

Towards 2030: Shortcomings and Solutions in Food Loss and Waste Reduction Policy

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INTRODUCTION

“[E]ating is an agricultural act.”¹ In *The Pleasures of Eating*, Wendell Berry argues that food is not an abstract idea, but rather that eating is part of a life cycle that begins with agriculture, continues with production, consumption and waste, and implicates politics and ethics along the way.² Berry argues that our quickness to dispose of things—appliances, and plastics, and other household items—is the direct byproduct of our lack of connection to food production.³ In other words, because we do not understand and appreciate how food is produced, we do not understand and appreciate the consequences of throwing it away, and think little of doing so.

Berry’s theory rings true, but many other causes also contribute to food loss and waste in the United States.⁴ Government policy is among these numerous and complicated causes,⁵ and this Note will address that relationship.

Food loss and waste are urgent problems both nationally and globally.⁶

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1. WENDELL BERRY, *The Pleasures of Eating*, in WHAT ARE PEOPLE FOR?: ESSAYS 145, 145 (Counterpoint Press 2010).

2. *Id.* at 145-47.

3. WENDELL BERRY, *Waste*, in WHAT ARE PEOPLE FOR?: ESSAYS, 126, 126-28 (Counterpoint Press 2010) (1990).

4. *See, e.g.*, JEAN C. BUZBY ET AL., U.S. DEP’T OF AGRIC., ECONOMIC RESEARCH SERVICE, THE ESTIMATED AMOUNT, VALUE, AND CALORIES OF POSTHARVEST FOOD LOSSES AT THE RETAIL AND CONSUMER LEVELS IN THE UNITED STATES, EIB-121 5 (Feb. 2014); WORLD BANK GROUP, FOOD PRICE WATCH 7 (Feb. 2000).

5. *See, e.g.*, BUZBY, *supra* note 4, at 5, 8.

6. *See, e.g.*, BUZBY, *supra* note 4, at 1; JENNY GUSTAVSSON ET AL., FOOD AND AGRIC. ORG. OF THE U.N., GLOBAL FOOD LOSSES AND FOOD WASTE: EXTENT, CAUSES AND PREVENTION (2011). Food loss and waste are related but distinctly defined terms: food loss is the “amount of edible food, postharvest, that is available for human consumption but is not consumed for any reason,” while food waste is a “component of food loss and occurs when an edible item goes unconsumed.” *Id.* at 1-2. Food loss typically happens during the farm-to-retail stage, but food waste usually occurs at the retail and consumer stages, and is “the result of a conscious decision to throw food away.” WORLD BANK

The United States Department of Agriculture (USDA) estimates that in 2010 about one third of the food that was edible and available for consumption was not eaten.⁷ Similarly, the Food and Agricultural Organization of the United Nations (FAO) found that in 2011 one third of consumable food was lost or wasted globally.⁸ These statistics are shocking in their own right, but become even more serious when we consider the implications for hunger and the environment.

Millions of Americans are going hungry at the same time as massive quantities of edible food are falling out of the system.⁹ Furthermore, lost or wasted food often ends up in landfills, where it contributes to climate change by releasing methane into the atmosphere.¹⁰ And, because food production “uses more water and land than any other industry,”¹¹ these resources are squandered if the resulting food goes uneaten.

Within the last several years, the United States has become more concerned with food loss and waste and is attempting to reduce it.¹² But so far, these efforts have been limited to announcing the country’s first waste reduction goal — a fifty percent reduction by 2030 — and introducing initiatives that encourage industry and consumer education,¹³ rather than enacting laws that affirmatively correct aspects of the food production and consumption system that contribute to loss and waste. Therefore, despite

GROUP, *supra* note 4, at 5.

7. BUZBY, *supra* note 4, at 11.

8. GUSTAVSSON, *supra* note 6, at 4.

9. *Hunger and Poverty Facts and Statistics*, FEEDING AMERICA, <http://www.feedingamerica.org/hunger-in-america/impact-of-hunger/hunger-and-poverty/hunger-and-poverty-fact-sheet.html> (last visited July 2, 2017).

10. ENVIRONMENTAL PROTECTION AGENCY, INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS: 1990 – 2015 ES-15 (2017), https://www.epa.gov/sites/production/files/2017-02/documents/2017_executive_summary.pdf [hereinafter INVENTORY OF U.S. GREENHOUSE GAS 1990-2015].

11. *See, e.g., Food & Agriculture*, NATURAL RESOURCES DEFENSE COUNCIL, <https://www.nrdc.org/about/food-agriculture> (noting that “food production uses more water and land than any other industry”); WORLD BANK GROUP, *supra* note 4, at 6 (noting that producing 1 ton of apples requires, on average, 822 m3 of water).

12. *See, e.g.*, Press Release, U.S. Dep’t of Agric. & Env’tl. Protection Agency, USDA and EPA Launch U.S. Food Waste Challenge (June 4, 2013), <https://www.usda.gov/media/press-releases/2013/06/04/usda-and-epa-launch-us-food-waste-challenge> [hereinafter USDA and EPA Launch U.S. Food Waste Challenge].

13. *Id.*; USDA and EPA Join with Private Sector, Charitable Organizations to Set Nation’s First Food Waste Reduction Goals, U.S. DEP’T OF AGRIC. (Sept. 16, 2015), <https://www.usda.gov/media/press-releases/2015/09/16/usda-and-epa-join-private-sector-charitable-organizations-set> (last accessed Sept. 9, 2017) [hereinafter Nation’s First Food Waste Reduction Goals].

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the federal government's calls to address these problems, current federal policies like the absence of federal date labeling laws actually contribute to food loss and waste.¹⁴

However, there are federal policy changes that would likely have a positive impact on food loss and waste. Policies recently proposed and enacted by the United Nations, in Europe, and at a local level in the United States with the express goal of reducing food loss and waste can provide useful direction.¹⁵ In light of existing regulatory structure and deeply entrenched consumer and retailer attitudes,¹⁶ policy changes, in addition to continued education efforts and corporate initiatives, will be necessary for the United States to reach its 2030 reduction goal.

This Note first delineates why food waste is a dire problem with implications for hunger and the environment. It then explores how policies like the USDA grades and standards and the country's patchwork date labeling system actually contribute to food loss and waste rather than reducing it, and work counter to policies and initiatives that encourage food donation or attempt to tackle loss and waste. It also details efforts by the United Nations, in Europe, and at the state and local level in the United States to adopt proactive policy.

Finally, this Note argues that a dual federal and state/local policy approach will be necessary to address the problem in the United States. The federal government needs to take a more aggressive approach by broadening the USDA grades and standards, implementing uniform national date labeling laws, strengthening the Emerson Good Samaritan

14. See, e.g., EMILY BROAD LEIB, HARVARD FOOD LAW AND POLICY CLINIC & NATURAL RESOURCES DEFENSE COUNCIL, *THE DATING GAME: HOW CONFUSING FOOD DATE LABELS LEAD TO FOOD WASTE IN AMERICA* (2013), <http://blogs.law.harvard.edu/foodpolicyinitiative/files/2013/09/dating-game-report.pdf> (proposing that food date labeling, which is regulated by a patchwork of state laws, is confusing and leads to consumer food waste).

15. See, e.g., SEATTLE, WASH., ORDINANCE 124582 (Sept. 22, 2014) (*amending* SEATTLE MUNICIPAL CODE §§ 21.36.082, 21.36.083, 21.36.922), http://clerk.seattle.gov/~archives/Ordinances/Ord_124582.pdf (Seattle ordinance prohibiting food waste in garbage) [hereinafter SEATTLE ORDINANCE]; Amendment 2015-922 du 15 Mai 2015, Assemblée-Nationale, <http://www.assemblee-nationale.fr/14/amendements/2736/AN/922.pdf> (French law that mandates grocery store donation of food waste that was repealed before it went into effect).

16. DANA GUNDERS, NATURAL RESOURCES DEFENSE COUNCIL, *WASTED: HOW AMERICA IS LOSING UP TO 40 PERCENT OF ITS FOOD FROM FARM TO FORK TO LANDFILL 10* (2012), <https://www.nrdc.org/food/files/wasted-food-ip.pdf>.

Food Donation Act,¹⁷ and further expanding tax incentives. In the meantime, state and local government should continue to pass laws that mandate food waste diversion from landfills. Furthermore, cities can serve as laboratories for new and innovative food waste reduction solutions.

