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THE FARM BILL: A WICKED PROBLEM SEEKING A SYSTEMATIC SOLUTION

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In a recent op-ed in the *Washington Post*, a food writer, a professor of journalism (and *New York Times* best-selling author), a senior scientist, and a professor of human rights law, declared in unison that our “food system and the diet it’s created have caused incalculable damage to the health of our people and our land, water and air.”¹ The authors noted that the United States’ food system largely developed out of agricultural policies that were concerned with issues that hold much less significance today—“policies that made sense when the most important public health problem concerning food was the lack of it and when the United States saw ‘feeding the world’ as its mission.”² As a solution, the authors called on the President to implement “an executive order establishing a national policy for food, health, and wellbeing.”³

Although never expressly stating so, the authors describe why farm bill reform has proven to be a “wicked” problem.⁴ The authors point to national problems such as shorter life spans, increased fossil fuel usage, and the rise of income inequality as results of our “piecemeal” policy on food law.⁵ More specifically, the authors point out that “[d]iet-related chronic disease, food safety, marketing to children, labor conditions, wages for farm and food-chain workers, immigration, water and air quality, greenhouse gas emissions, and support for farmers” are all issues related to the food system, despite

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1. Mark Bittman et al., *How a National Food Policy Could Save Millions of American Lives*, WASHINGTON POST BLOGS 1, 1 (Nov. 9, 2014, 6:24 PM), <http://www.washingtonpost.com/opinions/how-a-national-food-policy-could-save-millions-of-american-lives/2014/11/07/89c55e16-637f-11e4-836c-83bc4f26eb67story.html> [hereinafter *National Food Policy*].

2. *Id.* at 2.

3. *Id.* at 3.

4. *See id.* (“As long as food-related issues are treated as discrete rather than systemic problems, congressional committees in thrall to special interests will be able to block change.”).

5. *Id.*

being overseen by eight separate federal agencies.⁶

The authors subtly offer “systems thinking” as a solution. The complexity of the U.S. food system—of which the farm bill is an integral part—is what makes reform so wicked and is why systems thinking offers a promising solution. Systems thinking focuses on interrelationships, perspectives, and boundaries surrounding a given problem.⁷ Thinking systematically requires participation from a greater number of stakeholders and employs a holistic approach.⁸ The focus is on making things better rather than making them perfect. Because of these characteristics, systems thinking is well suited to helping advocates, stakeholders, and decision makers design a more sustainable farm bill.

It is no surprise that the *Washington Post* op-ed is written by no less than four advocates with varied backgrounds. Consideration of diverse perspectives from a variety of stakeholders sits at the very heart of systems thinking.

The authors suggest that a national food policy that employs systems thinking could be created and implemented by White House counsel, working with the Department of Health and Human Services and the United States Department of Agriculture (USDA) to “align agricultural policies with public health objectives.”⁹ White House Counsel would also collaborate with the Environmental Protection Agency (EPA) and the USDA to ensure that environmental goals are not compromised to produce food.¹⁰ The authors are confident that our government has the power to restructure the American food system. Yet, they caution that “[a]s long as food-related issues are treated as discrete rather than systemic problems,” reforming our food system will remain a challenge.¹¹

Although the op-ed authors describe the most recent Farm Bill¹² as “business-as-usual,”¹³ there are many creative and innovative aspects of this Farm Bill that employ “system-like” thinking already.

6. *Id.*

7. See Daniel Aronson, *Targeted Innovation: How Systems Thinking Can Improve the Results of Innovation Efforts*, SYSTEMS THINKING, available at http://www.thinking.net/Systems_Thinking/st_innovation_990401.pdf (describing the systems thinking approach).

8. See *id.* (discussing the importance of analyzing problems holistically to identify and respond to feedback loops that may not appear at the local level of a particular problem).

9. *Id.* at 3.

10. *Id.*

11. *Id.*

12. Agricultural Act of 2014, 7 U.S.C.A. § 9001 (2014).

13. *National Food Policy*, *supra* note 1, at 3.

For example, for the first time in farm bill history, the 2014 Farm Bill makes funding available for programs that promote physical activity.¹⁴ A system thinker would approach the country's obesity problem by not only looking at what Americans eat but also at how much Americans exercise. Establishing a sustainable food system will require a systems thinking approach to food policy reform. Ultimately, this country needs a farm bill that takes a holistic approach, appreciates integration and coordination, and further embraces the principles of systems thinking.

I. INTRODUCTION

Many scholars have blamed national agricultural policies for a whole host of horrors, including the degradation of human health,¹⁵ the destruction of the natural environment,¹⁶ and the disappearance of the family farm.¹⁷ The programs embedded in the U.S Farm Bill—the

14. See *infra* Part III(C)(2).

15. See Mary Jane Angelo, *Corn, Carbon, and Conservation: Rethinking U.S. Agricultural Policy in a Changing Global Environment*, 17 GEO. MASON L. REV. 593, 611–12 (2010) [hereinafter *Corn, Carbon, and Conservation*] (describing the direct (pesticide use) and indirect (cheap high fructose corn syrup) health effects of agricultural policies); J. Amy Dillard, *Sloppy Joe, Slop, Sloppy Joe: How USDA Commodities Dumping Ruined the National School Lunch Program*, 87 OR. L. REV. 221, 241 (2008) (identifying concerns with the National School Lunch Program and the use of prepared, highly processed foods); 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, 275 (2009) [hereinafter *A Rotten System*] (describing the public health impacts of the Farm Bill's subsidized commodity crop system); Anthony Kammer, *Cornography: Perverse Incentives and the United States Corn Subsidy*, 8 J. FOOD L. & POL'Y 1, 30–31 (2012) [hereinafter *Cornography*] (describing the effect of commodity subsidies on diet, nutrition, and healthcare costs); Lindsay F. Wiley, *The U.S. Department of Agriculture As A Public Health Agency? A "Health in All Policies" Case Study*, 9 J. FOOD L. & POL'Y 61, 69 (2013) (listing dietary guidelines, agricultural subsidies, nutrition assistance programs, and school meals as four USDA programs influencing obesity-related chronic diseases); Julie Foster, Comment, *Subsidizing Fat: How the 2012 Farm Bill Can Address America's Obesity Epidemic*, 160 U. PA. L. REV. 235, 239–40 (2011) (suggesting ways the 2012 farm bill can make fruits, vegetables, and whole grain less expensive). *But see* Patricia L. Farnese, *Remembering the Farmer in the Agriculture Policy and Obesity Debate*, 65 FOOD & DRUG L.J. 391, 401 (2010) (noting that there is “little evidence that USDA food and nutrition programs are contributing to rising obesity rates”).

16. See Linda Breggin & Bruce Myers, *Subsidies With Responsibilities: Placing Stewardship and Disclosure Conditions on Government Payments to Large-Scale Commodity Crop Operations*, 37 HARV. ENVTL. L. REV. 487, 522 (2013) [hereinafter *Subsidies with Responsibilities*] (recommending reforms to the Farm Bill to better address pollution resulting from large-scale commodity crop operations).

17. See Emily Broad Leib, *The Forgotten Half of Food System Reform: Using Food and Agricultural Law to Foster Healthy Food Production*, 9 J. FOOD L. & POL'Y 17, 51 (2013) [hereinafter *The Forgotten Half of Food System Reform*] (noting the disappearance of “the agriculture of the middle”); Melanie J. Wender, *Goodbye Family Farms and Hello Agribusiness:*

piece of legislation responsible for establishing the United States' agricultural policies—have been described as “broken,”¹⁸ “imbalanced,”¹⁹ “unpopular,”²⁰ and “wasteful.”²¹

The farm bill in its modern form continues to be the single most important piece of legislation to address agriculture and food policy at the national level.²² It is not surprising then, that farm bill reform is often suggested as a way to cure the ills associated with high-fructose corn syrup, factory farming, and mega-monocultures,²³ as well as to achieve a more sustainable food system.²⁴ Yet, the most recent incarnation of the farm bill did not include the overhaul many desired, or the full-scale revolution requested.²⁵ The farm bill continues to favor industrial farming practices.²⁶ Meanwhile, U.S.

The Story of How Agricultural Policy Is Destroying the Family Farm and the Environment, 22 VILL. ENVTL. L.J. 141, 143 (2011) (“The decrease in family farms is the result of the Farm Bill . . .”).

18. *Cornography*, *supra* note 15, at 24.

19. *The Forgotten Half of Food System Reform*, *supra* note 17, at 29.

20. *Cornography*, *supra* note 15, at 41 (referencing farm subsidies).

21. See Mary Beth Blauser, *The 2008 Farm Bill: Friend or Foe to Conservationists and What Improvements Are Needed?*, 12 VT. J. ENVTL. L. 547, 554 (2011) (noting that some members of Congress called the 2008 Farm Bill “wasteful”).

22. See *A Rotten System*, *supra* note 15, at 214–15 (calling the farm bill “the single most important statute affecting the United States today”).

23. See *Subsidies With Responsibilities*, *supra* note 16, at 522 (recommending reforms to the farm bill to better address pollution resulting from large-scale commodity crop operations); William S. Eubanks II, *The 2013 Farm Bill: An Opportunity for Change*, 28 NAT. RES. & ENV'T. 30, 30 (2013) (describing five areas of farm bill reform worthy of congressional consideration); Mark Bittman, *Don't End Agricultural Subsidies, Fix Them*, N.Y. TIMES (Mar. 2, 2011), http://opinionator.blogs.nytimes.com/2011/03/01/dont-end-agricultural-subsidies-fix-them/?_php=true&_type=blogs&_r=0 (proposing that Congress reform the Farm Bill to address “obesity, the near-demise of family farms, monoculture and a host of other ills”).

24. Although there is no one definition of sustainable food systems, those advocating for such a system envision food produced, processed, and traded in ways that “contribute to thriving local economies and sustainable livelihoods; protect the diversity and welfare of both plants and animals (farmed and wild); avoid damaging natural resources and contributing to climate change; and provide social benefits, such as good quality food, safe and healthy products, and educational opportunities.” CITY OF SANTA MONICA OFFICE OF SUSTAINABILITY & THE ENV'T, WHAT IS SUSTAINABLE FOOD?, http://www.smgov.net/Departments/OSE/Food/What_is_Sustainable_Food.aspx (last visited Feb. 17, 2015).

25. See *Cornography*, *supra* note 15, at 41 (describing how the U.S. political structures prevent bad food policies from getting better); Michael Pollan, *Farmer in Chief*, N.Y. TIMES MAG., Oct. 12, 2008, at 62, 66, available at <http://michaelpollan.com/articles-archive/farmer-in-chief/> (calling for the resolarizing of the American farm through federal policies that encourage “diversified sun farming”).

26. See *Cornography*, *supra* note 15, at 58 (stating that it is not surprising that the largest industrial growers are the primary beneficiaries of governmental subsidies and see increase in market share).

obesity rates continue to rise,²⁷ the number of farms in this country continues to decline, and farmland continues to disappear.²⁸

Reforming the farm bill, and, with it, this nation's agricultural and food policies, has proven to be a "wicked" problem.²⁹ But to say that the United States is worse off because of the 2014 Farm Bill would be incorrect.³⁰ In fact, the vast majority of stakeholders calling for reform labeled the most recent farm bill as something closer to a "mixed bag"³¹ than a complete failure.

This article advocates for employing systems thinking in food system reform generally, but also, specifically, as a way to approach farm bill reform. Using the most recent farm bill as an example, this article introduces systems thinking and explains how a systems thinking approach to food policy reform might be developed.

This article provides the first broad analysis of programs within the 2014 Farm Bill "bag" that employ a systems thinking approach and thereby help create a more sustainable food system. Part I describes the original Farm Bill and its evolution from a law to with support farmers and feed the hungry during the Great Depression, to a 1,000 page, one trillion dollar piece of legislation. Part II uses the concept of a "wicked problem" to describe challenges to food policy and Farm Bill reform, and offers systems thinking as a new approach to designing a better farm bill. Part III analyzes the most recent Farm Bill, focusing on efforts that use systems thinking principles and create a more sustainable food system. New and innovative programs support alternative ways of farming and build partnerships between agencies, farmers, and consumers. Finally, with complete food policy reform unlikely, Part IV encourages the use of systems thinking by policy makers, advocates, and citizens in crafting future farm bills.

27. *Id.* at 3 (stating that "[t]he American citizenry continues to bear the ultimate costs and risk associated with bad and politically unassailable policies in the form of . . . skyrocketing obesity rates").

