOGY L.Q. 105, 152 (2006) (describing "pesticidal genetically modified organisms" and general problems with pesticide use, such as killing "nontarget species" and more general ecological disruptions that occur when nontarget predators and parasites are killed).

71 *See, e.g.*, Czarnezki, *supra* note 68, at 5 ("[O]rganic labeling is primarily concerned with prohibiting the use of synthetic chemicals, which may result in less risk to consumers from chemicals in their food and may have some environmental benefits such as less risk to wildlife and soil from pesticides. But such labeling does not explicitly say anything about other environmental concerns such as water usage and greenhouse gas emissions.").

72 *See* Rebecca L. Goldberg, *Administering Real Food: How the Eat-Food Movement Should—and Should Not—Approach Government Regulation*, 39 ECOLOGY L.Q. 773, 801–02 (2012) (describing the National Organic Program as "an expensive and resource-intensive certification process").

some producers who might otherwise obtain certification and the associated price premiums it can generate.

In summary, although several types of foods sold in the United States have robust environmental labeling programs for a limited set of environmental attributes, it is now largely impossible for a consumer to decipher whether her food comes from a farm or ranch that has implemented certain environmental practices, such as preserving forest or other wildlife habitat, reducing runoff and other pollution, conserving water, or implementing other environmental conservation practices. In light of apparent consumer demand for environmental attributes and the unlikely expansion of public governance in this area, the time is ripe for a U.S. environmental labeling regime for food. Developing a labeling regime that more clearly and comprehensively defines the environmental impacts of raising animal products or crops—and one that applies to more foods—would capture existing consumer preferences, nudge producers toward more environmentally beneficial behavior, and reward those producers that are already implementing conservation practices but are not receiving higher prices in return. Indeed, consumers have indicated a strong willingness to pay more for products with their preferred process attributes,[73] and price premiums and associated farmer incentives could be substantial. [74]

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73 *See* A. Christine Green, *The Cost of Low-Priced Organics: How Corporate Organics Have Weakened Organic Food Production Standards*, 59 ALA. L. REV. 799, 800 (2008) (noting that "[f]or well over a decade, the popularity of organic food has grown every year despite its higher price"); Sean P. Sullivan, *Empowering Market Regulation of Agricultural Animal Welfare Through Product Labeling*, 19 ANIMAL L. 391, 405–06 (2013) (observing that contingent valuation surveys suggest that U.S. consumers will pay "substantial premiums" for humanely-raised animal products but that actual consumer demand for low-priced product might suggest a different conclusion). *But see* Margot J. Pollans, *Bundling Public and Private Goods: The Market for Sustainable Organics*, 85 N.Y.U. L. REV. 621, 645–46 (2010) (arguing that "[c]onsumers currently are not willing to pay for sustainability" "because the benefits accrue to everyone, not just those who pay for them," and noting that consumers are willing to pay higher prices for organic foods, and concluding that this willingness stems from the bundling of environmental attributes with values that consumers believe accrue to them individually, such as "health, including safety and nutrition).

74 *But see* Thompson, *supra* note 4, at 1187 (noting opportunities for agricultural eco-labeling beyond the National Organic Program, but suggesting that consumer willingness to pay a premium for environmental farm products is not likely adequate to incentivize substantial environmental improvements); Richard B. Stewart, *A New Generation of Environmental Regulation?*, 129 CAP. U. L. REV. 21, 142 (2001) (noting the lack of "much firm empirical evidence to show that consumers actually pay a price premium for green products other than organic foods").

An environmental food label could take several forms. It could capture a broad array of environmental values, such as reduction of air and water pollution; land conservation; and preservation or creation of wildlife habitat and related practices by, for example, providing crops for wildlife in winter or pollinator-friendly plantings. Indeed, the label could be even broader; several scholars have explored the possibility of labels that capture a large menu of environmental attributes or that address the "life cycle" environmental impacts of food, from its growth through its transport to consumers. For example, Jason Czarnezki raises the possibility of a "state-sponsored voluntary eco-labeling program" that would provide consumers with information about the food's environmental life-cycle impacts or "overall ecological footprint."[75] Czarnezki notes that Sweden has already implemented this type of label, although only for the life cycle carbon impact of foods.[76] Under this program, food labels indicate the total carbon emissions associated with food products on grocery shelves.[77] Environment and sustainability scholars, too, have proposed broader food labeling, such as a label that includes a "carbon, nitrogen, and water footprint" per product weight.[78] Similarly, Mary Jane Angelo and Joanna Reilly Brown have proposed a "whole-system" certification, in which farmers would voluntarily participate in a program similar to Leadership in Energy and Environmental Design (LEED), which has different certification options that vary in terms of stringency and certifies entire buildings as "green" if they meet a variety of metrics.[79] In the agricultural context, an eco-label similar to LEED's would reward "agricultural practices that increase resilience across all components of the farm ecosystem."[80] These practices would include a suite of "standards for

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75 Czarnezki, *supra* note 68, at 30.