I. HISTORY: FOOD WASTE AND ITS IMPACT

Even by conservative estimate, the United States squanders a staggering amount of food.¹⁸ Annually, we do not eat 31 percent, or 133 billion pounds, of the food that is available and edible at the retail and consumer levels.¹⁹ This food amounts to an estimated \$161.6 billion in lost value.²⁰ It also translates to approximately 141 trillion in lost calories.²¹

Yet, simultaneously, many Americans are going hungry: in 2015, 42 million people in the United States lived in food insecure households.²²

And, lost or wasted food that ends up in landfills contributes to climate change because it emits methane.²³ Methane is a greenhouse gas that warms the planet by trapping heat in the atmosphere.²⁴ Landfills were the third largest source of methane emissions in the United States in 2015.²⁵ In

17. Bill Emerson Good Samaritan Food Donation Act, 42 U.S.C. § 1791 (2012).

18. BUZBY, *supra* note 4, at 11.

19. BUZBY, *supra* note 4, at 11. Within this 133 billion pounds, the most wasted food groups are dairy products (25 billion pounds), vegetables (25 billion pounds), and grain products (18.5 billion pounds). *Id.* Retail-level waste (43 billion pounds) accounted for 10 percent of the total available food supply, and consumer-level losses (90 billion pounds) accounted for 21 percent. *Id.* Farm level waste and loss that occurs between the farm and retailer were not calculated in the USDA's study because of data limitations. *Id.* Were those numbers incorporated, postharvest waste would be over 31 percent. *Id.* Another study finds that the USDA's estimates were low and places food waste closer to 40 percent of the available and edible food supply. Kevin D. Hall et al., *The Progressive Increase of Food Waste in America and Its Environmental Impact*, 4 PLOS ONE 11 (Nov. 25, 2009), <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0007940#pone.0007940-20071>. Major studies on food waste cite Hall's work. *See, e.g.* GUNDERS, *supra* note 16, at 4.

20. BUZBY, *supra* note 4, at 13.

21. *Id.* at 18.

22. FEEDING AMERICA, *supra* note 9. Food insecurity means that the "availability of nutritionally adequate and safe foods or the ability to acquire acceptable foods in socially acceptable ways is limited or uncertain." Life Sciences Research Office, *Core Indicators of Nutritional State for Difficult-to-Sample Populations*, 120 THE JOURNAL OF NUTRITION 1559, 1575 (1990) (Sue Ann Anderson, ed.).

23. INVENTORY OF U.S. GREENHOUSE GAS, *supra* note 10, at ES-14.

24. INVENTORY OF U.S. GREENHOUSE GAS, *supra* note 10, at ES-2. Notably, methane speeds global warming at a rate of twenty-one times faster than carbon dioxide. BUZBY, *supra* note 4, at 3.

25. INVENTORY OF U.S. GREENHOUSE GAS, *supra* note 10, at 7-4. Overall methane emissions have

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the same year, the Environmental Protection Agency (EPA) estimated that over 35 million tons of food went to landfills or incinerators rather than more productive uses.²⁶ This tonnage represents about 95 percent of total food waste.²⁷ The EPA's Food Recovery Hierarchy ranks landfills and incinerators as the least desirable outcome for uneaten food.²⁸ The agency rates food production reduction at the farm-level as most desirable, followed by feeding the hungry, feeding animals, industrial uses, and composting.²⁹

Furthermore, food loss and waste represent misallocated investments and misused natural resources at the farm and farm-to-retail stages.³⁰ Food production requires a heavy allocation of costly natural resources, including water, energy, fertilizer, and land.³¹ For example, it takes 822,000 liters of water to produce one ton of apples.³² If these apples fall out of the food system before they are consumed, this water, and any fertilizer and land used in their production, was wasted. And furthermore, if the apples reach the market or consumers but are not eaten, the fuel that was used to transport them via truck or plane was also wasted.

The following sections explore (1) key components of the regulatory framework in the United States that contribute to, or do not adequately

decreased since 1990, a trend that is mostly attributable to a reduction in decomposable material (including food scraps) in municipal solid waste (MSW) landfills and an increase in the amount of landfill gas collected and combusted. *Id.* However, MSW methane emissions account for about 95 percent of the total landfill emissions in 2015. *Id.* And, at 21.1 percent, food scraps were the largest contributor to the MSW waste stream. *Id.* at 7-15.

26. *Reducing Wasted Food At Home*, ENVTL. PROTECTION AGENCY, <http://www2.epa.gov/recycle/reducing-wasted-food-basics>. (last visited Feb. 18, 2017) [hereinafter *Reducing Wasted Food At Home*]. Less than 3 percent of this food was recovered and recycled. BUZBY, *supra* note 4, at 2.

27. *Reducing Wasted Food At Home*, *supra* note 26. MSW waste is sent to landfills at a much higher rate than it is incinerated, or recycled or composted: in 2012 upwards of 130 million tons of MSW waste went to landfills, while about 60 million was recycled, over 20 million was incinerated with energy recovery and close to 20 million was composted. INVENTORY OF U.S. GREENHOUSE GAS, *supra* note 10, at 7-14. Notably, recycling and composting rates have steadily risen since 1990. INVENTORY OF U.S. GREENHOUSE GAS, *supra* note 10, at 7-14.

28. *Food Recovery Hierarchy*, ENVTL. PROTECTION AGENCY, <http://www2.epa.gov/sustainable-management-food/food-recovery-hierarchy> (last visited Feb. 18, 2017) [hereinafter *Food Recovery Hierarchy*].

29. *Id.*

30. WORLD BANK GROUP, *supra* note 4, at 6.

31. WORLD BANK GROUP, *supra* note 4, at 6.

32. WORLD BANK GROUP, *supra* note 4, at 6.

combat, food loss and waste and (2) both domestic and global efforts to address loss and waste. Although recent proactive federal efforts are important, they are not yet robust enough to counteract the negative effects that current policies have on food loss and waste.

II. UNITED STATES POLICY THAT CONTRIBUTES TO FOOD LOSS AND WASTE: FARM-TO-RETAIL FOOD LOSS

Barriers to sale created by government food safety regulations or standards contribute to farm-to-retail level loss.³³ Most notably, the USDA's Agricultural Marketing Service (AMS) provides grades and standards to categorize food based on certain quality criteria.³⁴ The current USDA categories are voluntary for most foods,³⁵ but are widely used³⁶

33. *Breaking the Grade Barrier: A Grocery Store Pioneers*, NAT. RES. DEF. COUNSEL, <https://www.nrdc.org/experts/dana-gunders/breaking-grade-barrier-grocery-store-pioneers> (last visited Sept. 26, 2017); MILEPOST CONSULTING, NAT. RES. DEF. COUNSEL, LEFT-OUT: AN INVESTIGATION OF THE CAUSES & QUANTITIES OF CROP SHRINK 4-5, 19 (2012), https://www.nrdc.org/sites/default/files/hea_12121201a.pdf. Although there are other markets for produce beyond grocery stores, such as juice processing, these are not necessarily available for all commodities. *Id.* If USDA grades and standards were less stringent, presumably less produce that does not reach a secondary market would be wasted.

34. *Grades and Standards*, AGRIC. MKTG. SERV., U.S. DEP'T OF AGRIC., <http://www.ams.usda.gov/grades-standards> (last visited Sept. 9, 2017). Various pieces of legislation authorize the AMS to establish the USDA's quality labels. 1 WEST'S FED. ADMIN. PRAC. § 14 n. 1 (2017), available at Westlaw. For example, the Agricultural Marketing Act of 1946 authorizes the USDA to assign grades to food products. 7 U.S.C. § 1622 (2012).

35. *See, e.g., Fruits*, AGRIC. MKTG. SERV., U.S. DEP'T OF AGRIC., <http://www.ams.usda.gov/grades-standards/fruits> (last visited Sept. 9, 2017). While federal inspection of meat and poultry for wholesomeness (i.e. safety) is mandatory, grading (i.e. quality) is voluntary. *Inspection & Grading of Meat and Poultry: What Are the Differences?*, FOOD SAFETY AND INSPECTION SERV., U.S. DEP'T OF AGRIC., http://www.fsis.usda.gov/wps/portal/food-safety-education/get-answers/food-safety-fact-sheets/production-and-inspection/inspection-and-grading-of-meat-and-poultry-what-are-the-differences/_inspection-and-grading-differences!/ut/p/a1/jZFRT4MwEMc_DY9di8yF-UZiZlYOXBYd42Xp4FpIoCVtkcxPb8EHnRm69qV39_tf2_hDKc4E_S94tRUUtB6iLPfkWzJwl2GJEqW7iNZx2_b5CkMib-7t8DhDyD2btRPrID8p49uuOBObcINx1LTYkqwsROORhEhe5BaZwyKQukKQnzRozmBukSwNhCq2TR5YMVFi6sVLcwhjj9Po8lrmhRCY4kQw1QM-Za2dVGnVfDgkFyJSAiooxUCB y0MfJLj8gvMfZ5ReJa_c69nbzVRR7Jjn_Bq7M4AuYNtm6yGt5Ggd-CMTJ861dCoZHQfMnbLo0p iUPDnFi3_czLiWvYZbLxHXJKXUBqeXJG6b1_TjOVIR6qXZ-zr4BEpuht4!/#2 (last visited Sept. 9, 2017).

36. *Quality Grading and Inspections*, AGRIC. MKTG. SERV., U.S. DEP'T OF AGRIC., <http://www.ams.usda.gov/services/grading> (last visited Sept. 9, 2017).