28. See U.S. DEP'T AGRIC., 2012 CENSUS OF AGRICULTURE PRELIMINARY REPORT HIGHLIGHTS (Feb. 2014), available at http://www.agcensus.usda.gov/Publications/2012/Preliminary_Report/Highlights.pdf (stating that the most recent agricultural census for 2012 shows that the number of farms decreased by 4.3% between 2007 and 2012).

29. See *infra* Part II.

30. Bill Ayers, *The 2014 Farm Bill: A Reflection After 40 Years of Advocacy*, THE HUFFINGTON POST (Mar. 5, 2014), http://www.huffingtonpost.com/bill-ayres/the-2014-farm-bill-the-ba_b_4896404.html (noting that the farm bill "was not the disaster it could have been").

31. See *id.* (calling the results of the final farm bill "mixed").

II. EVOLUTION OF THE FARM BILL

A. *The Original Farm Bill*

The very first farm bill, the Agricultural Adjustment Act of 1933,³² arose from a confluence of economic and environmental disasters.³³ The overarching goal of the original farm bill was to stabilize commodity crop prices (and farm income), which had fallen below the cost of production during the course of the Great Depression.³⁴ The federal government accomplished this by paying farmers to produce less.³⁵ Although the Agricultural Adjustment Act of 1933 also had provisions for providing nutritional assistance to children, implementing conservation policies, and building infrastructure in rural farming communities,³⁶ the passage of the first farm bill was “primarily to manage fluctuations in commodity price and supply,”³⁷ thus marking the beginning of federally subsidized commodity crops.³⁸

Since 1933, the farm bill has been reauthorized fifteen times.³⁹ Each bill, with its various goals and priorities, has shaped America’s agricultural policies.⁴⁰ For example, the 1973 Farm Bill—formally known as the 1973 Agriculture and Consumer Protection Act—initiated the use of target prices and deficiency payments.⁴¹ The 1985 Farm Bill—or the 1985 Security Act—focused on farmers’ conservation practices, thus bringing conservation issues squarely into the farm bill debate.⁴² The 2002 Farm Bill—officially titled the Farm

32. Agricultural Adjustment Act of 1933, Pub. L. No. 10-73, 48 Stat. 31 (codified as amended at 7 U.S.C. §§ 601–620, 623–624, 627) (1933).

33. See *Corn, Carbon, and Conservation*, *supra* note 15, at 621 (describing the Great Depression and the Dust Bowl as leading federal agriculture laws).

34. MARY JANE ANGELO, JASON J. CZARNEZKI, & WILLIAM S. EUBANKS II, *FOOD, AGRICULTURE AND ENVIRONMENTAL LAW* 3 (2013). [hereinafter *FOOD, AGRICULTURE, AND ENVIRONMENTAL LAW*].

35. *Corn, Carbon, and Conservation*, *supra* note 15, at 597.

36. *FOOD, AGRICULTURE, AND ENVIRONMENTAL LAW*, *supra* note 34, at 3.

37. JILL RICHARDSON, *RECIPE FOR AMERICA: WHY OUR FOOD SYSTEM IS BROKEN AND WHAT WE CAN DO TO FIX IT* 165 (2009) [hereinafter *RECIPE FOR AMERICA*].

38. *Corn, Carbon, and Conservation*, *supra* note 15, at 597.

39. The reauthorization process reauthorizes the provisions of the Agricultural Act, but also includes a new set of amendments. *Id.*

40. *Id.*

41. *Cornography*, *supra* note 15, at 14. Deficiency payments are made when market price for a commodity crop falls below the target price set by Congress. *Id.* at 15.

42. See Michael R. Taylor, *The Emerging Merger of Agricultural and Environmental Policy: Building A New Vision for the Future of American Agriculture*, 20 VA. ENVTL. L.J. 169, 179 (2001) (“The 1985 Act marked an important shift in agricultural policy because it brought

Security and Rural Investment Act of 2002—housed the first energy title, signaling the federal government’s interest in the development of bioenergy.⁴³

Despite fluctuations in policy preferences throughout the reauthorizations, federal support has remained constant for the production of commodity crops including wheat, rice, and corn.⁴⁴ The emphasis on commodity crops has been linked to environmental degradation, the nation’s obesity crisis, and the loss of the family farm.⁴⁵ As food activist Jill Richardson explains, the commodity title of the farm bill “sets up a system to ensure we have lots of cheap corn, wheat, rice, soy and cotton so we can run factory farms and make processed foods.”⁴⁶

But, as legal scholar Mary Jane Angelo notes, while the basic structure of the farm bill has remained the same (including support for commodity crops), “significant changes have been made, numerous programs have been added, and the breadth of issues covered by the farm bill has expanded to encompass emerging agricultural interests such as conservation, organic production, and bioenergy.”⁴⁷ One such change was the addition of Title X to the 2008 Farm Bill, The Food Conservation and Energy Act, which created the Horticulture and Organic Production program.⁴⁸ Although federal support for organic practices has been a part of farm bills since the 1990 Farm Bill, the creation of the Horticulture and Organic Production title under the 2008 Farm Bill formally recognized and

conservation and environmental issues into the heart of the farm bill debate and, very importantly, created a direct linkage between farmers’ conservation practices and the economic benefits they receive from government.”).

43. James A. Duffield et al., *Ethanol Policy: Past, Present, and Future*, 53 S.D. L. REV. 425, 433 (2008).

44. See FOOD, AGRICULTURE, AND ENVIRONMENTAL LAW, *supra* note 34, at 14–15 (noting that it is desirable for Congress to include commodities in new farm bills when old bills expire because the permanent laws authorize the USDA to operate farm commodity programs, support eligible commodities at significantly higher rates than currently, and make certain commodities that are currently included ineligible for support).

45. See *The Forgotten Half of Food System Reform*, *supra* note 17, at 18–19 (stating that most discussions about mitigating the environmental and health impacts of the agricultural system in the United States “focus on reforming or dismantling the industrial commodity-based food system”).

46. RICHARDSON, RECIPE FOR AMERICA, *supra* note 37, at 168.

47. FOOD, AGRICULTURE, AND ENVIRONMENTAL LAW, *supra* note 34, at 13.

48. RENÉE JOHNSON, CONG. RESEARCH SERV., RL31595, ORGANIC AGRICULTURE IN THE UNITED STATES: PROGRAM AND POLICY ISSUES 9 (2008), available at <http://nationalaglawcenter.org/wp-content/uploads/assets/crs/RL31595.pdf>.

further expanded this support.⁴⁹ In addition, the 2008 Act increased support for specialty crops (fruits, vegetables, and nuts) and programs that support local and healthy foods.⁵⁰

The 2008 Farm Bill was also the product of new “coalitions” advocating for change. Organic farmers, environmentalists, anti-hunger advocates, and public health groups, all worked together to demand certain changes.⁵¹ Shortly after the passage of the 2008 Farm Bill, the American Farmland Trust—an organization focused on conserving farmland—deemed the bill historic, noting that, “[n]ew players and new partnerships shifted the debate in unprecedented ways, resulting in better programs and an increased focus on supporting the needs of producers and consumers.”⁵²

Increased public interest and coalition-type advocacy represented a growing understanding of the interconnectedness of food, our health, the environment, and the economy. New partnerships and coalitions continued to form over the next six years.⁵³ In 2010, Yale Law School and the National Policy & Legal Analysis Network to Prevent Childhood Obesity went so far as to hold a workshop to bring together leaders of different organizations with a specific common interest in reshaping farm bill policies.⁵⁴ The purpose of the workshop was to initiate coalition-building among organizations that did not communicate regularly with each other, and to discuss a “multidisciplinary agenda” for the next farm bill, strategically incorporating goals from the environmental as well as the public health and sustainable agriculture communities.⁵⁵ In 2012, a group of agricultural economics professors suggested that none of the farm bill beneficiaries would have been strong enough to pass a bill alone, noting that “[a] coalition of the food insecure interests,

49. *Id.*

50. *Id.* (describing cost-sharing provisions that focus on and support organic products).

51. Wiley, *supra* note 15, at 80.

52. AMERICAN FARMLAND TRUST, SUCCESS IN THE 2008 FARM BILL: A NEW DIRECTION OF FARM AND FOOD POLICY (2008), available at <http://www.farmland.org/programs/farm-bill/analysis/documents/AFT-2008-Farm-Bill-brochure-August2008.pdf>.

53. For example, in 2011, The Healthy Farms, Healthy People Coalition was formed to “work toward policy reform that promotes the health of all Americans while strengthening the economic and environmental viability of the food and agricultural sectors.” HEALTHY FARMS, HEALTHY PEOPLE COALITION, CROSS-SECTOR STATE MEETINGS, <http://hfhpcalition.org/cross-sector-state-meetings> (last visited Feb. 21, 2015).

54. National Policy & Legal Analysis Network to Prevent Childhood Obesity, *Farm Bill 2012: Building Coalitions for Change* 4 (2010), available at http://changelabsolutions.org/sites/phlpnet.org/files/YaleFarmBill2012FINALWEBRevised_20110124.pdf.

55. *Id.*

rural communities, fruit and vegetable growers, and program crop producers would likely find a more receptive audience than any one or two could find alone.”⁵⁶ Collaboration was apparent during negotiations of the most recent farm bill, suggesting that coalitions may play a greater role in farm bill negotiations in the coming years.

B. The Most Recent Farm Bill

Although the farm bill was once referred to as “The Most Important Bill You’ve Never Heard Of,”⁵⁷ development of the food movement has significantly increased awareness of the farm bill, allowing advocates with overlapping farm bill interests to come together.⁵⁸ In 2012, a coalition of over 90 stakeholders gathered by the Public Health Institute (the “Coalition”) sent a letter to Congress outlining what they thought should be the priorities for the next farm bill.⁵⁹ Organizations with various interests ranging from environmental,⁶⁰ anti-hunger,⁶¹ immigration,⁶² trade,⁶³ religion,⁶⁴ and policy⁶⁵ also signed on. The Coalition also included experts in nutrition,⁶⁶ public health,⁶⁷ and children rights⁶⁸—at the local⁶⁹ and national level⁷⁰—with varied goals of preserving family farms,⁷¹

56. Joe. L. Outlaw et al., *Farm Bill Stakeholders: Competitors or Collaborators?*, CHOICES, 2nd Quarter 2011, at 1, 4, available at http://www.choicesmagazine.org/magazine/pdf/cms/article_40.pdf.

57. Jerome Nathaniel, *Farm Bill 2013: An Inside Look At the Most Important Bill You’ve Never Heard Of*, POLICY MIC (Oct. 29, 2013), <http://www.policymic.com/articles/70309/farm-bill-2013-an-inside-look-at-the-most-important-bill-you-ve-never-heard-of>.

58. See Helen Dombalis, *Healthy Farms, Healthy People Summit*, NATIONAL SUSTAINABLE AGRICULTURE COALITION BLOG (May 19, 2011), <http://sustainableagriculture.net/blog/public-health-summit/> (summarizing the speakers and speeches given at the Healthy Farms, Healthy People summit in Washington, DC in May 2011).

59. *90 Hunger and Nutrition Organizations Urge Congress to Protect Nutrition Programs in the Upcoming Farm Bill*, PR NEWSWIRE (Apr. 19, 2012), <http://www.prnewswire.com/news-releases/90-hunger-and-nutrition-organizations-urge-congress-to-protect-nutrition-programs-in-the-upcoming-farm-bill-146645185.html>.

60. *Id.* (Environmental Working Group).

61. *Id.* (Bread for the World).

62. *Id.* (National Immigration Law Center).

63. *Id.* (United Fresh Produce Association).

64. *Id.* (Catholic Charities USA).

65. *Id.* (Institute for Agriculture and Trade Policy).

66. *Id.* (Academy of Nutrition and Dietetics).

67. *Id.* (American Public Health Association).

68. *Id.* (First Focus Campaign for Children).

69. *Id.* (Eat Smart Move More South Carolina).

70. *Id.* (The National Farm to School Network).

71. *Id.* (National Family Farm Coalition).

improving access to food,⁷² and combating homelessness.⁷³

Although the Coalition was created because of threatened cuts to nutrition programs, the Coalition's letter articulated three much broader shared principles in reforming the farm bill.⁷⁴ The letter explained that, while each organization had "specific missions and farm bill priorities," these missions and priorities revolved around three specific principles: to (1) protect against hunger; (2) improve nutrition and health outcomes among vulnerable populations; and, (3) strengthen community-based initiatives that link farmers with consumers and increase access to healthy food.⁷⁵

Despite seeming agreement between advocates, the path of the Agricultural Act of 2014 (the most recent farm bill) from its introduction to its enactment was long and acrimonious. The 2014 Farm Bill was first introduced in 2012, with discussions regarding the bill beginning as early as 2011.⁷⁶ For almost three years, the 2014 Farm Bill experienced extreme gridlock and debate within the walls of Congress,⁷⁷ with disagreements primarily centered on funding for nutrition programs.⁷⁸ During the summer and fall of 2013, articles on the status of the farm bill, and the lack of progress, were published on a regular basis.⁷⁹ But when the dust began to settle in January 2014,

72. *Id.* (Meals on Wheels Association of America).