76 *Id.* at 25.

77 CZARNEZKI, *supra* note 66, at 144.

78 Allison M. Leach et al., *Environmental Impact Food Labels Combining Carbon, Nitrogen, and Water Footprints*, 61 FOOD POL'Y 213, 218 (2016); *see also* Lara DuMond Guercio, *Local and Watershed Land Use Controls: A Turning Point for Agriculture and Water Quality*, 62 PLANNING & ENVTL. L. 3, 8 (2010) (suggesting a "domestic 'sustainable farms' certification program" that would "set forth minimum baseline management and land use standards for a variety of different agricultural operations" and that could be administered by "state agricultural departments or the USDA").

79 Mary Jane Angelo & Joanna Reilly-Brown, *Whole-System Agricultural Certification: Using Lessons Learned from LEED to Build a Resilient Agricultural System to Adapt to Climate Change*, 85 U. COLO. L. REV. 689, 736–47 (2014).

80 *Id.* at 747.

ecologically-sound farming practices" that farmers would have to meet in order to receive a LEED-type label, focusing primarily on climate change impacts.[81]

These proposed labels have much to recommend them, but so far have not materialized; building a labeling and certification regime from scratch requires significant coordination, time, and resources. In the absence of a more comprehensive environmental label, adding a labeling component to the existing EQIP and/or Conservation Stewardship Program would, if successful, help encourage participation in those programs and demonstrate the feasibility of environmental food labeling beyond the National Organic Program.

B. Building from Existing Agricultural Conservation Programs

From a resource-based perspective, the easiest path to an environmental label would be to rely on programs that already certify a broad range of agricultural environmental practices and have some experience in labeling.[82] The USDA, which administers both the organic program and the conservation programs described above, meets both qualifications. Although not typically viewed as an environmentally oriented agency—in part due to its role in doling out Congress's many environmentally damaging farm subsidies[83]—the USDA has a surprisingly broad range of expertise in environmental matters, including, for example, wildlife conservation on farms,[84]

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81 *Id.* at 747–48.

82 See Linda Breggin & D. Bruce Myers Jr., *Subsidies with Responsibilities: Placing Stewardship and Disclosure Conditions on Government Payments to Large-Scale Commodity Crop Operations*, 37 HARV. ENVTL. L. REV. 487, 529, 536 (2013), for a proposal that suggests that USDA conservation programs could be further enhanced and notes that disclosure of improved farmer conservation practices (or of the impacts of farming that receives subsidies) could be beneficial. Breggin & Myers propose that farmers receiving commodity payments from the USDA should have to certify "baseline stewardship measures for nutrient pollution." *Id.* at 529. Also note that "[a]lthough there is not a retail market for commodity crops in the same way as there is for Energy Star products, implementation of stewardship measures may make purchasing from those operations more appealing to those further up the supply chain in the food industry." *Id.* at 536.

83 *See, e.g.*, William S. Eubanks II, *A Rotten System: Subsidizing Environmental Degradation and Poor Public Health with Our Nation's Tax Dollars*, 28 STAN. ENVTL. L.J. 213, 221 (2009).

84 *See, e.g.*, USDA, *NRCS Landscape Conservation Initiatives*, NAT. RESOURCES CONSERVATION SERV., https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/programs/initiatives/?cid=stelprdb1042113 (last visited Jan. 10, 2019) (noting "Wildlife- and Ecosystem-Based Initiatives").

wetlands restoration,[85] soil conservation and water pollution reduction,[86] air quality improvement,[87] and even carbon emission reduction.[88] And because it already has compliance systems for programs like EQIP in place, adding an environmental certification program beyond the organic label would have relatively low organizational costs. Although the EQIP and organic labeling programs are within separate parts of the agency,[89] the USDA has

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85 *See, e.g.*, USDA, *Farmable Wetlands Program*, FARM SERV. AGENCY, https://www.fsa.usda.gov/programs-and-services/conservation-programs/farmable-wetlands/index (last visited Jan. 10, 2019) ("FWP is a voluntary program to restore up to one million acres of farmable wetlands and associated buffers.").

86 U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 38, at 7–8 (noting that beyond statutory requirements for the distribution of EQIP funds, NRCS prioritizes "reducing nonpoint source pollution and point source pollution from agricultural operations," "conserving ground and surface water resources," and "reducing soil erosion and sedimentation," among other priorities).