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because they allow large-volume buyers like grocery stores to conduct transactions using a “common language.”³⁷

A large amount of food never enters commerce because of USDA grades and standards.³⁸ A 2012 study commissioned by the National Resources Defense Council (NRDC) on crop shrink³⁹ in California found that USDA grading contributes to produce not entering either primary markets (for example, grocery stores) or secondary markets (such as juice processing).⁴⁰ The study noted that large purchasers frequently have more stringent standards than the USDA grades and that there are often secondary market purchasers that will buy rejected produce. However, the study found that producers cannot always find such buyers.⁴¹ Furthermore, imported produce that does not meet USDA grades and standards also falls out of the food system.⁴² The USDA implicitly acknowledges this issue in its recent efforts to encourage donation of rejected imported produce.⁴³

III. FOOD WASTE AT THE RETAIL AND CONSUMER LEVELS

A. Lack of a Federal Date Labeling Law

37. *Grades and Standards*, *supra* note 34. Many of the grading distinctions are based on aesthetic qualities, for example, U.S. No. 1 beets are “well trimmed, firm, *fairly smooth, fairly well shaped, fairly clean...*,” while U.S. No. 2 beets are “well trimmed, firm, *not excessively rough, not seriously misshapen...*” *Beets Grades and Standards*, AGRIC. MKTG. SERV., U.S. DEP’T OF AGRIC., <http://www.ams.usda.gov/grades-standards/beets-grades-and-standards> (last visited Sept. 9, 2017) (emphasis added).

38. NAT. RES. DEF. COUNSEL, *supra* note 33, at 19.

39. The study defines crop shrink as the “change between the volume of edible crops available for harvest and the volume entered into commerce. NAT. RES. DEF. COUNSEL, *supra* note 33, at 10.

40. NAT. RES. DEF. COUNSEL, *supra* note 33, at 19.

41. NAT. RES. DEF. COUNSEL, *supra* note 33, at 19. Secondary markets are not available for all commodities. *Id.* For example, while cherry juicers are more likely to accept all culled cherries because the growing season is short, a ketchup manufacturer is less likely to accept culled tomatoes because this crop is more abundant. *Id.*

42. *Selected New and Ongoing USDA Food Loss and Waste Reduction Activities*, OFF. OF THE CHIEF ECON., U.S. DEP’T OF AGRIC., http://www.usda.gov/oce/foodwaste/usda_commitments.html (last visited Sept. 9, 2017).

43. *Id.* One of the USDA’s Food Loss and Waste Reduction Activities has been to “increase donations of wholesome fresh imported produce that is subject to destruction or rejection because it does not meet the same or comparable federal marketing order standards as the domestic product.” *Id.* In early 2015, importers donated 604,000 pounds of produce to the Houston Food Bank, indicating that a large amount of imported food was, and by inference still is, lost. *Id.*

Date labeling is a major cause of food waste at both the retail and consumer levels.⁴⁴ Supermarkets must inevitably discard food that is no longer edible due to a health and safety hazard.⁴⁵ However, a great deal of food that is still edible but simply blemished or otherwise disfigured is thrown away because “[i]ndustry executives and managers view appropriate waste as a sign that a store is meeting quality control and full-shelf standards, meaning that blemished items are removed and shelves are fully stocked.”⁴⁶ To this end, supermarkets routinely throw away food that is near or past its sell-by date, but still edible.⁴⁷

Although retailers and consumers often throw away food based on date labels, the dating methods are largely arbitrary: they vary greatly from state-to-state and bear little relation to actual food safety.⁴⁸ A 1987 study found that 17 percent of weekly household waste occurred because food was “past a pull date, an expiration date, or, in some cases, a series of production code numbers misinterpreted as a date,” or “because the consumer believed that the food was too old by some other time standard.”⁴⁹ The NRDC and Harvard Food Law and Policy Clinic jointly published a 2013 policy report on the connection between the lack of standardized federal date labeling and food waste.⁵⁰ The study identified misinterpretation of our widely varying state and local labels as a “key factor” leading to food waste.⁵¹

Congress has the authority to regulate date labeling under the U.S. Constitution’s Commerce Clause,⁵² and has delegated some regulatory authority to agencies—the USDA, the Food and Drug Administration

44. See generally GUNDERS, *supra* note 16.

45. *Id.* at 10. This waste is the result of true safety concerns, and not the result of regulation because most states do not impose restrictions on the sale of food, even food that is past its sell-by date. *Id.*

46. *Id.*

47. LEIB, *supra* note 14, at 12. A supermarket industry expert estimated that, on average, a supermarket throws away \$2,300 worth of out-of-date food daily. GUNDERS, *supra* note 16, at 10.

48. GUNDERS, *supra* note 16, at 10.

49. LEIB, *supra* note 14, at 22. This study indicates that although consumers throw away some food because they judge it to be too old, independent of any formal date label, at least some of the time they waste food because of a date label alone, rather than the food’s appearance, smell or taste.

50. LEIB, *supra* note 14, at 2-3.

51. *Id.* at 2-3.

52. *Id.* at 8.

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(FDA), and, to some extent, the Federal Trade Commission (FTC).⁵³ However, these agencies have not regulated labeling comprehensively, and congressional efforts to pass a federal open date labeling law have failed since the initial, vigorous push for one in the 1970s.⁵⁴ Open dating, the most favored form of date labeling, refers to the practice of displaying a day, month, and year in plain view on the food's packaging.⁵⁵ In the absence of federal regulations,⁵⁶ a patchwork of state regulations governing date labeling sprang up, with over forty states currently requiring date labels on at least some food products.⁵⁷

In their study, the NRDC and Harvard characterized state regulations as falling into four categories:

53. See, e.g., Food, Drug and Cosmetic Act, 21 U.S.C.A. §§ 301-392 (West 2015); Poultry Products Inspection Act, 21 U.S.C.A. §§ 451-472 (West 2015); Federal Trade Commission Act of 1914 15 U.S.C. § 45(1) (2012). For example, 21 U.S.C. § 341, which gives authority to the FDA, reads:

Whenever in the judgment of the Secretary such action will promote honesty and fair dealing in the interest of consumers, he shall promulgate regulations fixing and establishing for any food, under its common or usual name so far as practicable, a reasonable definition and standard of identity, a reasonable standard of quality, or reasonable standards of fill of container.

21 U.S.C. § 341.

54. LEIB, *supra* note 14, at 6. During the 93rd Congress, ten bills proposed amendments to either the Fair Packaging and Labeling Act or the Federal Food, Drug, and Cosmetic Act (FDCA) to create an open labeling requirement. COMPTROLLER GEN. OF THE UNITED STATES, FOOD LABELING: GOALS, SHORTCOMINGS, AND PROPOSED CHANGES (1975), <http://www.gao.gov/assets/120/115505.pdf>. Similarly, the National Uniform Food and Safety Labeling Act of 1999 failed. LEIB, *supra* note 14, at 7. The law would have required food to be labeled with "use by" followed by the date after which the food should no longer be sold. *Id.* And, a bill introducing the Freshness Disclosure Act failed in 1999, 2001, 2003, 2005, 2007 and 2009. *Id.* Each bill would have amended the FDCA to require that "best if used by" precede all freshness dates. *Id.*

55. LEIB, *supra* note 14, at 6. Open dating differs from closed dating, an industry practice of using symbols or numerical codes that are understood by manufacturers and retailers but not the public. *Id.*

56. *Food Product Dating*, FOOD SAFETY AND INSPECTION SERV., U.S. DEP'T OF AGRIC., <http://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/food-labeling/food-product-dating/food-product-dating>. Federal law does require that infant formula carry a "use-by" date that is determined by the manufacturer, packer or distributor based on product analysis. *Id.* Federal law also requires that if a calendar date is used, it express the month and day of the month, and a descriptive phrase, such as "sell-by." *Id.*

57. LEIB, *supra* note 14, at 13, 17.

(1) Those that regulate the presence of date labels on certain foods but do not regulate sales after those dates; (2) [t]hose that do not regulate the presence of date labels but do broadly regulate sales after such dates if date labels are voluntarily applied; (3) [t]hose that regulate both the presence of dates labels and, broadly, the sale of products after those dates; and (4) [t]hose that do not require or regulate dates labels at all.⁵⁸

State regulations also differ in terms of the type of food that must be labeled, and the type of labels that are required.⁵⁹ These label types vary widely,⁶⁰ with phrases ranging from “use by” to “sell by” to “freeze by.” The statutorily-defined meaning of these phrases varies from state-to-state and is not legally defined at the federal level.⁶¹

Twenty states and the District of Columbia place some restrictions on the sale of food that is past its labeled sell-by date.⁶² Massachusetts is among these states, and is the only state to regulate the sale of all past-dated food.⁶³ Thirty states do not restrict past-dated food sales at all.⁶⁴ And, in fact, sell-by dates bear little relation to food safety as they are intended to indicate freshness and quality rather than safety.⁶⁵

58. LEIB, *supra* note 14, at 12.

59. LEIB, *supra* note 14, at 12.

60. LEIB, *supra* note 14, at 17.

61. LEIB, *supra* note 14, at 17.

62. LEIB, *supra* note 14, at 12.

63. 105 MASS. CODE REGS. 520.119 (2013). Section (F) states that:

No person shall offer for sale in the Commonwealth any food product after the expiration of a “sell by date” or a “best if used by date” unless: (1) It is wholesome and its sensory physical qualities have not significantly diminished; and, (2) It is segregated from food products which are not “past date”; and, (3) It is clearly and conspicuously marking either on the package or through the use of shelf markers or placecards, as being offered for sale after the recommended last date of sale or best use.