73. *Id.* (The National Center on Family Homelessness).

74. *Id.*

75. *Id.*

76. A few optimistic law review articles discussing the 2012 Farm Bill and 2013 Farm Bill exist. See Foster, *supra* note 15, at 236; Christopher Frump, Note, *Up to Our Ears: Corn Overproduction, Its Environmental Toll, and Using the 2012 U.S. Farm Bill to Limit Corn Subsidies, Increase Environmental Protection Incentives, and Place Accountability on Crop Operations*, 8 FLA. A. & M. U. L. REV. 419, 438–46 (2013); Eubanks II, *The 2013 Farm Bill: An Opportunity for Change*, *supra* note 23, at 295–304 (2013).

77. Ed O'Keef & Kimberly Kindy, *Farm Bill on Verge of Passage After a Long Three Years of Hagglng in Congress*, THE WASHINGTON POST (Feb. 3, 2014), http://www.washingtonpost.com/politics/farm-bill-on-verge-of-passage-after-a-long-three-years-of-hagglng-in-congress/2014/02/03/4496d63c-8cf5-11e3-833c-33098f9e5267_story.html (noting that the farm bill passed after "three years of arduous hagglng"); see also Laurie Ristino, *Changing Coalitions and the Farm Bill*, JURIST (Feb. 27, 2014), <http://jurist.org/forum/2014/02/laurie-ristino-farm-bill.php> (calling the 2014 Farm Bill's passage a "tortuous legislative journey").

78. See *The Forgotten Half of Food System Reform*, *supra* note 17, at 56.

79. A Google search of "Farm Bill 2013 New York Times" returned several articles including: Ron Nixon, *House Rejects Farm Bill as Food Stamp Cuts Prove Divisive*, N.Y. TIMES, July 20, 2013, at A12, available at http://www.nytimes.com/2013/06/21/us/politics/house-defeats-a-farm-bill-with-big-food-stamp-cuts.html?_r=0; Ron Nixon, *In Short, House Says it Needs a New Farm Bill*, N.Y. TIMES, Sept. 24, 2013, at A18, available at <http://www.nytimes.com/2013/09/25/us/politics/time-short-house-says-it-seeks-new-farm-bill.html>; Ron Nixon, *Lobbying Heats Up Before Farm Talks*, N.Y. TIMES, Oct. 23, 2013, at

and the conference committee reached an agreement on January 27, 2014, it took less than eight days for both chambers to approve the agreement and less than two weeks for the President to sign the bill into law on February 7, 2014.⁸⁰

In his presidential signing statement, President Obama called the 2014 Farm Bill “a jobs bill, an innovation bill, an infrastructure bill, a research bill, a conservation bill.”⁸¹ The president pointed out that the farm bill is “not just about helping farmers”—it “[creates] more good jobs,” and “gives more Americans a shot at an opportunity.”⁸² The farm bill does this, the President noted, in two main ways: by supporting rural communities and by helping hungry families.⁸³ This support is seen through investments in farmers markets and organic agriculture to support local food⁸⁴ and through investing in hospitals and schools, affordable housing, and broadband infrastructure in rural areas.⁸⁵ The President referred to these areas as “the things that help attract more businesses and make life easier for working families.”⁸⁶

When discussing the nutrition programs, the President noted that the 2014 Farm Bill gives citizens greater spending power at places like farmers markets, while also making it more affordable for working families to eat healthily and support farmers.⁸⁷ The President lauded the bill for creating new markets for farmers, and giving people the opportunity to purchase nutritious food directly from their farmer.⁸⁸ Tom Vilsack, Secretary of the USDA, was equally complementary of the farm bill, calling it “an investment in every American, no matter where they live.”⁸⁹

A18, available at http://www.nytimes.com/2013/10/24/us/lobbying-heats-up-ahead-of-farm-bill-talks.html?_r=0. A search with the Washington Post returns similar results.

80. RALPH M. CHITE, CONG. RESEARCH SERV., R43076, THE 2014 FARM BILL: COMPARISON AND SIDE-BY-SIDE 1 (2014), available at http://www.farmland.org/programs/federal/documents/2014_0213_CRS_FarmBillSummary.pdf [hereinafter 2014 FARM BILL SUMMARY].

81. Press Release, Office of the Press Secretary, Remarks by the President at the Signing of the Farm Bill (Feb. 7, 2014), available at <http://www.whitehouse.gov/the-press-office/2014/02/07/remarks-president-signing-farm-bill-mi>.

82. *Id.*

83. *Id.*

84. *Id.*

85. *Id.*

86. *Id.*

87. *Id.*

88. *Id.*

89. Tom Vilsack, *Secretary's Column: New Farm Bill is an Investment in Rural America*, U.S. DEP'T AGRIC. BLOG (Feb. 14, 2014, 12:00 PM), <http://blogs.usda.gov/2014/02/14/secretarys->

Despite these lofty sentiments about the bill, reviews from advocates and scholars on the new farm bill were mixed. The American Farm Land Trust praised the new bill, calling it the “biggest reform in agricultural policy in years.”⁹⁰ The Fair Food Network viewed the bill favorably because it included the Food Insecurity Nutrition Incentive, calling the program “[a] [w]in for [f]amilies, [f]armers, [and] [l]ocal economies.”⁹¹ The Farmers Market Coalition also supported the bill’s passing, remarking that it “offers substantial support for farmers markets, beginning farmers and ranchers, local food systems, organic agriculture and healthy food access.”⁹²

In contrast, several other groups readily disapproved of the bill. The Environmental Working group blogged its top six reasons for opposing the farm bill.⁹³ Feeding America, a nationwide network of food banks, also stated its opposition to the farm bill because of the deep financial cuts made to the Supplemental Nutrition Assistance Programs (SNAP).⁹⁴ Although the Public Health Institute’s statement on the bill was also critical of cuts made to SNAP, it was at least pleased that Congress supported other initiatives that improve access to affordable, higher quality nutrition for hungry Americans.⁹⁵

After the passing of the 2014 Farm Bill, Marion Nestle (the Paulette Goddard Professor of Nutrition, Food Studies, and Public Health at New York University) lamented to National Public Radio that the 2014 Farm Bill benefits agribusiness, but not small farms. Nonetheless, he noted, there were still “little tokens scattered throughout . . . that do lovely things for organics and for farmers markets,” as well as other useful initiatives that would be help low-

column-new-farm-bill-is-an-investment-in-rural-america.

90. *Id.*

91. *2014 Farm Bill Passes Senate*, FAIR FOOD NETWORK (Feb. 4, 2014, 9:47 AM) [hereinafter FAIR FOOD NETWORK], <http://fairfoodnetwork.org/connect/blog/2014-farm-bill-passes-senate>.

92. Jen O’Brien, *FMC Supports the 2014 Farm Bill*, FARMERS MARKET COAL. (Jan. 29, 2014), <http://farmersmarketcoalition.org/fmc-supports-the-passage-of-of-farm-bill/>.

93. Those six reasons were that the 2014 Farm Bill increases farm subsidies, rejects subsidy limits, increases insurance subsidies, cuts nutritional assistance, cuts funding for conservation, and flouts transparency. Scott Faber, *Top Six Reasons EWG Opposes the Farm Bill*, ENVTL. WORKING GROUP (Jan. 31, 2014), <http://www.ewg.org/agmag/2014/01/top-six-reasons-ewg-opposes-farm-bill>.

94. Bob Aiken, *Feeding America Responds to New Farm Bill Agreement*, FEEDING AMERICA (Jan. 28, 2014), <http://www.feedingamerica.org/hunger-in-america/news-and-updates/press-room/press-releases/feeding-america-responds-to-new-farm-bill-agreement.html>.

95. Matthew Marsom, *PHI Statement on Passage of Farm Bill*, PUB. HEALTH INST. (Feb. 7, 2014), <http://www.phi.org/news-events/596/phi-statement-on-passage-of-farm-bill>.

income groups eat more fruits and vegetables.⁹⁶ In the end, most analysts referred to the 2014 Farm Bill as a compromise⁹⁷ or mixed-bag,⁹⁸ with many breathing a sigh of relief knowing that “it could have been worse.”⁹⁹

III. WICKED PROBLEMS AND SYSTEMS THINKING

A. *Wicked Problems*

Why was passing the farm bill such a challenge and why do so many feel that the results fall short? Simply put, reauthorizing the farm bill has become a wicked problem. The term “wicked problem” is most frequently associated with social scientists Horst Rittel and Melvin R. Webber, to describe problems that are: exceedingly complex; involve a number of stakeholders, often with conflicting interests; and for which the solution will generate waves of consequences over a period of time.¹⁰⁰ Since their 1973 article addressing planning and design, Rittel and Webber’s concept of a “wicked problem” has been applied to a number of social, environmental, and public policy problems including AIDS, national

96. Interview by Lynne Rossetto Kasper with Marion Nestle, Paulette Goddard Professor of Nutrition, Food Studies, and Public Health, New York University (Feb. 11, 2014), *available at* <http://www.splendidtable.org/story/nyus-marion-nestle-farm-bill-benefits-agribusiness-not-small-family-farms>.

97. Krishnadev Calamur, *House Passes Compromise Farm Bill*, NAT’L PUB. RADIO (Jan. 29, 2014, 11:12 AM), <http://www.npr.org/blogs/thetwo-way/2014/01/29/268238623/house-passes-compromise-farm-bill>.

98. A variety of experts, including physicians, farmers, rural affairs and anti-hunger advocates, have labeled the farm bill a “mixed-bag.” See, e.g., *Public Health Experts Say Farm Bill is a “Mixed Bag” for Nutritional Assistance Program*, ISHN (Feb. 3, 2014), <http://www.ishn.com/articles/97899-public-health-experts-say-farm-bill-is-a-mixed-bag-for-nutritional-assistance-program> (describing the American Public Health Association’s stance on the Farm Bill); see also *The Farm Bill*, THE UNION OF CONCERNED SCIENTISTS, http://www.ucsusa.org/food_and_agriculture/solutions/strengthen-healthy-farm-policy/the-2012-farm-bill.html (last visited Feb. 26, 2015) (describing the version of the bill as “both victories and disappointments for healthy food and farm advocates”); *What is in the 2014 Farm Bill For Sustainable Farms and Food Systems?*, NAT’L SUSTAINABLE AGRIC. COAL. BLOG (Jan. 31, 2014), <http://sustainableagriculture.net/blog/2014-farm-bill-outcomes> (pointing out that, while the bill has many positive aspects, it nevertheless “fails to reform farm commodity and crop insurance subsidies and continues the regime of uncapped, unlimited payments”).

99. The Editorial Board, *The Farm Bill Could Have Been Worse*, N.Y. TIMES, Jan. 29, 2014, at A26, *available at* <http://www.nytimes.com/2014/01/30/opinion/the-farm-bill-could-have-been-worse.html>.

100. See Horst Rittel & Melvin Webber, *Dilemmas in a General Theory of Planning*, 4 POL’Y SCI. 155, 155–69 (1973) (introducing the concept of a wicked problem as it relates to planning).

security, healthcare,¹⁰¹ education,¹⁰² climate change,¹⁰³ water resource management,¹⁰⁴ and sustainability.¹⁰⁵ Wicked problems often involve profound conflicts between societal priorities and values, and solutions to one problem often create others.¹⁰⁶

Because farm bill stakeholders have diverse social, ethical, political, and legal motivations and short-term goals, the long-term goal of reforming our farm bill and our food system can be classified as a wicked problem. Examining the food movement reveals how food movement players are often interested in separate, but sometimes overlapping, objectives. Michael Pollan notes in *The Food Movement, Rising* that unlike many social movements—which splinter over time—“the food movement starts out splintered.”¹⁰⁷

Among the many threads of advocacy that can be lumped together under that rubric we can include school lunch reform; the campaign for animal rights and welfare; the campaign against genetically modified crops; the rise of organic and locally produced food; efforts to combat obesity and type 2 diabetes; ‘food sovereignty’ (the principle that nations should be allowed to decide their agricultural policies rather than submit to free trade regimes); farm bill reform; food safety regulation; farmland preservation; student organizing around food issues on campus; efforts to promote urban agriculture and ensure that communities have access to healthy food; initiatives to create gardens and cooking classes in schools; farm worker rights; nutrition labeling; feedlot pollution; and the various efforts to regulate food ingredients and marketing, especially to kids.¹⁰⁸

101. ROBERT E. HORN & ROBERT P. WEBER, NEW TOOLS FOR RESOLVING WICKED PROBLEMS: MESS MAPPING AND RESOLUTION MAPPING PROCESSES 3 (2007), available at http://www.strategykinetics.com/files/New_Tools_For_Resolving_Wicked_Problems.pdf.