87 USDA, *Air Quality Initiative*, NAT. RESOURCES CONSERVATION SERV., https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/air/ (last visited Jan. 10, 2019) [hereinafter USDA Air Quality] (noting tools that help reduce "greenhouse gas emissions, ozone precursors, volatile organic compounds, airborne particulate matter, and some odor-related volatile compounds").

88 *See, e.g.*, USDA, *Data and Decision-Making Support*, ECON. RES. SERV., https://www.ers.usda.gov/topics/natural-resources-environment/climate-change/data-and-decision-making-support/ (last updated Feb. 17, 2017) (noting that the Service "is actively involved in the development and dissemination of data to facilitate climate change research and decision-making by a wide variety of stakeholders," although providing examples that deal more with resilience and adaptation to climate change or limited modes of carbon reduction (such as biomass production) than on lifecycle emissions reductions from agriculture); USDA, *EQIP On-Farm Energy Initiative*, NAT. RESOURCES CONSERVATION SERV., https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/financial/eqip/?cid=stelprdb1046252 (last visited Jan. 11, 2019) (describing the NRCS's On-Farm Energy Initiatives, which "helps farmers and ranchers make voluntary improvements that can boost energy efficiency on the farm"); USDA Air Quality, *supra* note 87 (showing that carbon emissions are addressed as part of EQIP's Air Quality Initiative).

89 The USDA's Agricultural Marketing Service runs the National Organic Program, whereas its Natural Resources Conservation Service runs many of its conservation programs. USDA, *National Organic Program*, AGRIC. MARKETING SERV., https://www.ams.usda.gov/about-ams/programs-offices/national-organic-program (last visited Jan. 11, 2019); USDA, *Programs*, NAT. RESOURCES CONSERVATION SERV., https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/ (last visited Jan. 11, 2019). The Farm Service Agency runs programs such as the USDA's Conservation Reserve Program, Grasslands Reserve Program, Farmable Wetlands Program, and Farm-to-Fleet Program Biofuel Production Incentive. USDA, *Conservation Programs*, FARM SERV. AGENCY, https://www.fsa.usda.gov/programs-and-services/conservation-programs/index (last visited Jan. 11, 2019); USDA, *Energy Programs*, FARM SERV. AGENCY, https://www.fsa.usda.gov/programs-and-services/energy-programs/index (last visited Jan. 11, 2019).

long-running, well-staffed, and relatively comprehensive programs certifying farmers' environmental achievements.[90]

The USDA's direct expertise would not be as important of a consideration from a monitoring and compliance perspective because the agency relies on third-party certifying agents to implement the National Organic Program,[91] which it would also likely do if enlisted to take on additional sustainability labels. But the agency would write the standard and accredit third-party agents, both of which require expertise.[92] Fortunately, the agency has extensive expertise in verifying farmer compliance with EQIP. Under the individualized contracts that farmers enter into with local USDA Natural Resources Conservation Service offices for EQIP, the service receives and monitors farmers' verification that they have implemented practices. The farmer maintains a "customer service file" in which she documents the practices implemented, and sometimes, the farmer must also provide "invoices, receipts, and other supporting documentation" to show the practices that were implemented.[93]

Building an environmental food label from an existing program that already certifies farmers' environmental practices, such as USDA's EQIP, would naturally encompass a broad array of environmental values,[94] although not the full life-cycle of effects as

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90 EQIP and most other USDA conservation programs are administered by the agency's Natural Resources Conservation Service, which has "employees in nearly every county across America." USDA, *Contact Us*, NAT. RESOURCES CONSERVATION SERV., https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/contact/ (last visited Jan. 11, 2019). *See also* U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 38, at 6 (noting that NRCS has "53 state offices and over 2,600 local offices").

91 USDA, *Accredited Certifying Agents*, AGRIC. MARKETING SERV., https://www.ams.usda.gov/services/organic-certification/certifying-agents (last visited Jan. 11, 2019).

92 *Id.*

93 USDA, Minn. NRCS, *EQIP Contracting Guidance Document – FY 2017: General Guidance, Offered Conservation Activity Plans (CAP's) and Conservation Practices*, 1 (Dec. 2016), https://www.nrcs.usda.gov/wps/PA_NRCSConsumption/download?cid=nrcseprd1303692&ext=pdf.