Id. Of the twenty states and the District of Columbia that also regulate post-dated food sales to some extent, only Michigan, Mississippi, Alabama and Florida do so for more than one type of food item. LEIB, *supra* note 14, at 13.

64. *See, e.g.*, GUNDERS, *supra* note 16, at 10; LEIB, *supra* note 14, at 14.

65. LEIB, *supra* note 14, at 19.

B. Insufficient Food Donation Incentives

Food retailers throw away over eleven percent of fresh produce and other perishables.⁶⁶ Although this figure does not account for the food that they do already divert from landfills, retailers could also donate this food to organizations that feed the hungry or divert it to other sustainable uses, such as composting, instead of throwing it into dumpsters that are eventually emptied into landfills. They could also resell it to emerging “social supermarkets” or other innovative enterprises.⁶⁷ However, food retailers have historically feared the liability that would stem from donating spoiled or tainted food that subsequently injures or kills someone.⁶⁸ A mid-1990s survey conducted by America’s Second Harvest found that more than eighty percent of the 250 companies surveyed reported that the threat of liability was their most significant reason for dumping, rather than donating, food.⁶⁹ This fear persisted into the 1990s despite every state having adopted a Good Samaritan food donation law aimed at encouraging food donations by limiting donor liability.⁷⁰

In 1977, California became the first state to adopt this type of legislation.⁷¹ Its law insulated people, counties, and county agencies from

66. JOSÉ B. ALVAREZ & RYAN JOHNSON, DOUG RAUCH: SOLVING THE AMERICAN FOOD PARADOX 1 (Feb. 28, 2012).

67. EMILY BROAD LEIB, HARVARD LAW & POLICY CLINIC & NAT. RES. DEFENSE COUNCIL, DON’T WASTE, DONATE 13, 17 (2017), http://www.chlpi.org/wp-content/uploads/2013/12/Dont-Waste-Donate_March-2017.pdf [hereinafter DON’T WASTE, DONATE] (citing Fare & Square, the nonprofit market run by the Philadelphia food bank Philabundance as an example of a social supermarket). Social supermarkets offer discount food to people in poverty. See Serri Graslie, *Social Supermarkets A “Win-Win-Win” For Europe’s Poor*, NAT. PUBLIC RADIO (Dec. 12, 2013), <http://www.npr.org/sections/thesalt/2013/12/11/250185245/social-supermarkets-a-win-win-win-for-europes-poor>. This type of store was popularized in Europe. See, e.g., Agence France-Presse in Copenhagen, *Danish supermarket selling expired food opens second branch*, THE GUARDIAN (Nov. 27, 2016), <https://www.theguardian.com/environment/2016/nov/27/food-waste-denmark-buy-expired-produce-copenhagen-wefood>. However, the Good Samaritan Food Donation Act currently does not limit donor liability for this type of donation. DON’T WASTE, DONATE, *supra* note 67, at 1, 9.

68. David L. Morenoff, *Lost Food and Liability: The Good Samaritan Food Donation Law Story*, 57 Food & Drug L.J. 107, 107 (2002).

69. *Id.* America’s Second Harvest is now called Feeding America and is the largest domestic hunger-relief organization in America. *Our History*, FEEDING AMERICA, <http://www.feedingamerica.org/about-us/about-feeding-america/our-history/>.

70. Morenoff, *supra* note 68, at 107-108.

71. Morenoff, *supra* note 68, at 108.

liability for injury resulting from the donation of any agricultural product, unless the injury resulted from gross negligence or a willful act.⁷² Originally, the bill would have made disposing of food without first offering to donate it illegal.⁷³ However, subsequent amendments replaced this provision with the dual incentives of reduced liability and tax deductions for donation.⁷⁴ A patchwork of other state Good Samaritan laws ensued.⁷⁵

In the 1990s, the federal government passed the Model Good Samaritan Act.⁷⁶ The 1990 Model Act protected people and gleaners from liability for good faith donations of “apparently fit grocery product” to a nonprofit organization.⁷⁷ Similarly to California’s law, the Model Act did not excuse liability stemming from gross negligence or intentional misconduct.⁷⁸ The bill’s co-sponsor, Senator Don Nickles (R-OK), explained on the Senate floor that he saw a need for the law because grocery stores and restaurants discarded too much “wholesome and nutritious” food due to corporate counsels’ fear of liability in the face of unstandardized state Good Samaritan laws.⁷⁹

In 1996, the Bill Emerson Good Samaritan Food Donation Act gave the Model Act the force and effect of law, with amended language and added

72. CAL. FOOD & AGRIC. CODE § 58505 (West 2017). The law states that:

Except for any injury resulting from gross negligence or willful act, no county or agency of a county established pursuant to this chapter and no person who donates any agricultural product shall be liable for any injury, including, but not limited to, injury resulting from the ingesting of such agricultural product, as a result of any act, or the omission of any act, in connection with donating any product pursuant to this chapter.

Id.

73. Morenoff, *supra* note 68, at 109.

74. Morenoff, *supra* note 68, at 109.

75. Morenoff, *supra* note 68, at 116-17. Some states followed the California law. *Id.* at 116-17. Others went further by reducing liability for donee nonprofit organizations. *Id.* at 116-17. Some also set different liability thresholds, while others protected against criminal as well as civil liability. *Id.*

76. Model Good Samaritan Food Donation Act of 1990, 42 U.S.C.A. § 12672 (West 1990), amended by 42 U.S.C. § 1791 (1996).

77. 42 U.S.C.A. § 12672(c). As defined by the act, the term gleaner “means a person who harvests for free distribution to the needy, or for donation to a nonprofit organization for ultimate distribution to the needy, an agricultural crop that has been donated by the owner.” 42 U.S.C.A. § 12672.

78. *Id.*

79. 136 CONG. REC. S1880-97 (daily ed. Mar. 1, 1990) (statement of Sen. Nickles).

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protection for donee nonprofit organizations.⁸⁰ Notably, the Act only provides liability protection for “donation[s] to a nonprofit organization for ultimate distribution to the needy.” It also requires that donated food comply with federal, state and local quality and labeling standards, and does not explicitly provide liability protection for the donation of past-dated food.⁸¹

In 1997, the Department of Justice (DOJ) issued an opinion on the Emerson Act’s preemptive effect. The DOJ construed the Act as “preempting only those state [G]ood [S]amaritan statutes that furnish less liability protection than federal law.”⁸² The judiciary has not yet ruled on the Emerson Act preemption question.⁸³

There was some proof immediately following the Emerson Act’s passage that it encouraged more food donation.⁸⁴ For example, in 1996, 7-Eleven announced that it would increase its donations from 1.5 million

80. Bill Emerson Good Samaritan Food Donation Act, 42 U.S.C. § 1791 (2012). Section (c) Liability for damages from donated food and grocery products states:

(1) Liability of person or gleaner

A person or gleaner shall not be subject to civil or criminal liability arising from the nature, age, packaging, or condition of apparently wholesome food or an apparently fit grocery product that the person or gleaner donates in good faith to a nonprofit organization for ultimate distribution to needy individuals.

(2) Liability of nonprofit organization

A nonprofit organization shall not be subject to civil or criminal liability arising from the nature, age, packaging, or condition of apparently wholesome food or an apparently fit grocery product that the nonprofit organization received as a donation in good faith from a person or gleaner for ultimate distribution to needy individuals.

(3) Exception

Paragraphs (1) and (2) shall not apply to an injury to or death of an ultimate user or recipient of the food or grocery product that results from an act or omission of the person, gleaner, or nonprofit organization, as applicable, constituting gross negligence or intentional misconduct.

42 U.S.C. § 1791(c).

81. 42 U.S.C. § 1791(b)(1).

82. Preemptive Effect of the Bill Emerson Good Samaritan Food Donation Act, 21 O.L.C. 55, 59 (1997), <http://www.justice.gov/olc/file/476996/download>.

83. Morenoff, *supra* note 68, at 128.

84. Morenoff, *supra* note 68, at 128.

pounds annually to 4 million pounds annually.⁸⁵ Yet, in 2014, the federal government was still clarifying corporate liability. As part of the U.S. Food Waste Challenge, the USDA held a webinar entitled “Donating Unsold Food – A Primer on Liability, Food Safety, and the Good Samaritan Act.”⁸⁶ That the USDA held this webinar indicates that there is still significant confusion about or ignorance of the Emerson Act.⁸⁷ And, a 2016 survey by the Food Waste Reduction Alliance found that 50 percent of food manufacturer respondents, 25 percent of retail respondents, and 39 percent of restaurant respondents indicated that liability concerns were a barrier to food donation.⁸⁸

The federal government also uses tax incentives to encourage corporate entities to donate food. The Tax Reform Act of 1976 increased corporations’ ability to take tax deductions for contributions to charities or foundations.⁸⁹ The Internal Revenue Code now contains a special provision that allows corporations to take limited deductions for contributions of “apparently wholesome”⁹⁰ food⁹¹ to donees that care for the ill, needy, or infants.⁹² This provision was expanded in 2016: changes included more generous deduction caps and making the deductions available to non-C corporations.⁹³ However, the provision still limits deductions to donations (as opposed to resales) for ultimate distribution to

85. Marian Burros, *Eating Well*, N.Y. TIMES, Dec. 11, 1996, at C8.

86. *Webinars*, OFFICE OF THE CHIEF ECONOMIST, U.S. DEP’T OF AGRIC., <https://www.usda.gov/oce/foodwaste/webinars.html>. The webinar’s presenters discussed “liability concerns and clear[ed] up misconceptions that may keep companies from donating food.” *Id.*

87. Anecdotally, this Note’s author spoke to the manager of a St. Louis branch of the St. Louis-based grocery chain Schnucks who reported that, in accordance with corporate policy, the store did not donate any perishable food. He attributed the lack of donation to fear of the consequences of donating spoiled food.