102. Judith Welch Wegner, *Reframing Legal Education's "Wicked Problems,"* 61 RUTGERS L. REV. 867, 870 (2009).

103. Richard J. Lazarus, *Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future*, 94 CORNELL L. REV. 1153, 1160 (2009).

104. Joseph F.C. DiMento & Helen Ingram, *Science and Environmental Decision Making: The Potential Role of Environmental Impact Assessment in the Pursuit of Appropriate Information*, 45 NAT. RESOURCES J. 283, 285 n.4 (2005).

105. Rebecca M. Bratspies, *Sustainability: Can Law Meet the Challenge?*, 34 SUFFOLK TRANSNAT'L L. REV. 283, 292 (2011).

106. See Rittel & Webber, *supra* note 100, at 155–69 (indicating that “many societal processes have the character of zero-sum games”).

107. Michael Pollan, *The Food Movement, Rising*, N.Y. REV. BOOKS (May 20, 2010), available at <http://michaelpollan.com/articles-archive/the-food-movement-rising/>.

108. *Id.*

Another way to approach a wicked problem is to think about problems that are resistant to a unilateral solution.¹⁰⁹ Wicked problems often “lack a definite formulation, have no clear set of possible solutions, and offer no obvious means of determining whether or not the problem has been resolved.”¹¹⁰ As explained in the book *Wicked Environmental Problems*,

In a wicked problem, key stakeholders, including the agency and various interest groups, typically have significantly different and often incompatible worldviews. Yet these profound differences are rarely acknowledged or explored. Thus a missing dimension in the decision process is an effort to explicitly identify and consider the range of values that inform participants’ perceptions of the problem and their preferred policy responses.¹¹¹

While the most recent farm bill represents greater consideration of stakeholder interests,¹¹² decision makers should acknowledge that farm bill reform is a wicked problem and continue to encourage participation from the greatest number of stakeholders. In addition, policy makers should employ systems thinking when evaluating programs within the farm bill.

B. Systems Thinking

1. Systems Thinking: An Introduction

Systems thinking has increasingly been offered as a way to address complex or wicked problems.¹¹³ Systems thinking has its foundation in system theory. Modern system theory is credited to the biologist Ludwig von Bertalanffy who, in 1968, wrote *General System Theory: Foundations, Development, Applications*—a book about the

109. Barry Richmond, *Systems Thinking: A Critical Set of Critical Thinking Skills for the 90s and Beyond*, 90 *SYS. DYNAMICS* 934, 934 (1990).

110. Bratspies, *supra* note 105, at 292.

111. PETER J. BALINT ET AL., *WICKED ENVIRONMENTAL PROBLEMS* x (2011).

112. See, e.g., Agricultural Act of 2014, H.R. 2642, 113th Cong. § 6025 (2014) (requiring the Secretary to “give a higher priority to strategic applications for a plan” that was “developed through the collaboration of multiple stakeholders in the service area of the plan”).

113. KAMBIZ E. MAANI & VANDANA MAHARAJ, *SYSTEMIC THINKING AND COMPLEX PROBLEM SOLVING A THEORY BUILDING EMPIRICAL STUDY 4* (2001), available at http://www.systemdynamics.org/conferences/2001/papers/Maani_1.pdf; see also Sarah Heller & Sarah Cornish, *Solving Wicked Problems: Using Systems Thinking in Design*, *GOOD* (Jan. 27, 2013), http://magazine.good.is/articles/solving-wicked-problems-using-systems-thinking-in-design?full_site=1 (describing the uses of system thinking to solve complex problems).

organizational principles of natural systems.¹¹⁴ Yet, system theory has roots in Greek philosophy, such as Aristotle's musing that "the whole is greater than the sum of the parts."¹¹⁵ At its core, systems thinking is a method of organizing the chaos of real world problems, using concepts and components that promote better understanding.¹¹⁶

Systems thinking is best thought of as a paradigm for perceiving and thinking about a problem.¹¹⁷ Systems thinking begins with a system. While there is no uniform definition of a system, academics agree that a system is comprised of its elements, or parts that make up the whole, linkages between these parts, and the system's boundary.¹¹⁸ Donella H. Meadow, a pioneer of systems thinking, defines a system as "an interconnected set of elements that is coherently organized in a way that achieves something."¹¹⁹ Dr. Meadow explains that systems thinking focuses on interactions of parts, connections, and feedback loops.¹²⁰ This way of thinking allows for the identification of leverage points—or places in a system where a small change could lead to a large shift in behavior.¹²¹

Subsystems can exist within a system. For example, a forest is a larger system that encompasses subsystems of trees and animals. Systems thinking allows understanding of not only the tree and the forest within which it grows, but also the greater landscape that encompasses the forest, as well as other geological and ecological features that allow the tree to survive; thus, the tree becomes "a small part in global exchange processes."¹²² Systems thinking is, therefore, forest thinking—a way of viewing "the systems of relationships that link the component parts."¹²³

The use of pesticides is often offered as an example to illustrate the difference between piecemeal, linear thinking and holistic,

114. See generally L. VON BERTALANFFY, GENERAL SYSTEM THEORY: FOUNDATIONS, DEVELOPMENT, APPLICATIONS (1968).

115. ARISTOTLE, THE METAPHYSICS (J. H. McMahan trans.) (1991).

116. BOB WILLIAMS & RICHARD HUMMELBRUNNER, SYSTEM CONCEPTS IN ACTION: A PRACTITIONER'S TOOLKIT 18 (2011).

117. See generally Barry Richmond, Managing Dir., High Performance Sys., Systems Dynamics/Systems Thinking: Let's Just Get on with It, Address Before the 1994 International Systems Dynamics Conference (1994), available at <http://www.iseesystems.com/resources/Articles/SDSTletsjustgetonwithit.pdf>.

118. *Id.* at 16.

119. DONELLA H. MEADOWS, THINKING IN SYSTEMS: A PRIMER 11 (2008).

120. *Id.* at 11–34.

121. *Id.*

122. WILLIAMS & HUMMELBRUNNER, *supra* note 116, at 17.

123. MAANI & MAHARAJ, *supra* note 113, at 3.

circular thinking associated with systems thinking.¹²⁴ The pesticide example works like this: researchers have been asked to design a strong pesticide to prevent a particularly pesky pest from destroying crops. Linear thinking would focus on only the strong pesticide's effect on the pesky pest.¹²⁵ Missing from this type of thinking is any consideration of feedback loops or relationships that might exist in addition to the effect on the pest; thus, unintended consequences are overlooked.¹²⁶ If systems thinking is employed instead of linear thinking, researchers may see that the strong pesticide's ability to kill the pesky pest is a short term outcome.¹²⁷ Because of the pesticide's potency, it also kills other insects that help control the population of the pesky pest. As the pesky pest becomes resistant to the pesticide, its population will no longer be controlled by these other insects. The population of the pesky pest ultimately increases, doing even more damage to the crops.

Using linear thinking can make the original problem worse. In the pesticide example, the problem was exacerbated because the researchers did not consider all the interactions between the pesticide and the environment to which it was being applied. Understanding interactions and feedback loops that might arise from the application of a stronger pesticide may have prevented such a failure.¹²⁸ Using a more systemic approach, researchers could have determined that introducing more of the insect that controlled the pesky pest, or planting a crop that was more resistant to the pesky pest, would have been superior solutions.¹²⁹ Stated another way, the systems thinking approach goes beyond this input-blackbox-output paradigm to one that considers inputs, outputs, initial, intermediate and eventual outcomes, and feedback, processes, flows, control and contexts.¹³⁰

124. Aronson, *Targeted Innovation*, *supra* note 7.

125. *See id.* (contrasting systems thinking with the traditional linear approach to pest control).

126. *See id.* ("Instead of focusing on the individual pieces of what is being studied, systems thinking focuses on the *feedback relationships* between the thing being studied and the other parts of the system.").

127. *See id.* ("[T]he application of the stronger pesticide indeed reduces the number of the target insect . . . in the short run.").

128. *See id.* (explaining how systems thinking can prevent long-term failure of pest control).

129. *See id.* ("Some of the insects killed by the pesticide helped control the population of the target insect by preying or competing with them . . .").

130. *See* Peter J. Hammer & Charla M. Burill, *Global Health Initiatives and Health System Development: The Historic Quest for Positive Synergies*, 9 *IND. HEALTH L. REV.* 567, 598 (2012) ("It demands a deeper understanding of the linkages, relationships, interactions and behaviors among the elements that characterize the entire system.").

Despite various definitions of systems and systems thinking, there are several common themes. These include “notions of holism, integration, interconnectedness, organization, perspective taking, nonlinearity, and constructivism.”¹³¹ Systems thinking is often defined as a framework for looking at interrelationships—as opposed to linear cause-effect chains—by focusing on patterns of change instead of specific moments in time.¹³² The consideration of interrelationships involves looking at connections between things and the resulting consequences.¹³³ The concept of perspectives suggests that “a situation can be ‘seen’ in different ways” and that this will “affect how [we] understand the system and situation.”¹³⁴ Finally, thinking systematically requires the ability to determine the boundaries of the system by determining what is *in* and what is *out* of the system.¹³⁵

2. Systems Thinking As Applied to Food Systems

Systems thinking has broad appeal and has been proposed as a way to address numerous wicked problems including fisheries management,¹³⁶ public lands management,¹³⁷ litigation finance,¹³⁸ international public health concerns,¹³⁹ and pollution prevention.¹⁴⁰ Systems thinking has also been offered as a solution to food related issues such as obesity¹⁴¹ and other diet-related health conditions.¹⁴²

131. NAT'L CANCER INST., SYSTEMS THINKING: POTENTIAL TO TRANSFORM TOBACCO CONTROL 40, available at http://cancercontrol.cancer.gov/brp/tcrb/monographs/18/m18_3.pdf.

132. Ozzie Mascarenhas, *Innovation as Defining and Resolving Wicked Problems* 22 (2009) (unpublished paper). One description that is particularly useful when thinking about the farm bill is the one put forth by Williams and Hummelbrunner in their book, *Systems Concepts in Action: A Practitioner's Toolkit*. See generally WILLIAMS & HUMMELBRUNNER, *supra* note 116. These two organizational consultants describe systems in terms of interrelationships, perspectives, and boundaries. See *id.* at 18 (discussing how the best means of understanding systems thinking is through the concepts of interrelationships, perspectives, and boundaries).

133. WILLIAMS & HUMMELBRUNNER, *supra* note 116, at 18.

134. *Id.* at 20.

135. *Id.* at 22.

136. Chad J. McGuire & Bradley P. Harris, *Systems Thinking Applied to U.S. Federal Fisheries Management*, 26 NAT. RESOURCES & ENV'T 3, 3 (2012).

137. Antony S. Cheng, *Build It and They Will Come? Mandating Collaboration in Public Lands Planning and Management*, 46 NAT. RESOURCES J. 841, 855 (2006).

138. Mariel Rodak, *It's About Time: A Systems Thinking Analysis of the Litigation Finance Industry and Its Effect on Settlement*, 155 U. PA. L. REV. 503, 523 (2006).

139. Hammer & Burill, *supra* note 130, at 568.

140. Carol Foley & Michael Elliot, *Systems Design and the Promotion of Pollution Prevention: Building More Effective Technical Assistance Programs*, 29 GA. L. REV. 449, 449 (1995).

141. See THINKING IN CIRCLES ABOUT OBESITY, <http://www.thinkingincirclesaboutobesity.com/Index.htm> (last visited Mar. 30, 2015) (applying systems thinking to weight management).

Just as systems thinking is actively being employed in other policy arenas, so too should federal policy makers consciously incorporate systems thinking into discussions about our food system and the farm bill.