94 Note, however, that some conservation activity plans under EQIP are narrower than others despite the approximatly 200 practices that farmers can implement under EQIP. *See, e.g.*, USDA, *FY 2016 EQIP Conservation Activity Plan (CAP)*, NAT. RESOURCES CONSERVATION SERV., https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/financial/eqip/?cid=nrcseprd401472 (last visited Jan. 11, 2019) (noting that a CAP can "address a specific resource need, such [as] nutrient management or a[n] herbicide resistance issue"). Also, the Government Accountability Office (GAO) notes that "NRCS state offices do not consistently use environmental concerns as a primary factor when allocating EQIP funds"—a problem that the GAO argues needs improvement. U.S. GOV'T ACCOUNTABILITY OFFICE, *supra* note 38, at 42.

envisioned by Czarnezki. The labeling could be as simple as noting on a food package that the product came from a farm that followed an EQIP-certified conservation plan or was a participant in the Grasslands Reserve Program, for example.[95] As noted above, farmers that receive EQIP funding implement a full conservation plan approved by the USDA—a plan that sometimes includes a variety of conservation practices, such as reducing soil erosion and preserving wildlife habitat.[96]

Building from existing agricultural programs to initially implement an eco-labeling system for food is certainly a second-best solution. EQIP plans are tailored to individual farms or ranches; every EQIP plan does not include comparable environmental protections nor represent an overall judgment of the corresponding farm's eco-friendliness. In these ways, an EQIP label would fall short of the comprehensive labels envisioned by Czarnezki, Angelo, and Reilly-Brown. Moreover, the National Organic Program and other USDA environmental programs have been criticized for the influence of special interests on their standards and administration.[97] Relying on the agency to implement a broader environmental label could raise similar concerns.

More generally, influencing agricultural environmental performance through voluntary measures is not likely to mitigate the environmental impacts wrought by the agriculture industry as effectively as direct regulation. However, voluntary measures are likely more politically feasible (and, of course, the two approaches are not incompatible). Further, the challenges of using labels to correctly and adequately inform consumer choice and connect consumer preference to producer behavior are well documented. It is difficult for one label to accurately convey the environmental attributes of a product or sufficiently communicate the complexity of these

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95 Of course, many agricultural products are packaged with products from other farms and cannot be traced to one specific farm, but this hurdle can and has been overcome through careful labeling in other contexts, such as foods that contain some organic ingredients.

96 *See supra* note 34 and accompanying text.

97 *See, e.g.*, Czarnezki, *supra* note 68, at 32 (noting "strong lobbying and special interest powers that have impacted organic regulation"); Ariele Lessing, *A Supplemental Labeling Regime for Organic Products: How the Food, Drug, and Cosmetic Act Hampers a Market Solution to an Organic Transparency Problem*, 18 MO. ENVTL. L. & POL'Y REV. 415, 449 (2011) (describing "industrial-scale retailers" appointed to the National Organic Standards Board).

attributes.[98] Even if the label accomplished all of this, consumers might not fully understand the information.[99] These concerns are particularly troublesome in the context of labeling food from participants in voluntary environmental programs like EQIP; those participants might, on the whole, cause a significant amount of environmental harm, which consumers may well not realize. Still, if consumers proved willing to pay a premium for such environmentally labeled but non-organic foods, this demonstrated willingness would both encourage participation in the USDA's voluntary programs and suggest that a more holistic labeling regime is feasible.

CONCLUSION

Food labels abound in the United States, but labeling for the environmental attributes of food extends only slightly beyond the organic certification, which, from an environmental perspective, is too permissive in some ways and likely too restrictive in others. Apparent consumer demand for environmentally sourced food, the lack of adequate existing or likely new regulation to mitigate the environmental impacts of agriculture, and the potential to incentivize farmers to improve environmental practices through price premiums for environmentally-labeled foods all suggest that there is room for an eco-label, as other scholars have also argued. But such a label has yet to materialize in the United States, perhaps due to the challenges of creating and administering broad-based environmental standards. Although hardly a substitute for a more holistic certification, building from the USDA's voluntary programs, through which farmers already implement a range of environmental practices, would be a positive first step. Even the simple act of labeling a food as "grassland friendly" (if the farmer participated in the USDA's Grassland Reserve Program, for example) could potentially incentivize more farmers to participate in the program and inform more consumers about the comparative environmental practices of the farmers from which they purchase their foods. There is a risk that relying on an existing grant program to support a new label would overcompensate farmers for the

98 *See, e.g.*, Klaus G. Grunert et al., *Sustainability Labels on Food Products: Consumer Motivation, Understanding and Use*, 44 FOOD POL'Y 177, 177 (2014) (noting potential "gaps in the understanding of both the general concept of sustainability and of specific sustainability labels").

99 *See, e.g.*, Peter S. Menell, *Structuring a Market-Oriented Federal Eco-Information Policy*, 54 MD. L. REV. 1435, 1445–46 (1995).

environmental attributes that they provide. However, a price premium could perhaps offset the costs of the grant allowing lower amounts of government grant money to be paid to each farmer and thus enhancing participation in the program. Moreover, it could help spur the adoption of a broader environmental certification program by demonstrating the benefits of environmental labeling to producers.