88. FOOD WASTE REDUCTION ALLIANCE, ANALYSIS OF U.S. FOOD WASTE AMONG FOOD MANUFACTURERS, RETAILERS, AND RESTAURANTS 17, 24, 32 (2016).

89. Tax Reform Act of 1976, Pub. L. No. 94-455, 90 Stat. 1520 (codified as amended in I.R.C. § 170).

90. The Code adopts the Bill Emerson Good Samaritan Food Donation Act’s definition of “apparently wholesome.” I.R.C. § 170(e)(3)(C)(iii)(vi) (West 2015).

91. I.R.C. § 170(e)(3)(C) (West 2015).

92. I.R.C. § 170(e)(3)(A)(i) (West 2015).

93. The Harvard Food Law and Policy Clinic, *America Can Finally Give More: Congress Passes Permanent Extension of Enhanced Tax Deductions for Food Donations*, CENTER FOR HEALTH LAW & POLICY INNOVATION, HARVARD LAW SCHOOL (Dec. 22, 2015), <http://www.chlpi.org/america-can-finally-give-more-congress-passes-permanent-extension-of-enhanced-tax-deductions-for-food-donations/>.

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the needy.

IV. NEW FOOD LOSS AND WASTE REDUCTION EFFORTS IN THE UNITED STATES

A. National Initiatives

Given the startlingly high rates of food waste in the United States and the commentary surrounding it, the federal government has begun to address the problem through initiatives. In 2013, the USDA and EPA jointly launched the U.S. Food Waste Challenge to “reduce, recover, and recycle food waste.”⁹⁴ The Challenge aims to engage producer groups, processors, manufacturers, retailers, communities, and other government agencies through a range of activities and initiatives.⁹⁵ These include programs to educate consumers about food waste, streamline procedures for donating wholesome misbranded meat and poultry products, and facilitate the donation of produce that is rejected because it does not meet USDA grades and standards.⁹⁶

The Challenge also encourages participants to join the EPA’s Food Recovery Challenge, which promotes adherence to the EPA’s Food Recovery Hierarchy and provides access to data management software and technical assistance to track and improve food waste.⁹⁷ By the end of 2014, the U.S. Food Waste Challenge had more than 4,000 participants, and that year the Food Recovery Challenge diverted almost 606,000 tons of wasted food away from landfills and incinerators.⁹⁸

In September 2015, the USDA and EPA announced the United States’

94. USDA and EPA Launch U.S. Food Waste Challenge, *supra* note 12.

95. USDA and EPA Launch U.S. Food Waste Challenge, *supra* note 12.

96. USDA and EPA Launch U.S. Food Waste Challenge, *supra* note 12.

97. USDA and EPA Launch U.S. Food Waste Challenge, *supra* note 12.

98. Nation’s First Food Waste Reduction Goals, *supra* note 13. To date, the majority of the participants are food producers, grocery stores, restaurants, catering companies, universities and schools. *U.S. Food Waste Challenge Participants*, UNITED STATES DEPARTMENT OF AGRICULTURE, OFFICE OF THE CHIEF ECONOMIST, <http://www.usda.gov/oce/foodwaste/participants.htm>. They range from single franchises, like the Chipotle in Ithaca, NY, which donates “wholesome unsold food” to a local food rescue organization, to large corporations, like Cargill, which harvested and donated 600,000 pounds of corn from its Minnesota fields that would have otherwise gone un-harvested. <https://www.usda.gov/oce/foodwaste/commitments/cargill/corn.html>.

first national food waste reduction goal: a 50 percent decrease by 2030.⁹⁹ The agencies ostensibly plan to reach this goal by building on existing initiatives and further encouraging the private sector to take aggressive steps to reduce loss and waste.¹⁰⁰ However, at the time of this writing, the EPA is facing potentially catastrophic budget cuts.¹⁰¹

Notably, members of Congress have made as yet unsuccessful efforts to affirmatively tackle food loss and waste legislatively. In 2015, Congresswoman Chellie Pingree (D-ME) introduced H.R. 4184, the Food Recovery Act, which contained a wide range of measures designed to address loss and waste.¹⁰² Pingree also introduced the Food Date Labeling Act in 2016 to enact a federal labeling standard.¹⁰³ Neither bill moved beyond committee.

In February 2017, Congresswoman Marcia Fudge (D-OH), Congressman Jim McGovern (D-MA), Congressman Dan Newhouse (R-WA) and Pingree introduced H.R. 952, the Food Donation Act of 2017.¹⁰⁴ The bill would amend the Emerson Act by expanding its liability protection to resale to nonprofit retailers, donation or resale directly to individuals, donation or resale of past-dated foods that meet safety and labeling standards, and donation or resale of mislabeled food if the mislabeling does not affect food safety.¹⁰⁵

B. Progressive State and Local Policies

In the last several years, state and local governments have proposed and

99. Nation's First Food Waste Reduction Goals, *supra* note 13. This goal was adopted following announcement of the UN's 2030 reduction goal and is in line with it. *See id.*

100. *See infra*, note 121. For example, existing initiatives include an app to help consumers safely store food and understand food date labels, and research on technologies to make waste and loss reduction cost effective. *Id.*

101. Glenn Thrush & Coral Davenport, *Donald Trump Budget Slashes Funds for E.P.A. and State Department*, THE NEW YORK TIMES (Mar. 15, 2017), <https://www.nytimes.com/2017/03/15/us/politics/budget-epa-state-department-cuts.html>.

102. Food Recovery Act of 2015, H.R. 4184, 114th Cong. (2015). The measures included expanding the deductions available under the tax code to include contributions of food to organizations that hold the food for nonprofit retail sale, and an amendment to the Federal Food Donation Act to require that executive agencies and Congress donate excess food. *Id.*

103. Food Date Labeling Act of 2016, H.R. 5298, 114th Cong. (2016).

104. Food Donation Act of 2017, H.R. 952, 115th Cong. (2017).

105. *Id.*

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implemented more aggressive and progressive food waste reduction measures. Massachusetts passed a commercial organic material ban covering food waste in October 2014.¹⁰⁶ The ban only applies to entities that dispose of over one ton of solid food waste and vegetative material per week.¹⁰⁷ However, the penalties are potentially severe: violators may incur up to \$25,000 for each day of violation and up to two years in prison.¹⁰⁸

Recently and more comprehensively, Seattle banned the disposal of all food waste.¹⁰⁹ Effective since January 2015, the ordinance applies to commercial establishments, building owners, and private residences, with some exceptions.¹¹⁰ It bans food waste from garbage containers headed for landfills by requiring either that food waste is composted, or separated for recycling.¹¹¹ Violation carries a \$50 per collection penalty for commercial establishments and building owners, and a \$1 or \$50 collection penalty for residents, depending on the collection receptacle used.¹¹²

New York City is also tackling food waste. In 2013, Local Law 77

106. Commercial Organic Material Waste Ban Amendments, January 2014 (codified as amended at 310 MASS. CODE REGS. § 19.000 (Westlaw 2015)).

107. 310 MASS. CODE REGS. § 19.006 defines commercial organic material as: “[f]ood and vegetative material from any entity that generates more than one ton of those materials for solid waste disposal per week, but excludes material from a residence.” 310 MASS. CODE REGS. § 19.006 (West 2017).

108. *Id.* at §19.082.

109. SEATTLE ORDINANCE, *supra* note 15.

110. SEATTLE ORDINANCE, *supra* note 15.

111. Section 21.36.082(A) reads:

[A]ll commercial establishments...shall separate food waste...for recycling, and no food waste...shall be deposited in garbage containers or drop boxes or disposed as garbage at the City’s transfer stations. All commercial establishments that generate food waste...shall subscribe to a composting service, process their food waste onsite or self-haul their food waste for processing. All building owners shall provide composting service for their tenants or provide space for tenants’ own food waste containers. SEATTLE ORDINANCE, *supra* note 15, § 21.36.082(A).

Section 21.36.083(B) reads:

[A]ll residents living in single-family structures, multifamily structures and mixed-use buildings shall separate food waste...for recycling, and no food waste...shall be deposited in a garbage container or drop box or disposed as garbage at the City’s transfer stations. *Id.* § 21.36.083(B).