Systems thinking lends itself to building local or community-based food systems.¹⁴³ Numerous presentations can be found which illustrate how food systems thinking can be used to build sustainable food systems within a community.¹⁴⁴ Toronto Public Health, for example, calls systems thinking “a way to see the bigger picture, of developing food solutions to food problems by seeing and leveraging their connections to other health, social, economic, and environmental issues.”¹⁴⁵ Systems thinking is often included in discussions on organizing and running food policy councils,¹⁴⁶ and complex adaptive systems theory, a sub-type of systems thinking, has been applied to the study of food hubs.¹⁴⁷

Many places of higher education offer courses in “food system thinking”¹⁴⁸ and “agricultural system thinking.”¹⁴⁹ For example, John

142. See G.F. Combs et al., *Thinking in Terms of Food Systems*, DIV. OF NUTRITIONAL SCI., CORNELL UNIV., <http://www.css.cornell.edu/FoodSystems/Cnc96.html> (applying systems thinking to various diet-related health conditions).

143. See generally Kenneth A. Meter, *Evaluating Farm and Food Systems in the U.S.*, CROSSROADS RES. CTR., available at <http://www.crcworks.org/evalffsaea.pdf> (discussing the system aspect of community-based food systems).

144. See *Food System Thinking*, AG INNOVATIONS NETWORK (Jul. 8, 2014), <http://www.sonomacofsa.org/news/details/july-salon-food-system-thinking> (arguing that system theory can help to change the food system); see also Ricardo Salvador, *The Food Movement: Public Health and Wellbeing*, JOHNS HOPKINS BLOOMBERG SCHOOL OF PUBLIC HEALTH (Dec. 16, 2014), <http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-a-livable-future/center-for-a-livable-future-videos/food-system-thinking> (arguing for reform within the U.S. food system); *Canada's Agri-Food Destination: The Compelling Need for Successful Food Systems*, THE CANADIAN AGRI-FOOD POL'Y INST. (Jan. 2012), <http://agrecon.mcgill.ca/courses/430/notejh/yeon.pdf> (describing a strategic plan for changing the Canadian food system).

145. TORONTO PUBLIC HEALTH, *CULTIVATING FOOD CONNECTIONS: TOWARDS A HEALTHY AND SUSTAINABLE FOOD SYSTEM FOR TORONTO 3* (May 2010), available at <http://www.toronto.ca/legdocs/mmis/2010/hl/bgrd/backgroundfile-30483.pdf>.

146. See *Project Bread: A Fresh Approach to Ending Hunger*, MA FOOD POLICY COUNCIL, <http://www.projectbread.org/reusable-components/accordions/ma-food-advisory-council.html> (last visited on March 30, 2015) (“The Council . . . advances food system thinking with the Commonwealth . . .”).

147. See Mirella L. Stroink & Connie H. Nelson, *Complexity and Food Hubs: Five Casestudies from Northern Ontario*, 18 INT'L J. OF JUST. & SUSTAINABILITY 620, 620–35 (2013), available at <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELPRDC5105332> (discussing the effectiveness of locally-adapted food practices).

148. See *Food System Thinking*, COLLEGE OF ACES, <http://sustainablefood.aces.illinois.edu/thinking> (last visited Feb. 23, 2015) (listing a course in “Food System Thinking”).

Greber—a professor at the University of Massachusetts with a PhD in Agroecology—teaches a course in Agricultural System Thinking.¹⁵⁰ He notes that Agricultural System Thinking can help leaders, advocates, and citizens:

[D]iscover the root causes of our most perplexing agricultural problems, learn how to build resilience into food and farming systems, see how our linear thinking creates our problems, and ultimately how to manage complex systems for multiple objectives (economic, environmental AND social) and thus move us toward a more sustainable and truly successful agriculture.¹⁵¹

While those who research and work with food systems are familiar with the usefulness of “systems thinking,” there is no research applying systems thinking at the federal level, where the farm bill resides.¹⁵² The next section examines interrelationships, perspectives, and boundaries in more detail, and illustrates where these concepts appear within the most recent farm bill. A greater understanding of what systems thinking is, where it appears within the farm bill, and why this type of thinking is helpful when setting food and agricultural policies at the national level can guide future efforts to reform the farm bill and create a more sustainable food system.

IV. 2014 FARM BILL: BREAKING DOWN SILOS

A. *Interrelationships*

“Interrelationships” refers to how things are connected within a system and the consequences of these connections.¹⁵³ This is in

149. See *Agricultural Systems Thinking*, UNIV. OF MASS., <http://courses.umass.edu/plsoilin379-jgerber/index.html> (last visited Feb. 23, 2015) (listing a course in “Agricultural System Thinking”).

150. See *id.* (listing the course and professor information).

151. John Gerber, *Why Agricultural Systems Thinking?*, WORLD.EDU (Jul. 22, 2014), <http://johngerber.world.edu/2014/07/22/why-ag-systems-thinking/>.

152. My search revealed only one law article using the term “system thinking” or “systems thinking” in the context of food systems. Margaret Sova McCabe & Joanne Burke, *The New England Food System in 2060: Envisioning Tomorrow’s Policy Through Today’s Assessment*, 65 ME. L. REV. 550, 555 (2013); see also Ellen Gustafson, *Food: The Thinking Person’s Game*, THE HUFFINGTON POST (Oct. 21, 2013), http://www.huffingtonpost.com/ellen-gustafson/food-the-thinking-persons_b_4111309.html (“To make those decisions and really make progress in our food system thinking, we’ll need to break down the silos between African hunger and American hamburgers.”).

153. See WILLIAMS & HUMMELBRUNNER, *supra* note 116, at 18.

contrast to traditional compartmentalized linear cause and effect-type thinking.¹⁵⁴ If interconnections are changed or strengthened, the system may change in surprising ways. In addition, interrelationships consider something called “feedback” and “feedback loops.”¹⁵⁵ Feedback is the transmission or return of information, and a feedback loop is a closed sequence of causes and effects.¹⁵⁶ Thus, in systems thinking, the link between input and output is not independent from the link between the output and the input; output has an effect on input, and vice versa, making the system dynamic.¹⁵⁷

Interrelationships are found two ways within the 2014 Farm Bill: through the linkages between different objectives of the farm bill, and through the formation and strengthening of partnerships at the individual and agency levels.¹⁵⁸ The 2014 Farm Bill both creates new partnerships and expands existing ones between agencies, between farmers and consumers, and between novice and experienced farmers.

1. Linking Objectives

a. Nutrition Programs and Local Food

While the programmatic emphasis of the farm bill has changed with the shift in political leadership, farmer support and nutrition assistance have remained the two most heavily funded programs within the farm bill.¹⁵⁹ It is therefore not surprising that programs linking these two objectives appear in the 2014 Farm Bill.

Several programs both encourage healthy options and support local farmers and farmers markets by encouraging the purchase of fruits and vegetables.¹⁶⁰ Interestingly, even though the farm bill has a

154. See Aronson, *supra* note 7 (explaining the application of linear and systemic thinking to a pest problem).

155. WILLIAMS & HUMMELBRUNNER, *supra* note 116, at 35.

156. *Id.*

157. See *id.* (noting the importance of feedback loops as providing a circular relationship within systems thinking).

158. There may be additional interrelationships, but these two are the most apparent.

159. Approximately 79% of the most recent farm bill supports nutrition programs, 9.5% goes towards crop insurance, and 4.6% goes towards commodity programs. See Brad Plumer, *The \$956 Billion Farm Bill, In One Graph*, THE WASHINGTON POST, Jan. 28, 2014, available at <http://www.washingtonpost.com/blogs/wonkblog/wp/2014/01/28/the-950-billion-farm-bill-in-one-chart/>.

160. See, e.g., 7 U.S.C. § 4201(b) (2012) (“The purpose of this chapter is to minimize the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to assure that Federal programs are administered in a

title dedicated to specialty crops and organic crops,¹⁶¹ most programs supporting farmers markets and local food appear in the Nutrition Title. For example, the Food Insecurity Nutrition Incentive (FINI) program is a new program housed within the Nutrition Title of the 2014 Farm Bill.¹⁶² This program extends and amends the hunger-free community grants found within earlier farm bills, by shifting instead to “incentive grants” for projects that incentivize SNAP participants to buy fruits and vegetables.¹⁶³ The program received 31.5 million dollars in funding for fiscal year 2014 and 2015.¹⁶⁴ The program is a 1:1 program, so that, for every one dollar spent on fruits and vegetables, the participant receives one dollar to use towards a future purchase of a fruit or vegetable.¹⁶⁵ Because priority is given to grants located in underserved communities, it also combats food deserts.¹⁶⁶

A variety of types of retail establishments, including farmers markets, can participate in the FINI program, providing an additional way to connect consumers to farmers.¹⁶⁷ The USDA acknowledges that this program is innovative for bringing together diverse stakeholders within the food system.¹⁶⁸ Smaller, local farmers receive

manner that, to the extent practicable, will be compatible with State, unit of local government, and private programs and policies to protect farmland.”).

161. 7 U.S.C. §§ 6501–6523 (2012).

162. 7 U.S.C. § 7517 (2012).

163. RENÉE JOHNSON, CONG. RESEARCH SERV., R43632, SPECIALTY CROP PROVISIONS IN THE 2014 FARM BILL 14 (2014) [hereinafter JOHNSON, SPECIALTY CROP PROVISIONS], available at <http://nationalaglawcenter.org/wp-content/uploads/assets/crs/R43632.pdf>.

164. USDA, FOOD INSECURITY NUTRITION INCENTIVE GRANT PROGRAM, 2014/2015 REQUEST FOR APPLICATIONS 11, available at http://nifa.usda.gov/sites/default/files/rfa/1415_FINI.pdf [hereinafter FINI].

165. At least one study has shown that incentives, such as receiving a voucher after purchasing fruits and vegetables at a farmers market for future purchases, can increase the consumption of fruits and vegetables. See Shereen Lehman, *Farmers Market Vouchers May Improve Access to Healthy Foods*, REUTERS (Aug. 8, 2014), <http://www.reuters.com/article/2014/08/08/us-food-vouchers-farmers-markets-idUSKBN0G81Z920140808> (“Vouchers for shopping at farmers markets can help families on food assistance programs consume more fruits and vegetables, new research shows.”).

166. See FINI, *supra* note 164, at 29. (“Operate in underserved communities, particularly Promise Zones and StrikeForce Communities.”).

167. Although priority is given to grants supporting direct-to-consumer marketing programs, large grocery stores could potentially receive FINI grants. See Cailin Kowalewski, *FINI: The Greatest Little Grant You’ve Never Heard of*, THE FRIEDMAN SPROUT (Oct. 1, 2014), <http://friedmansprout.com/2014/10/01/fini-the-greatest-little-grant-youve-never-heard-of/> (“Priority will be given to projects that maximize funds used directly for incentives, use direct-to-consumer marketing, are located in underserved communities (especially Promise Zones and StrikeForce communities), link low-income customers to farmers, and provide local produce.”).

168. Press Release, USDA National Institute of Food and Agriculture, USDA Announces up to \$31 Million to Empower People to Make Healthy Eating Choices (Sep. 29, 2014),

support while consumers using SNAP have access to healthy food products.¹⁶⁹

Another farm bill program linking nutrition and local food is the Pilot Project for Procurement of Unprocessed Fruits and Vegetables,¹⁷⁰ a new program in the 2014 Farm Bill. Under this program, eight states—California, Connecticut, Michigan, New York, Oregon, Virginia, Washington, and Wisconsin—have greater flexibility in purchasing fruits and vegetables, and can therefore increase their purchases of locally-grown fruits and vegetables for their school meal programs.¹⁷¹ The pilot project allows states to inject funds into local farm economies while providing healthy meals made from local food to school children.¹⁷² This program is another example of systems thinking because, as one USDA representative noted, “[w]hen schools invest food dollars into local communities, all of agriculture benefits, including local farmers, ranchers, fishermen, food processors and manufacturers.”¹⁷³

b. Insurance and Conservation

While protecting farmers through various insurance options has been an objective of the farm bill since its creation,¹⁷⁴ protecting natural resources through conservation is a more recent addition. The 2014 Farm Bill recouples conservation compliance to crop

<http://www.fns.usda.gov/pressrelease/2014/021514>.

169. A similar increase was made available to individuals receiving WIC benefits. *See Low Income Families and Produce Farmers Get a Boost Through Increased WIC Voucher Value*, NAT'L SUSTAINABLE AGRIC. COAL. BLOG (Jun. 3, 2014), <http://sustainableagriculture.net/blog/wic-produce-voucher-increase/> (“The increase in cash value vouchers has great potential to help not just low-income families improve their access to healthy food and overall nutrition and health, but to also boost incomes for produce farmers and increase the reach of farmers markets.”).

170. *See* 42 U.S.C. § 1755(f) (2012) (“The Secretary shall conduct a pilot project under which the Secretary shall facilitate the procurement of unprocessed fruits and vegetables . . .”).

171. *See* Press Release, USDA, USDA Selects States for Participation in the Pilot Project for Procurement of Unprocessed Fruits and Vegetables (Dec. 8, 2014), <http://www.fns.usda.gov/pressrelease/2014/fns-001214> (“Under the pilot, California, Connecticut, Michigan, New York, Oregon, Virginia, Washington, and Wisconsin will be able to increase their purchases of locally-grown fruits and vegetables for their school meal programs.”) [hereinafter USDA Release].

172. Press Release, USDA, USDA Releases Request for Applications for Unprocessed Fruit and Vegetable Plot (Jul. 21, 2014), <http://www.fns.usda.gov/pressrelease/2014/fns-0004>.

173. *Id.*

174. *See* 7 U.S.C. § 1502(a) (2012) (“It is the purpose of this subchapter to promote the national welfare by improving the economic stability of agriculture through a sound system of crop insurance and providing the means for the research and experience helpful in devising and establishing such insurance.”).

insurance premium assistance, linking two different titles and objectives of the farm bill.¹⁷⁵ Specifically, the 2014 Farm Bill “relinked highly erodible land conservation and wetland conservation compliance with eligibility for premium support paid under the federal crop insurance program.”¹⁷⁶ Farmers who wish to purchase insurance to grow crops on highly erodible lands must first develop conservation plans and file a Highly Erodible Land Conservation and Wetland Conservation Certification with their local Farm Service Agency.¹⁷⁷ Furthermore, the new Sodsaver provision with the 2014 Farm Bill limits crop insurance to farmers who convert native grasslands to crop production.¹⁷⁸ The goals of such programs are to reduce soil erosion and sediment runoff and therefore protect soil productivity.¹⁷⁹

Linking crop insurance with conservation policy exemplifies systems thinking. These provisions recognize that farmers should not just be producers, but should also be good stewards of the earth. The conservation compliance programs within the 2014 Farm Bill recognize that healthy soil is an essential part of our food system, but also acknowledge that farming is a risky enterprise. Environmental organization, agricultural associations, farmers unions, and insurance bureaus have voiced support for this move¹⁸⁰ calling it a “win” for

175. See *Conservation Compliance: A Key Component of the Farm Bill*, WILDLIFE MANAGEMENT INSTITUTE, http://www.wildlifemanagementinstitute.org/index.php?option=com_content&view=article&id=584:conservation-compliance-a-key-component-of-the-farm-bill&catid=34:ONB%20Articles&Itemid=54 (last visited Feb. 23, 2015) (“Between 1985 and 1996, the federal crop insurance program required conservation compliance before providing funds to farmers. However, in the 1996 Farm Bill it was dropped as a requirement from the crop insurance program to attract more producers to participate. Conservation compliance was then tied to the direct payment subsidies to farmers that were initiated in the 1996 Farm Bill.”).

176. Press Release, USDA, USDA Reminds Farmers of 2014 Farm Bill Conservation Compliance Changes (Jul. 22, 2014), <http://www.usda.gov/wps/portal/usda/usdahome?contentidonly=true&contentid=2014/07/0155.xml>.

177. See *id.* (describing filing requirements); *2014 Farm Bill Drill Down: Conservation-Crop Insurance Linkages*, NAT’L SUSTAINABLE AGRIC. COAL. BLOG (Feb. 10, 2014), <http://sustainableagriculture.net/blog/2014-farmbill-hel-wetlands/> (“For the first time since Congress severed the link between conservation and insurance subsidies in 1996, farmers who purchase subsidized crop insurance will have to develop conservation plans when they grow crops on land subject to high rates of erosion.”) [hereinafter SUSTAINABLE AGRICULTURE, *Crop Insurance*].

178. See SUSTAINABLE AGRICULTURE, *Crop Insurance*, *supra* note 177 (“The 2014 Farm Bill also includes a Sodsaver provision to limit crop insurance subsidies on native grasslands that are converted to crop production.”).

179. See *Subsidies with Responsibilities*, *supra* note 16, at 521 (“Their goal is to reduce soil erosion, which in turn helps to protect soil productivity and reduce sediment runoff.”).

180. See U.S. SENATE COMM. ON AGRIC. NUTRITION & FORESTRY, AN HISTORIC AGREEMENT, LINKING CONSERVATION COMPLIANCE AND CROP INSURANCE 4, *available at*

conservation.¹⁸¹

*c. Waste and Energy*¹⁸²

The Biomass Crop Assistance Program (BCAP) in the 2014 Farm Bill seeks to offset feedstock¹⁸³ collection and delivery costs to biomass conversion facilities (BCFs), which can then use these residues to generate energy.¹⁸⁴ While much of the feedstock is woody material from forestland, the program is also interested in agricultural or crop residues from agricultural lands.¹⁸⁵

This program was reauthorized as part of the 2014 Farm Bill. It provides financial assistance by matching grants to farmers and ranchers who plant and maintain new energy biomass crops, or who “harvest and deliver forest or agricultural residues” to energy facilities.¹⁸⁶ While this program is still in its infancy (making its first appearance in the 2008 Farm Bill), it demonstrates that policy makers are thinking not just about the unintended consequences of focusing solely on ethanol as a biofuel, but also about the environmental benefits of using biomass as an energy source.¹⁸⁷ It also shows greater coordination between the USDA Farm Service and the USDA Forest Service, and helps reduce forest fires and disease on federal land

http://www.stabenow.senate.gov/linkedddocuments/farm_bill/2014/fb_conservation.pdf (listing organizations that support the conservation compliance agreement in the 2014 farm bill).

181. SUSTAINABLE AGRICULTURE, *Crop Insurance*, *supra* note 177.

182. *See Funding Available for Turning Biomass Material into Energy*, NAT'L SUSTAINABLE AGRIC. COAL. BLOG (Jun. 11, 2014), <http://sustainableagriculture.net/blog/bcap-nofa/> (describing government funding provided for converting biomass into energy).

183. “Feedstock” refers to crops that are suited to be turned into energy. *Id.*

184. *See Biomass Crop Assistance Program: Promoting the cultivation of biomass for bioenergy production*, NAT'L SUSTAINABLE AGRIC. COAL. BLOG (Oct. 2014), <http://sustainableagriculture.net/publications/grassrootsguide/renewable-energy/biomass-crop-assistance-program/> (“BCAP provides . . . matching payments to assist with the collection, harvest, storage and transport of a BCAP crop or certain types of woody biomass to a biomass conversion facility.”).

185. *See* MARK A. MCMINIMY, CONG. RESEARCH SERV., R41296, BIOMASS CROP ASSISTANCE PROGRAM: STATUS AND ISSUES 6 (Mar. 10, 2014), *available at* <http://nationalaglawcenter.org/wp-content/uploads/assets/crs/R41296.pdf> (defining biomass as including waste material such as “crop residue” and “other vegetable water material”) [hereinafter CONGRESSIONAL, *Biomass Crop*].

186. Press Release, USDA Farm Service Agency, USDA Announces Funding Availability for Turning Biomass Material into Energy (Jun. 9, 2014), http://fsa.usda.gov/FSA/newsReleases?area=newsroom&subject=landing&topic=ner&newstype=newsrel&type=detail&item=nr_20140609_rel_0115.html.

187. For a detailed review of the most recent Biomass Crop Assistance Program, *see generally* CONGRESSIONAL, *Biomass Crop*, *supra* note 185 (outlining the status and issues of the BCAP).

while providing biomass feedstock for advanced energy facilities.¹⁸⁸

2. Partnerships

In any system, strong partnerships can improve connections and feedback loops. The 2014 Farm Bill creates new, alternative partnerships and expands on existing partnerships that can support a sustainable food system.

a. Agency and Public-Private Partnerships

The Health Food Financing Initiative (HFFI) is both a partnership between the USDA, the Treasury Department, and the U.S. Department of Health and Human Services, and a partnership between these federal agencies and private businesses.¹⁸⁹ Together, these three federal agencies provide grants to full service grocery stores and farmers markets that are located in lower-income urban and rural areas.¹⁹⁰ Although similar grants have been distributed by the federal government since 2011, the 2014 Farm Bill formally establishes this program and gives administrative responsibility to the USDA.¹⁹¹ The 2014 Farm Bill authorizes \$125 million in federal aid to this program with the goal of improving access to healthy food in underserved areas, creating and preserving quality jobs, and revitalizing low income areas.¹⁹² As a result, HFFI is one way of

188. See Press Release, USDA Farm Service Agency, USDA Improves Forest Health by Harvesting Biomass for Energy, 2014 Farm Bill Program Generates Renewable Energy, Helps Reduce Forest Fire Threats (Dec. 17, 2014), <http://content.govdelivery.com/accounts/USFSA/bulletins/e3c810> (“BCAP, reauthorized by the 2014 Farm Bill, provided incentives for the removal of dead or diseased trees from National Forests and Bureau of Land Management lands for renewable energy, while reducing the risk of forest fire.”).

189. See ROBERT WOOD JOHNSON FOUND., THE STATE OF OBESITY: BETTER POLICIES FOR A HEALTHIER AMERICA, TRUST FOR AMERICA’S HEALTH 50 (Sep. 2014), available at <http://www.rwjf.org/content/dam/farm/reports/reports/2014/rwjf414829> (“The federal government has been funding HFFI grants through the U.S. Department of Health and Human Services and the Department of Treasury since 2011.”).

190. See *id.* (“To date, HFFI has distributed more than \$109 million in grants across the country, helping to support the financing of grocery stores and other healthy food retail outlets including farmers’ markets, food hubs and urban farms.”).

191. See *2014 Farm Bill Drilldown: Local and Regional Food Systems, Healthy Food Access, and Rural Development*, NAT’L SUSTAINABLE AGRIC. COAL. BLOG (Feb. 11, 2014), <http://sustainableagriculture.net/blog/2014-farmbill-local-rd-organic/> (“The bill also authorizes USDA to house a Healthy Food Financing Initiative (HFFI) to provide healthy food retailers with grants and loans to “overcome the higher costs and initial barriers to entry in underserved areas.”).

192. See 7 U.S.C. § 6953(a) (2012) (“The purpose of this section is to enhance the authorities of the Secretary to support efforts to provide access to healthy food by establishing an initiative to improve access to healthy foods in underserved areas, to create and preserve

addressing the issue of “food deserts.”¹⁹³

HFFI has received a tremendous amount of support from organizations focused on bringing healthy foods into underserved areas. For example, Dr. Oran Hesterman (CEO of the Fair Food Network) noted that, because of this program, the 2014 Farm Bill does more than previous farm bills to help low income families access healthy and affordable food in their communities.¹⁹⁴ In an op-ed to *The Huffington Post*, Donald Hinkle-Brown (CEO of The Reinvestment Fund, Yael Lehmann, Executive Director of The Food Trust) and Judith Bell (President of PolicyLink) praised the program not just for its nutritional benefits, but also for the economic development this program fosters.¹⁹⁵ They note, “[h]ealthy food retail can serve as economic anchors in a community, generating new income while attracting complementary stores and services like banks, pharmacies, and restaurants.”¹⁹⁶

The proposed Hubb 55, located in a food desert in Cleveland, is one example of a project funded through HFFI in 2014.¹⁹⁷ An \$800,000 grant will help fund Hubb 55, a food hub, a farmers market, café and brewery.¹⁹⁸ The stated goals of Hubb 55 are to: “(1) create sustainable employment and business opportunities; (2) increase

quality jobs, and to revitalize low-income communities by providing loans and grants to eligible fresh, healthy food retailers to overcome the higher costs and initial barriers to entry in underserved areas.”)

193. See Tracie Mauriello, *Federal Farm Bill to Alleviate Food Deserts*, PITTSBURGH POST-GAZETTE (Feb. 7, 2014), <http://www.post-gazette.com/news/nation/2014/02/08/Federal-farm-bill-to-alleviate-food-deserts/stories/201402080056> (“The bill authorizes funding for the Healthy Food Financing Initiative to provide start-up grants and affordable loan financing for food retailers, farmers markets and cooperatives that sell and deliver healthy goods to ‘food deserts’”); *Healthy Communities*, LET’S MOVE, <http://www.letsmove.gov/healthy-communities> (last visited Feb. 23, 2015) (describing HFFI as a way to combat food deserts); THE REINVESTMENT FUND, *A HEALTHY FOOD FINANCING INITIATIVE: AN INNOVATIVE APPROACH TO IMPROVE HEALTH AND SPARK ECONOMIC DEVELOPMENT 1* (Feb. 17, 2010), available at http://www.trfund.com/wp-content/uploads/2013/05/HealthyFoodFinancing_2_17_10.pdf (explaining that since 2004, the FFFI has “helped develop 83 supermarkets and fresh food outlets in underserved rural and urban areas throughout the state, creating or retaining 5,000 jobs in those communities”).