112. SEATTLE ORDINANCE, *supra* note 15, at 15.

established the Department of Sanitation's (DSNY) organic waste collection pilot program.¹¹³ The law authorized the DSNY to collect organic waste, which included food scraps, curbside on a voluntary basis in one designated area.¹¹⁴ The city ran the pilot program in a Staten Island neighborhood, and has since expanded it to cover 100,000 households in the city's five boroughs, with plans to add more.¹¹⁵ New York City also aims to expand community composting to divert food waste from landfills.¹¹⁶

Beyond reducing the consumer food waste-to-landfill stream, New York City's 2015 One New York plan aims to minimize food producers' landfill inputs. Proposed solutions for this minimization include processing 250 tons of food waste daily at the city's wastewater treatment plants.¹¹⁷ One New York also proposes a Zero Waste Challenge for commercial waste generators.¹¹⁸ Restaurants generate the most commercial waste in the city, and as part of its strategy to achieve zero

113. NEW YORK CITY, N.Y., Local Law 77 of 2013 (codified in scattered sections N.Y. CITY ADMIN. CODE § 16-300 (2017)), <http://legistar.council.nyc.gov/LegislationDetail.aspx?ID=1450676&GUID=7743FA15-9A38-4854-8877-31C725522D90&Options=ID%7CText%7C&Search=food+waste>. Section 1 of Local Law 77, defines "compostable organic waste" in part as: "[A]ny material found in the waste stream than can be broken down into, or otherwise becomes party of, usable compost, such as food scraps, soiled paper, and plant trimmings . . ." *Id.* § 1.

114. *Id.* § 2.

115. CITY OF NEW YORK, ONE NEW YORK: THE PLAN FOR A STRONG AND JUST CITY 178 (2015). The city planned to add 33,000 additional households in 2015, but it is not yet clear whether it accomplished this expansion.

116. One New York notes that:

Although community composting diverts only a small amount of organic waste compared to curbside collection, it plays a big role in engaging and educating New Yorkers about the importance of composting. It raises awareness of what compost is and what benefits it provides through both outreach and education . . . [m]aking and using compost locally demonstrates to New Yorkers firsthand that apple cores and eggshells are not garbage, but rather useful resources.

Id. at 179.

117. *Id.* at 179. The city is conducting a three-year demonstration period of using anaerobic digesters at a wastewater treatment plant to convert food waste into biogas, a natural gas that can heat homes and businesses. *Id.* If successful, the project would scale up to conversion of 500 tons of organic waste per day, about 8 percent of the city's combined residential and commercial food waste. *Id.* The city notes that this scale is "unprecedented anywhere in the county," and could heat 5,200 homes and prevent 90,000 tons of greenhouse gas emissions per year. *Id.*

118. *Id.* at 187.

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commercial waste, in 2013 the city began working toward mandatory source-separation of food waste at all food service-establishments.¹¹⁹

*C. Government Food Loss and Waste Reduction Initiatives
and Policies Outside of the United States*

The United States announced its waste reduction goal just before the United Nations' September 2015 General Assembly meeting on global sustainable development goals.¹²⁰ At the meeting, the United Nations (UN) announced sustainability development goals to be achieved in seventeen areas by 2030.¹²¹ Goal 12 is to “[e]nsure sustainable consumption and production patterns,” which entails aiming to “halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses” by 2030.¹²²

Following the adoption of the UN's 2030 Agenda for Sustainable Development, the European Commission released its EU Action Plan for the Circular Economy in December 2015.¹²³ This plan aims to reduce overall waste in the European economy by moving member states toward greater resource efficiency.¹²⁴ To that end, it affirms the EU and its member states' commitment to act in line with the UN's 2030 waste

119. *Id.* Local Law 146 of 2013, which took effect July 1, 2015, requires food-service establishments above a certain capacity to separate their food waste and arrange for either composting, aerobic or anaerobic digestion, or another DSNY-approved method of organic waste disposal. NEW YORK CITY, NY, Local Law 146 of 2013 (amending ADMINISTRATIVE CODE tit. § 16-306.1 (2017)), <http://legistar.council.nyc.gov/LegislationDetail.aspx?ID=1482542&GUID=DDD94082-C0E5-4BF9-976B-BBE0CD858F8F>. One New York states New York City's intention to build on this law, by eventually requiring all food-service establishments and related businesses to source-separate their food waste. CITY OF NEW YORK, *supra* note 115, at 187.

120. Nation's First Food Waste Reduction Goals, *supra* note 13.

121. *Transforming Our World: the 2030 Agenda for Sustainable Development*, U.N. SUSTAINABLE DEVELOPMENT SUMMIT, SEPT. 25-27, 2015 (Sept. 18, 2015).

122. *Goal 12: Ensure Sustainable Consumption and Production Patterns*, U.N. SUSTAINABLE DEVELOPMENT GOALS, <http://www.un.org/sustainabledevelopment/sustainable-consumption-production/> (last visited July 4, 2017).

123. *Closing the Loop: An EU Action Plan for the Circular Economy*, EUROPEAN COMMISSION, http://eur-lex.europa.eu/resource.html?uri=cellar:8a8ef5e8-99a0-11e5-b3b7-01aa75ed71a1.0012.02/DOC_1&format=PDF (last visited Sept. 9, 2017). The European Commission is the European Union's executive body. It represents the European Union's collective interests, not member states' individual interests. *Organisational Structure*, EUROPEAN COMMISSION, http://ec.europa.eu/about/index_en.htm (last visited July 4, 2017).

124. *Closing the Loop*, *supra* note 123, at 1.

reduction goals.¹²⁵ The EU established the EU Platform on Food Losses and Food Waste, the goals of which are to aid households and commercial and retail actors in reducing food waste by “defining measures needed to prevent food waste; sharing best practices; and evaluating progress made over time.”¹²⁶ The sub-group on food donation’s goals include establishing a “Pilot Project” to facilitate food redistribution in the EU.¹²⁷ The sub-group on food waste measurement’s goals include potentially developing a common EU monitoring and reporting framework regarding food waste amounts.¹²⁸

In May 2015, France’s national government took ambitious action on food waste reduction. The French Senate passed the world’s first national law mandating that food retailers donate food they would otherwise throw away, a proactive legislative approach to reducing food waste.¹²⁹ The law

125. *Id.* at 14. The Commission urges that reduction measures should include preventing “food waste in primary production, processing and manufacturing, in retail and other distribution of food, in food services as well as in households.” *Towards a Circular Economy*, *supra* note 123, at 9.

126. *EU PLATFORM on Food Losses and Food Waste*, EUROPEAN COMMISSION, https://ec.europa.eu/food/safety/food_waste/eu_actions/eu-platform_en (last visited Sept. 9, 2017).

127. *Mandate of Sub-group Established under the EU Platform on Food Losses and Food Waste to Support EU Activities to Facilitate Food Donation*, EUROPEAN COMMISSION 2 (2017), https://ec.europa.eu/food/sites/food/files/safety/docs/fw_eu-actions_subgroup-mandate_food-donation.pdf.

128. *Mandate of Sub-group Established under the EU Platform on Food Losses and Food Waste to Support EU Activities on Measurements of Food Waste*, EUROPEAN COMMISSION 1 (2017), https://ec.europa.eu/food/sites/food/files/safety/docs/fw_eu-actions_subgroup-mandate_fw-measure.pdf [hereinafter *EU Mandate on Measurements of Food Waste*].

129. Amendment du 15 mai 2015 de loi relative à la transition énergétique pour la croissance verte [Amendment of May 15, 2015 to the Law on Energy Transition to Green Growth], ASSEMBLÉE-NATIONALE, <http://www.assemblee-nationale.fr/14/amendements/2736/AN/922.pdf>. France’s Constitutional Counsel struck down the law in July 2015 for procedural reasons. Conseil constitutionnel [CC] [Constitutional Court] decision No. 2015-718DC, Aug. 13, 2015 (Fr.), <http://www.conseil-constitutionnel.fr/conseil-constitutionnel/francais/les-decisions/acces-par-date/decisions-depuis-1959/2015/2015-718-dc/decision-n-2015-718-dc-du-13-aout-2015.144275.html>. But, in September 2015, National Assembly members reintroduced the food waste provisions. Loi 2015-3053 du 15 sept. 2015 visant à lutter contre le gaspillage alimentaire [Law 2015-3053 of September 15, 2015 on the Fight Against Food Waste], ASSEMBLÉE-NATIONALE, <http://www.assemblee-nationale.fr/14/propositions/pion3053.asp>. In December 2015, the National Assembly adopted the proposed law. Loi 2015-632 du 9 decembre 2015 de Proposition de loi relative à la lutte contre le gaspillage alimentaire [Law 2015-632 of December 9, 2015 on the Proposal of Law Related to the Fight Against Food Waste], ASSEMBLÉE-NATIONALE, <http://www.assemblee-nationale.fr/14/pdf/ta/ta0632.pdf>. It passed the bill into law in February 2016. Loi 2016-269 du 3 fevrier 2016 de Proposition de loi relative à la lutte contre le gaspillage alimentaire [Law No. 2016-269 of February 3, 2016 on the Proposal of Law Related to the Fight Against Food Waste], SENAT, <http://www.senat.fr/petite-loi-ameli/2015-2016/269.html>.