194. FAIR FOOD NETWORK, *supra* note 91.

195. Donald Hinkle-Brown et al., *Access to Healthy Foods Improves Health, Brings Economic Benefits*, HUFF POST, THE BLOG (Feb. 20, 2014, 9:04 AM), http://www.huffingtonpost.com/don-hinklebrown/access-to-healthy-food_b_4822735.html.

196. *Id.*

197. Thirteen similar projects were also funded. *CED-HFFI Grant Awards FY 2014* U.S. DEP’T OF HEALTH & HUMAN SERVS., ADMIN. FOR CHILDREN & FAMILIES, OFFICE OF CMTY. SERVS. (Sept. 29, 2014), <http://www.acf.hhs.gov/programs/ocs/resource/ced-hffi-grant-awards-fy-2014> [hereinafter *Grant Awards*].

198. *Id.*

access to affordable, local, healthy food in Cleveland; (3) develop a healthy food distribution system; and, (4) implement strategies that promote and encourage healthy food education and consumption.”¹⁹⁹ This project is expected to create 45 jobs and bring \$450,000 into the community.²⁰⁰

HFFI is one example of the creative public-private partnerships funded through the 2014 Farm Bill.²⁰¹ The program is system-like because, through partnerships and recognition of common objectives, it both increases access to healthy food in underserved communities, while spurring economic development and revitalization. Partnerships like these can help stakeholders and legislatures see the forest for the trees and should be further developed and encouraged.

3. Farmer-Consumer Partnerships

New partnerships do not just exist at the agency level. The Farmers’ Market and Local Food Promotion Program (FMLFPP) is an example of a 2014 Farm Bill program focused on connecting farmers to their consumers.²⁰² This program, administered by the Agricultural Marketing Service (AMS) arm of the USDA, consists of two competitive grant programs: the Farmers’ Market Promotion Program (FMPP) and the Local Food Promotion Program (LFPP).²⁰³ Although the Farmers’ Market Promotion Program existed in prior farm bills, it was not funded as part of the one-year extension of the Farm Bill in 2013.²⁰⁴ The Local Food Promotion Program, on the

199. *Hub 55*, ST. CLAIR SUPERIOR DEV. CORP., <http://www.stclairsuperior.org/neighborhoods/st-clair-neighborhood/hub-55/> (last visited Apr. 1, 2015).

200. *Grant Awards*, *supra* note 197.

201. An example of a conservation partnership new to the 2014 Farm Bill is the USDA Regional Conservation Partnership Program. The USDA’s conservation agency, the Natural Resources Conservation Service (NRCS), will support cooperative projects between farmers, ranchers, and private forest landowners. These projects will receive more than \$370 million in Federal funding, and leverage “an estimated \$400 million in partner contributions to improve the nation’s water quality, support wildlife habitat and enhance the environment.” *RCP – 2014/15 Final Projects Homepage*, NATURAL RES. CONSERVATION SERV., <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/farmbill/rcpp/?cid=stelprdb1264664> (last visited Apr. 1, 2015).

202. *See generally* 7 U.S.C. § 3005 (2012).

203. *Farmers Markets and Local Food Marketing: Farmers Market Promotion Program (FMPP)*, USDA AGRIC. MKTG. SERV., <http://www.ams.usda.gov/AMSV1.0/ams.fetchTemplateData.do?template=TemplateN&navID=FMPPGrantsLinkSMPSelectaState&rightNav1=FMPPGrantsLinkSMPSelectaState&topNav=&leftNav=WholesaleandFarmersMarkets&page=FMPP&resultType=&acct=fmpp> (Mar. 26, 2015).

204. *Government Shutdown Leaves Farm Bill Stranded; Local Food Programs That Could Save Taxpayers Billions Remain in Limbo*, UNION OF CONCERNED SCIENTISTS (Oct. 3, 2013), <http://www.ucsusa.org/news/commentary/govt-shutdown-harms-Farm-Bill->

other hand, is a new program to the farm bill. Over \$27 million in competitive grants are available through the Local Food Marketing Promotion Program (LFPP) and the Farmers Market Promotion Program (FMPP) each fiscal year.²⁰⁵ This new and renewed support for direct marketing and local food can further connect farmers to consumers.

The goal of FMPP is to “increase domestic consumption of, and access to, locally and regionally produced agricultural products” through grants to CSA networks and associations, local governments, non-profits, and regional farmers market authorities.²⁰⁶ The focus is on direct-to-consumer-marketing activities such as roadside stands and farmers markets.²⁰⁷ The grants do not require any matching funds.²⁰⁸

The goal of the LFPP is to develop and expand food businesses in order to increase domestic consumption of locally- and regionally-produced agricultural products.²⁰⁹ LFPP does this by matching grants to agricultural businesses, CSA networks and cooperatives, non-profits, and economic development corporations. A project qualifies as an LFPP if it involves an intermediary supply chain activity such as moving or promoting the project from the origin of the project to the distributor (e.g. food hub) or from the distributor to the retail outlet (e.g., store, CSA, or farmers market).²¹⁰ Matching funds are required.²¹¹

0408.html#.VM_IETGjOM4.

205. See USDA AGRIC. MKTG. SERV., FARMERS MARKET PROMOTION PROGRAM ANNOUNCEMENT: FISCAL YEAR 2014 REQUEST FOR APPLICATIONS 2, available at <http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRDC5107561> (last visited Feb. 20, 2015) (listing the availability of \$15 million in competitive grants through the Farmers Market Promotion Program); *Local Food Promotion Program: Fiscal Year 2014 Request for Applications*, USDA AGRIC. MKTG. SERV. 2, available at <http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRDC5107563> (last visited Feb. 20, 2015) (listing the availability of \$15 million in competitive grants through the Local Food Promotion Program).

206. *Farmers Markets and Local Food Marketing: Farmers Market Promotion Program (FMPP)*, *supra* note 203.

207. *Id.*

208. USDA AGRIC. MKTG. SERV., FARMERS MARKET PROMOTION PROGRAM (FMPP): FREQUENTLY ASKED QUESTIONS 7 (Mar. 6, 2015), available at <http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRDC5108029>.

209. *Farmers Markets and Local Food Marketing: Local Food Promotion Program (LFPP)*, *supra* note 203.

210. USDA AGRIC. MKTG. SERV., LOCAL FOOD PROMOTION PROGRAM (LFPP): FREQUENTLY ASKED QUESTIONS 1, available at <http://www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRDC5107907> (last visited March 31, 2015).

211. *Id.*

Connecting farmers and consumers has also been a stated goal of several departments within the Department of Agriculture.²¹² In an effort to implement the goals of the 2014 Farm Bill, the Agricultural Marketing Service requested funds “to aid the development of food value chains such as food hubs and other marketing outlets for locally- and regionally-produced food where data, infrastructure and technology gaps limit producers’ marketing opportunities and consumers’ access.”²¹³ In announcing the grant amount for fiscal year 2014, Secretary Vilsack explained that local and regional food systems are one of the USDA’s priorities in its efforts to revitalize rural economies.²¹⁴ Vilsack acknowledged that investments made in local and regional food systems both support farmers and ranchers, and strengthen community economies.²¹⁵

4. Farmer-Farmer Partnerships

The Conservation Reserve Program-Transition Incentives Program (CRP-TIP), although not a new program, has recently received renewed support.²¹⁶ It is commended for creating a new farmer-farmer partnership that incentivizes retiring landowners to return their land to production by using established conservation practices. It also gives economically disadvantaged farmers and ranchers the means to purchase or rent their own land.²¹⁷ It is the addition of transferring land between veteran farmers and novice farmers and ranchers that is new and which supports strong farmer-farmer partnership.²¹⁸

212. See THE OFFICE OF BUDGET AND PROGRAM ANALYSIS, USDA, FY 2015 BUDGET SUMMARY & ANNUAL PERFORMANCE PLAN 79, available at <http://www.obpa.usda.gov/budsum/FY15budsum.pdf> (noting that the USDA has a strategic goal of “assist[ing] rural economies to create prosperity by better connecting consumers with local producers.”).

213. *Id.*

214. Press Release, USDA, USDA Awards Over \$52 Million in Grants to Grow Organic and Local Food Economies, (Sept. 29, 2014), <http://www.usda.gov/wps/portal/usda/usdahome?contentid=2014/09/0216.xml&contentidonly=true>

215. *Id.*

216. *Funding Available to Conserve Sensitive Land and Support Beginning Farmers*, NAT’L SUSTAINABLE AGRIC. COAL. BLOG (June 5, 2014), <http://sustainableagriculture.net/blog/crp-tip-announcement/>.

217. *Conservation Programs: Transition Incentives Program*, USDA FARM SERV. AGENCY, <http://www.fsa.usda.gov/FSA/webapp?area=home&subject=copr&topic=tipr> (last updated May 24, 2013).

218. Continuation of Conservation Reserve Program, Including Transition Incentives Program, 79 Fed. Reg. 32,435 (June 05, 2014) (to be codified at 7 C.F.R pt. 1410), available at <http://www.gpo.gov/fdsys/pkg/FR-2014-06-05/pdf/2014-13085.pdf>.

B. Perspective

In the context of systems thinking, perspective means the consideration of alternatives.²¹⁹ As Williams and Hummelbrunner note, thinking systematically about stakeholders' perspectives draws the focus away from how the system exists in "real life" to consider what it could or should be like.²²⁰ This generates greater insight into how programs actually work in real life.²²¹

The 2014 Farm Bill is historic in its funding of alternative farming practices like organic farming. It also provides unprecedented support for farmers who grow specialty crops as opposed to commodity crops.

1. Organic Farming

Support for organic farming existed in prior farm bills but reached a new high in the 2014 Farm Bill. Commentators describe the 2014 Farm Bill's investment in organic farming as an "historic win."²²² The success of organic farming is especially encouraging given that many of these programs lost funding when the previous farm bill expired in 2013.²²³ Financial support can be found in a number of programs, including cost-sharing for obtaining organic certification, research and education on organics, and the National Organic Program (NOP).²²⁴

Perhaps one of the more exciting programs—and one which shows a deeper policy shift—can be found in the Crop Insurance title of the Farm Bill.²²⁵ The 2014 Farm Bill expanded crop insurance for organics by requiring price elections by 2015. These price elections reflect actual retail or wholesale prices of non-conventional, organic crops for all organic crops produced in compliance with federal

219. WILLIAMS & HUMMELBRUNNER, *supra* note 116, at 19-21.

220. *Id.*

221. *Id.*

222. Cookson Beecher, *Historic Wins for Organic Industry in New Farm Bill*, FOOD SAFETY NEWS (Apr. 2, 2014), <http://www.foodsafetynews.com/2014/04/historic-wins-for-organics-in-new-farm-bill-says-industry-official/#.VBeeIfldWSo>.

223. See Stateside Staff, *Farm Bill Extension Causes Trouble for Organic Farmers*, MICHIGAN RADIO (Nov. 11, 2013), <http://michiganradio.org/post/farm-bill-extension-causes-trouble-organic-farmers> (noting that cost share program was discontinued in 2013).

224. See generally FY 2015 BUDGET SUMMARY, *supra* note 212, at 11, 73 (describing the new programs).

225. Kate Fitzgerald, *Organic Farming Comes of Age in the 2014 Farm Bill*, FAIR FOOD NETWORK (Apr. 29, 2014 11:51am), <http://fairfoodnetwork.org/connect/blog/organic-farming-comes-age-2014-farm-bill>.

standards for organics.²²⁶ Financial, programmatic, and research support for organic farming also grew in the 2014 Farm Bill.²²⁷ This support further legitimizes organic farming at the federal level as a viable alternative to conventional farming.

2. Specialty Crops

Like organics, support for specialty crops was not a new addition to the 2014 Farm Bill. But also like organics, investments in growing fruits and veggies reached a new high. The 2008 Farm Bill was the first farm bill to specifically target specialty crops.²²⁸ As defined in the 2008 Farm Bill, specialty crops include “fruits and vegetables, tree nuts, dried fruits, and horticulture and nursery crops (including floriculture).”²²⁹ Specialty crops make up approximately one-fourth of the total sales of U.S. crops, but only 3% of the harvested cropland acres in the United States.²³⁰

Unlike commodity crop growers, most specialty crop farmers do not benefit from individually tailored support programs within the farm bill.²³¹ Instead, organic farmers and specialty crop farmers benefit from indirect support through marketing and promotion programs, trade assistance, research and Extension, pest and disease protection, and crop insurance.²³² Increased support for specialty crops can be found throughout the various titles of the 2014 Farm Bill including, Title XI: Crop Insurance (e.g., whole farm coverage as opposed to insuring individual crops); Title X: Horticultural (e.g., specialty crop block grants and the farmers’ market and local food promotion programs); and Title IV: Nutrition.²³³ In terms of overall spending, the greatest increases in support are found in the Nutrition Title.²³⁴ Such programs include the farm-to-school programs, the fresh fruit and vegetable program, the food insecurity nutrition

226. RENEE JOHNSON, CONG. RESEARCH SERV., R42771, FRUITS, VEGETABLES, AND OTHER SPECIALTY CROPS: SELECTED FARM BILL AND FEDERAL PROGRAMS 12 (July 11, 2014), available at <http://nationalaglawcenter.org/wp-content/uploads/assets/crs/R42771.pdf>.

227. *2014 Farm Bill Drilldown: Sustainable and Organic Research*, NAT’L SUSTAINABLE AGRIC. COALITION BLOG (Feb. 12, 2014), <http://sustainableagriculture.net/blog/2014-farm-bill-drilldown-ree/>.

228. JOHNSON, SPECIALTY CROP PROVISIONS, *supra* note 163, at 4. Some pilot programs existed in the 2002 Farm Bill. *Id.*

229. 7 U.S.C. § 1621 statutory note.

230. JOHNSON, SPECIALTY CROP PROVISIONS, *supra* note 163, at 1.

231. *Id.* at 4–5.

232. *Id.* at 5.

233. *Id.* at 8.

234. *Id.* at 9.

incentive, and HFFI.²³⁵

These programs not only demonstrate a commitment to supporting specialty crop growers, but they also reflect a deeper understanding by the USDA of the importance of partnerships and systems thinking in creating a sustainable food system. For example, when speaking about Whole-Farm Insurance, the Secretary of Agriculture noted that this type of insurance “gives farmers more flexibility, promotes crop diversity, and helps support the production of healthy fruits and vegetables.”²³⁶ Greater flexibility gives farmers and ranchers greater freedom in making decisions about their land, which gives them a better chance of success and thereby strengthens the national agricultural economy.²³⁷ In addition, the USDA is vocal about the connection between organics, specialty crops, and nutrition. As Secretary Vilsack noted on the USDA blog in April 2014, the USDA’s continued and increased support shows a dedication to producers’ long-term success, and to broadening the specialty crop market.²³⁸

Despite support for alternatives such as organic crops and specialty crops, farm bill spending on commodity crops still greatly exceeds that spent on any alternatives.²³⁹ Furthermore, farmers of commodity crops are given far more individualized support through federal programs than farmers of organics or specialty crops.²⁴⁰ As a result, the current, limited support for alternatives is not sufficient to create a sustainable food system.

C. Boundaries

Essential to systems thinking is recognizing what is and is not part of the system. Boundaries determine what is relevant versus irrelevant; what is important versus unimportant; who is benefitted versus disadvantaged; and who is given a resource for what purpose.²⁴¹

235. *Id.* at 13–14.

236. Press Release, USDA, New Pilot Program Offers Coverage for Fruits and Vegetables, Organic and Diversified Farms (May 21, 2014), <http://www.usda.gov/wps/portal/usda/usdahome?contentid=2014/05/0100.xml>.

237. *Id.*

238. Tom Vilsack, *Secretary’s Column: Farm Bill Supports Specialty Crop Growers, Improves Access to Healthy Food*, USDA BLOG (Apr. 18, 2014 12:00PM), <http://blogs.usda.gov/2014/04/18/secretarys-column-farm-bill-supports-specialty-crop-growers-improves-access-to-healthy-food/>.

239. JOHNSON, SPECIALTY CROP PROVISIONS, *supra* note 163, at 5.

240. *Id.* at 4–5.

241. WILLIAMS & HUMMELBRUNNER, *supra* note 116, at 22.

The 2014 Farm Bill does a much better job than its predecessors of developing such “boundaries” by considering relevant and necessary parts of a sustainable food system through greater expansion of definitions and scope, and through inclusion of new terms.

1. Expanding Definitions: Retail Food Store

The 2014 Farm Bill amends the definition of retail food store by changing the “stocking requirements” of retail stores.²⁴² The new stocking requirements would require stores wishing to serve as “retail food stores”—for purposes of accepting SNAP benefits—to sell at least seven types of items in each of four delineated categories (fruits and vegetables, grains, dairy, and meat); and to sell perishable items in at least three of these categories.²⁴³ This change has been applauded by anti-hunger advocates as creating additional opportunities for the purchase of healthful food.²⁴⁴

2. Expanding Scope: CSAs, Gleaners, and Physical Education

Prior to the 2014 Farm Bill, shares in Community Supported Agriculture (CSAs) could not be purchased using SNAP benefits.²⁴⁵ Furthering efforts to connect consumers—particularly those receiving SNAP benefits—to healthy food options, the 2014 Farm Bill expands those outlets where SNAP benefits can be redeemed to include CSAs.²⁴⁶ This option is another opportunity for individuals receiving assistance to purchase healthy foods, benefitting both farmers and consumers.

Community Food Projects have been further expanded to support food recovery and “gleaning” projects.²⁴⁷ Gleaners are

242. Agricultural Act of 2014, H.R. 2642, 113th Cong. § 4002 (2014).

243. ED BOLEN ET AL., CENTER ON BUDGET AND POLICY PRIORITIES, SUMMARY OF THE 2014 FARM BILL NUTRITION TITLE: INCLUDES BIPARTISAN IMPROVEMENTS TO SNAP WHILE EXCLUDING HARSH HOUSE PROVISIONS 11 (Feb. 3, 2014), *available at* <http://www.cbpp.org/files/1-28-14fa.pdf>.

244. FOOD FOR THOUGHT, ADVOCACY CORNER: THE NEW FARM BILL – PROS AND CONS FOR FOOD BANK PARTICIPANTS, *available at* shfb.2ss.net/upload/file/Food-For-Thought---Winter-2014.pdf (last visited Feb. 21, 2015).

245. In a CSA, “shareholders” purchase a “share” of a farm and in return receive produced harvested from that farm later in the season. See Rachel Armstrong & Nicholas R. Johnson, *Advising Farms with Community-Supported Agriculture Programs: Challenges and Changes for the Legal Practitioner*, 19 AGRIC. MGMT. COMM. NEWSLETTER NO. 2 (Sept. 2014), at 13 (discussing that before the 2014 Farm Bill, “regulations implementing SNAP prohibited food retailers from accepting benefits in advance of the delivery of food. 7 C.F.R. § 278.2(e) (2007).”).

246. Agricultural Act of 2014, at § 4012.

247. Community Food Projects have been in existence since the 1996 Farm Bill. USDA

defined in the farm bill as an entity that

collects edible, surplus food that would be thrown away and distributes the food to agencies or nonprofit organizations that feed the hungry; or . . . harvests for free distribution to the needy, or for donation to agencies or nonprofit organizations for ultimate distribution to the needy, an agricultural crop that has been donated by the owner of the crop.²⁴⁸

Gleaning projects present just a sample of the many programs funded through the Community Food Programs grants.

The Community Food Programs focus on long term solutions to food insecurity that link local food production and processing to improving the community's health, economy, and environment.²⁴⁹ They are particularly illustrative of the innovative ways the 2014 Farm Bill chooses to address food insecurity.

Another example of how the 2014 Farm Bill has expanded its "boundaries" by expanding its scope is by specifically referring to physical activity.²⁵⁰ Education programs that are part of the nutrition title no longer have to focus exclusively on nutrition education; funding is now available for programs that promote physical activity.²⁵¹ Addressing obesity and nutrition concerns by incentivizing the consumption of healthy foods, is only part of the solution. Providing funding for physical activities is truly using a systems thinking approach.

3. New Term: Food System

In addition to expanding the system, the text of the 2014 Farm Bill includes for the first time the phrase "food system."²⁵² A new provision of the Farm Bill requires the USDA to collect data on the

NAT'L INST. OF FOOD & AGRIC., *Community Food Projects Competitive Grant Program*, http://www.nifa.usda.gov/funding/cfp/cfp_synopsis.html (last visited Mar. 31, 2015). The USDA writes that these grants "increase food security in communities by bringing the whole food system together to assess strengths, establish linkages, and create systems that improve the self-reliance of community members over their food needs." *Id.*

248. Agricultural Act of 2014, at § 4026.

249. USDA NAT'L INST. OF FOOD & AGRIC., *Topic Areas*, <http://nifa.usda.gov/topic-areas> (last visited on Mar. 31, 2015).

250. Agricultural Act of 2014, at § 4028; FARM BILL SUMMARY, *supra* note 80, at 111.

251. Agricultural Act of 2014, at § 4028; FARM BILL SUMMARY, *supra* note 80, at 111.

252. JOHNSON, SPECIALTY CROP PROVISIONS, *supra* note 163, at 21; *see, e.g.*, Agricultural Act of 2014, at § 10,016.

marketing and production of locally and regionally produced agricultural products and to monitor the effectiveness of programs designed to facilitate and expand local food systems.²⁵³ Although the phrase “food system” only appears in a limited number of places, this is an encouraging first step—similar to the inclusion of the term “local food” in the 2008 Farm Bill.²⁵⁴

As Michael Pollan notes, labeling this piece of legislation a “farm bill” is a misnomer, it should in fact be called a “food bill.”²⁵⁵ In order to create a sustainable food system, Pollan’s suggestion should be taken one step further, addressing this legislation as a “food *system* bill”; one that not only recognizes the food and farm aspect of our food system, but also the energy inputs, waste outputs, urban and rural stakeholders, the producers, consumers, and everyone in between.

V. CONCLUSION

Passing a farm bill is one hurdle; implementing its programs is another. Even though the 2014 Farm Bill is now law, heated discussions about the funding and implementation of these programs continue. Take for example, the recent debate over adding white potatoes to the food items available for purchase through the WIC program,²⁵⁶ or allowing schools demonstrating revenue loss to opt out of implementing new school lunch nutrition standards.²⁵⁷ As debate over farm bill funding heightened, in June 2014, President Obama threatened to veto the House’s 2015 Agricultural spending bill.²⁵⁸

Despite these issues, on paper the 2014 Farm Bill does a better

253. JOHNSON, SPECIALTY CROP PROVISIONS, *supra* note 163, at 21.

254. The Food, Conservation, and Energy Act of 2008, H.R. 2419, 110th Cong. § 209(c)(3) (2008).

255. Michael Pollan, *You Are What You Grow*, N.Y. TIMES MAG. (Apr. 22, 2007), available at <http://michaelpollan.com/articles-archive/you-are-what-you-grow/>.

256. Michelle Obama, *The Campaign for Junk Food*, N.Y. TIMES, May 29, 2014, at A35, available at http://www.nytimes.com/2014/05/29/opinion/michelle-obama-on-attempts-to-roll-back-healthy-reforms.html?_r=1; Krissy Clark, *Potatoes Fight to get on the WIC Nutrition List*, MARKETPLACE (June 10, 2014, 4:16 PM), <http://www.marketplace.org/topics/wealth-poverty/potatoes-fight-get-wic-nutrition-list>.

257. *FY 2015 Agriculture Appropriations*, FOOD RESEARCH & ACTION CTR., <http://frac.org/leg-act-center/budget-and-appropriations/appropriations-2/> (last visited Feb. 21, 2015).

258. OFFICE OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, STATEMENT OF ADMINISTRATIVE POLICY: H.R. 4800—AGRICULTURE, RURAL DEVELOPMENT, FOOD AND DRUG ADMINISTRATION, AND RELATED AGENCIES APPROPRIATES ACT, 2015 (June 10, 2014), available at http://www.whitehouse.gov/sites/default/files/omb/legislative/sap/113/saphr4800r_20140610.pdf.

job of making interconnections, considering various perspectives, and defining our food system's boundaries. After all, systems thinking, as applied to food policy, needs to be written into the law before it can be fully implemented on the ground. The programs highlighted in this article adopt these approaches and reflect a greater understanding of the inputs and outputs generated throughout the entire food system. These programs also show a more thoughtful consideration of the interrelationships and forces involved in our food system.

There are still shortcomings in the 2014 Farm Bill and programs that need to be fully funded. Nevertheless, policy makers should continue to build on these systems thinking approaches as they strive to create federal food and agricultural policies that are healthy and sustainable for everyone.