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requires food retailers over 400 square meters in size to sign donation agreements or face a fine and public announcement. It also prohibits them from destroying food that is fit for consumption.¹³⁰

V. ANALYSIS

The major national and international food loss and waste reports show that both phenomena are urgent problems demanding attention. Some food loss and waste is “inevitable because food is inherently perishable and some food needs to be discarded to ensure food safety.”¹³¹ But, a great deal of our staggering amount of loss and waste is preventable. And, losing or wasting fully one third, and perhaps even as much as 40 percent, of our edible food supply is unacceptable given the urgency of climate change,¹³² the value and scarcity of natural resources,¹³³ and the prevalence of food insecurity.¹³⁴ Furthermore, even when retailers or consumers need to discard food for safety reasons, much of it can be diverted to sustainable uses, like composting or feeding animals.¹³⁵

Reducing food loss and waste could possibly result in lower rates of hunger and poverty.¹³⁶ In theory, less loss on the supply side (during

130. Loi 2016-269 du 3 février 2016 de Proposition de loi relative à la lutte contre le gaspillage alimentaire [Law No. 2016-269 of February 3, 2016 on the Proposal of Law Related to the Fight Against Food Waste], SENAT, <http://www.senat.fr/petite-loi-ameli/2015-2016/269.html>.

131. BUZBY, *supra* note 4, at 4.

132. *Goal 13: Take Urgent Action to Combat Climate Change and Its Impacts*, U.N. SUSTAINABLE DEVELOPMENT GOALS, <http://www.un.org/sustainabledevelopment/climate-change-2/>

133. Natural resources are especially precious in light of California’s susceptibility to drought: in early 2015, the state entered its fourth year of drought. Adam Nagourney, *As California Drought Enters 4th Year, Conservation Efforts and Worries Increase*, N.Y. TIMES (Mar. 17, 2015), <http://www.nytimes.com/2015/03/18/us/as-california-drought-enters-4th-year-conservation-efforts-and-worries-increase.html>. California produces over one third of the country’s vegetables and two thirds of the country’s fruits and nuts. *Cal. Agricultural Production Statistics*, CAL. DEP’T OF FOOD AND AGRIC., <https://www.cdffa.ca.gov/statistics/> (last visited Sept. 9, 2017).

134. FEEDING AMERICA, *supra* note 9.

135. *Food Recovery Hierarchy*, *supra* note 28.

136. Martine M. Rutten, *What Economic Theory Tells Us About the Impacts of Reducing Food Losses and/or Waste: Implications for Research, Policy and Practice*, AGRIC. & FOOD SEC. (Sept. 24, 2013), <https://agricultureandfoodsecurity.biomedcentral.com/articles/10.1186/2048-7010-2-13>.

production and transportation to retail venues) could reduce the price of food, which would in turn result in food-insecure people being able to buy more.¹³⁷ Similarly, reducing waste on the demand side (at the retail and consumer stages) could also reduce the price of food.¹³⁸

And because food loss and waste contribute to global warming and unnecessarily deplete natural resources, reductions would have a positive environmental impact.

The United States should prevent loss at the farm-to-retail level and waste at the retail and consumer levels. The major reports show that loss and waste occur throughout the production and consumption cycle. While the USDA's 2014 report lacks statistics on farm-to-retail loss because this data was too difficult to collect, it does show that there is loss at this level that could be significant.¹³⁹ Indeed, the FAO's 2011 global report includes farm-to-retail loss and estimates that about sixty percent of total waste and loss occurs at this level in North America and Oceania.¹⁴⁰ Given this finding, farm-to-retail level reductions deserve attention in the United States, alongside retail and consumer level reductions.

Of the 133 billion pounds of loss that the USDA did calculate, retail loss represented about one-third, while consumer level waste represented about two-thirds.¹⁴¹ These statistics suggest that while the government should address retail loss and waste, it must also implement policy that has the effect of reducing consumer waste.

Recent federal government attention toward loss and waste reduction is encouraging. Given the USDA and EPA's 2013 Food Waste Challenge and its 2030 goal, there seems to be momentum to address the problem at the federal level. However, it is difficult to imagine that we can achieve a fifty percent reduction in less than fifteen years solely through the kind of education and corporate partnership initiatives that form the substance of the United States' current loss and waste approach. And, given the proposed EPA budget cuts, momentum on food loss and waste reduction will likely lose steam under the Trump Administration. Furthermore, much

137. *Id.* at 3.

138. *Id.* at 4-5.

139. BUZBY, *supra* note 4, at 11.

140. GUSTAVSSON, *supra* note 6, at 5.

141. BUZBY, *supra* note 4, at 11.

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of our current policy, like the USDA's grading and standards system and patchwork date labeling, contributes to loss or waste.

The well-intentioned Emerson Act does not do enough to encourage food donation and still-edible food is unnecessarily wasted. It does not affirmatively encourage donation, or even require it, like France or Seattle's laws. Rather, it merely reduces a barrier to donation and therefore lacks real teeth. Commentators have noted that the law shifts responsibility for tackling hunger away from the government and onto the private sector.¹⁴²

Despite some evidence that donation increased following the Emerson Act's passage, many food producers and retailers still do not donate perishable food. This hesitancy could be due to a number of factors beyond ignorance of the Emerson Act: the lack of clarity on the preemption question, fear of corporate reputational harm if donated food does cause injury or death despite safe harbor from liability,¹⁴³ and the logistical and economic burdens of donation.

The Emerson Act's narrow scope may also contribute to hesitancy to donate. It only protects against liability for food that is donated to nonprofit organizations for ultimate distribution to the needy.¹⁴⁴ A March 2017 Harvard Law School Food Law and Policy Clinic & NRDC report notes that this language excludes transactions like the resale of food to social supermarkets.¹⁴⁵ The Act also does not explicitly provide liability protection for donation of past-dated food.¹⁴⁶ And, its requirement that donated food comply with all federal, state, and local labeling laws rules out a good deal of safe food: for example, food with inaccurate weight labeling.¹⁴⁷ Therefore, the Emerson Act does not support innovative models for reducing food waste as robustly as it should.

While the tax code incentivizes corporate food donations, as with the

142. See, e.g., Jessica A. Cohen, *Ten Years of Leftovers with Many Hungry Still Left Over: A Decade of Donations under the Bill Emerson Good Samaritan Food Donation Act*, 5 SEATTLE J. FOR SOC. JUST. 455, 478-81 (2006), <http://digitalcommons.law.seattleu.edu/sjsj/vol5/iss1/23>.

143. Stacey H. Van Zuiden, *The Good Fight for Good Samaritans: The History of Alleviating Liability and Equalizing Tax Incentives for Food Donation*, 17 DRAKE J. AGRIC. L. 237, 250-51 (2012).

144. 42 U.S.C. § 1791(c)(1) (2012).

145. DON'T WASTE, DONATE, *supra* note 67, at 1, 9.

146. DON'T WASTE, DONATE, *supra* note 67, at 11-12.

147. DON'T WASTE, DONATE, *supra* note 67, at 11.

Emerson Act, the available deduction is too narrow. Transfers of food in exchange for money, other property, and services are not deductible. This limitation stifles innovative models for reducing food waste.¹⁴⁸ The Harvard & NRDC food donation report also cites resale to nonprofit social supermarkets as an example of a transaction that cannot be deducted under the current tax code.¹⁴⁹ And, the tax incentives do not address the costs associated with transporting donated or resold food. These costs are likely an additional barrier to food donation or resale, especially for small businesses like farms.

As at the national level, there is encouraging momentum at the state and local level. Action on food loss and waste at these levels has so far been more proactive. Despite the glitz-factor of the national 2030 reduction goal and the USDA and EPA's Food Waste Challenge, these agendas are largely carried out through education programs and initiatives, rather than new laws. Because they are more agile than the national government, state and local governments have been able to pass legislation aimed at reducing food waste. They should continue to do so.

Local policies that ban food waste, like Seattle's ordinance and New York City's efforts will likely have a positive effect on waste reduction. Between 1990 and 2012, the amount of municipal solid waste that was composted rose from below five tons annually to about twenty tons annually.¹⁵⁰ The EPA attributes this rise to legislation banning yard trimmings in landfills.¹⁵¹ If implemented nationally, or in enough of the country to have an impact, legislation banning food waste in landfills would almost certainly have a similar effect on the amount of municipal solid waste that is composted.

State and local governments could also be useful for making education programs work more effectively. The Food Waste Challenge is a solid federal-level step forward, and already has 4,000 participants, but it may have difficulty reaching enough small local businesses. State and local governments may be better at reaching small businesses, which may be more closely plugged in to local networks rather than national ones.

148. DON'T WASTE, DONATE, *supra* note 67, at 2, 17.

149. DON'T WASTE, DONATE, *supra* note 67, at 2, 17.

150. INVENTORY OF U.S. GREENHOUSE GAS, *supra* note 10, at 7-14.

151. INVENTORY OF U.S. GREENHOUSE GAS, *supra* note 10, at 7-29.

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Importantly, cities can also serve as laboratories for determining what kind of food waste reduction efforts work and do not work. For example, if successful, New York City's pilot program to turn food waste into biogas at wastewater treatment plants could serve as a model for other cities.

Although the UN and EU proposals do not contain much substantive direction for how to reduce food loss and waste, the EU's reporting model is instructive. The EU urges creation of a reporting structure to facilitate reduction.¹⁵² This model could be useful in the United States to help mayors, governors, federal officials, and industry stakeholders share successes, failures, and roadblocks with the goal of fostering best practices.

VI. PROPOSAL

The United States must reduce food loss and food waste at all post-harvest stages: food loss at the farm-to-retail level, and food waste at the retail and consumer levels. Given the scale of the problem, federal, state, and local governments must all play a role in reduction efforts.

At the federal level, the USDA should amend its grades and standards so that they are less stringent. Congress should pass a federal date labeling law that preempts the patchwork of state laws. Congress should also strengthen the Good Samaritan Act by using it as a vehicle to require diversion of food waste from landfills and incinerators and by expanding its liability protection. And, Congress should amend the tax code to include deductions for food resale and for the transportation costs related to donation and resale.

The USDA should incorporate Grade 1 and Grade 2 fruits and vegetables into one Grade 1 category. Grade 1 currently excludes even slightly blemished fruits and vegetables, but this produce is perfectly edible.

Because the current state law date labeling patchwork is too complicated and confusing, the federal government should pass a preemptive date labeling law. This law should mandate easy to understand

152. *EU Mandate on Measurements of Food Waste*, *supra* note 128, at 1.

labeling language, and implement education programs to teach consumers about the new language's meaning. The law should limit labeling language to one or two simple terms like "best by" for less perishable foods and "use by" for more perishable foods.¹⁵³ The law should provide uniform guidelines for food producers about how to calculate these dates. Furthermore, as other commentators have suggested, the law could borrow from international models by requiring that labels carry information on how best to store food and not include the "sell by" dates intended for use by food retailers.¹⁵⁴

The Emerson Act should be used as a vehicle to mandate food donation and resale along the lines of France's and Seattle's laws. Food producers and retailers of a certain size by volume sold or square footage¹⁵⁵ should be required to divert food from landfills and incinerators either through donation or resale. Though USDA grades and standards will ideally be less stringent following the actions suggested above, the inclusion of food producers in this law would reduce the amount of loss due to lack of secondary buyers for food that is still rejected.

The Emerson Act should also be amended along similar lines to the Food Donation Act of 2017. The Act's liability protection should be expanded to cover food resale (including to nonprofit retailers like social supermarkets) and donations or sales to non-needy and end-point (nonprofit) recipients. The Act should also cover donation or resale of past-dated food that meets safety standards, and mislabeled food if the

153. This model is based on the British Food Labeling Regulations. See Akshat Tiwari, *Mystery Date: Advocating for a Harmonized System of Expiration Date Labeling of Food*, 49 VAND. J. TRANSNAT'L 1447, 1461 (2016). In December 2016, the USDA issued a new guidance encouraging manufacturers and retailers to use the term "Best if Used By" on date labels. Press Release, U.S. Department of Agriculture Food Safety and Inspection Service, USDA Revises Guidance on Date Labeling to Reduce Food Waste (Dec. 14, 2016), <https://www.fsis.usda.gov/wps/portal/fgis/newsroom/news-releases-statements-transcripts/news-release-archives-by-year/archive/2016/nr-121416-01>. In February 2017, the Food Marketing Institute and the Grocery Manufacturers Association launched a new initiative to reduce industry labeling to only two phrases similar to those used in Britain: "Best if used by" and "Use by." Press Release, Grocery Manufacturers Association, Grocery Industry Launches New Initiative to Reduce Consumer Confusion on Product Date Labels (Feb. 15 2017), <http://www.gmaonline.org/news-events/newsroom/grocery-industry-launches-new-initiative-to-reduce-consumer-confusion-on-pr/>. While these steps are encouraging they are both voluntary. A law is necessary to enact broad change.

154. See, e.g., Tiwari, *supra* note 153, at 1470-73.

155. Mandatory donation or diversion may be financially difficult for small producers and retailers. Van Zuiden, *supra* note 143, at 251.

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mislabeled does not affect food safety.¹⁵⁶

Additionally, Congress should expand the tax deduction. This expansion should include deductions for food resale. And because transportation of donated or resold food is expensive, the expansion should also cover deductions for these costs. Short of this measure, an appropriation to help farmers, producers, and retailers cover these costs would also be a helpful step toward reducing waste.¹⁵⁷

There are alternative ways for the federal government to improve reduction efforts should Congress not take any or all of the proposed steps. For example, beyond their current effort under the Food Waste Challenge to provide data management software and technical assistance to track and improve food waste, the EPA and USDA could implement a national data reporting system for monitoring reduction efforts by states, food producers and retailers, and others. As in Europe, this system can help identify best practices for reduction. In fact, the EPA, USDA, and the Rockefeller Foundation recently led the effort to create the National Resource Center for Action Against Food Waste,¹⁵⁸ which includes an online hub where government businesses, educators, community organizations, and the public can share resources.¹⁵⁹ Strengthening this new resource by raising awareness of it could be useful in driving reduction progress.

State and local government must also play a key role, including stepping up in the event of federal inaction. That role will likely be necessary during the Trump Administration because of its proposed EPA budget cuts and stance on environmental issues.¹⁶⁰ A federal law banning food waste in landfills would likely preempt state law, but state governments should follow Massachusetts's lead in the absence of such a

156. See DON'T WASTE, DONATE, *supra* note 67, at 8-12.

157. See Kate Cox, *An Expanded Tax Break for Food Companies*, THE NEW FOOD ECONOMY (Jan. 29, 2016), <http://newfoodeconomy.com/an-expanded-tax-break-for-food-donations/> (quoting NRDC's Nate Rosenberg on the need for an appropriations to cover transportation costs).

158. Press Release, The Rockefeller Foundation, The Rockefeller Foundation, USDA, and EPA to Lead Creation of National Resource Center for Action Against Food Waste (Dec. 16, 2016), <https://www.rockefellerfoundation.org/about-us/news-media/rockefeller-foundation-usda-epa-lead-creation-national-resource-center-action-food-waste/> (last visited Sept. 9, 2017).

159. *Resources*, FURTHER WITH FOOD: CENTER FOR FOOD LOSS AND WASTE SOLUTIONS, <https://furtherwithfood.org/resources/> (last visited at Oct. 15, 2017).

160. Editorial, *President Trump Takes Aim at the Environment*, N.Y. TIMES (Feb. 23, 2017), <https://www.nytimes.com/2017/02/23/opinion/president-trump-takes-aim-at-the-environment.html>.

law. And local governments should continue to pass donation and diversion laws, and generally innovate in the food waste reduction space. State and local government's role is particularly important given the difficulty of passing and implementing any new national legislation or policies, let alone several that impact our food system. This proposal aims to outline the ideal, most robust policy solution. Any of these suggestions, implemented individually, would be a positive step forward.

CONCLUSION

Ideally, the federal government will proactively tackle food loss and waste through legislation. Federal policy changes should include four major actions. First, relaxing USDA grades and standards so that aesthetically displeasing edible food stays in the food system. Second, passing national date labeling legislation to reduce the amount of food that is unnecessarily wasted because of confusion about current state-regulated date labels. Third, expanding the Emerson Act to require food donation or diversion and to provide more comprehensive liability protections. And fourth, amending to the tax incentives to include deductions for food donation or resale, and the associated transportation costs.

This four-part proposal represents a robust and ambitious federal policy action, but any of these changes would make a difference on its own. And, because it is difficult to pass any national legislation, let alone several pieces, state and local governments should continue to pass laws aimed at reducing food loss and waste. Small government entities are more nimble, and a groundswell of activity among them could drive the federal government to take more ambitious steps. Globally, we are reaching a tipping point on awareness about and action on food loss and waste, and grassroots movement on the issue will be an important catalyst for change.

Policies aimed at proactively reducing food loss and waste are essential because of the massive, pervasive scale of the problem, and the ambitious nature of the United States' 2030 reduction goal. It is difficult to see how the USDA and EPA's current plan to tackle food loss and waste through education and corporate initiatives will be aggressive enough, especially when some current policies actually contribute to loss and waste or do not

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do enough to reduce it. Current policies like the USDA grades and standards and the confusing date labeling patchwork create a one step forward, two steps back system in which we must work harder to achieve significant reductions of food loss and waste.

This Note's proposed policy changes will likely make reaching the 2030 goal easier. But, whether or not we do reach it, every step toward greater food loss and waste reduction is necessary. Progress on this issue will have positive implications economically, environmentally, and morally. Further reduction in food waste and loss will likely reduce hunger and poverty, which is both morally right and economically prudent. Actors along the entire food production and consumption chain will squander fewer natural and capital resources, thereby benefiting both the environment and economy. And, food loss and waste reduction will also likely slow climate change.

Beyond these tangible improvements, though, we intuitively sense that waste is wrong. Maybe, the converse of what Wendell Berry writes is also true: the less we waste, the more connected we will be to the food production cycle — the growing, processing, transporting, and selling that we often know little about.¹⁶¹

161. BERRY, *supra* note 3, at 126-28.