



New England Food Policy: *Building a Sustainable Food System*

March 2014

**American Farmland Trust
Conservation Law Foundation
Northeast Sustainable Agriculture Working Group**

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www.newenglandfoodpolicy.org



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American Farmland Trust (AFT)

AFT is the only national conservation organization dedicated to protecting farmland, promoting sound farming practices, and keeping farmers on the land. As the vital link between farmers, conservationists, and policy-makers, AFT is focused on ensuring the availability of land that provides fresh food, a healthy environment, and the foundation for successful farm businesses. Since its founding in 1980 by a group of farmers and citizens concerned about the rapid loss of farmland to development, AFT has helped to save more than five million acres of farmland and led the way for the adoption of conservation practices on millions more.

Conservation Law Foundation (CLF)

Founded in 1966, CLF protects New England's environment for the benefit of all people. CLF uses law, science, and the market to create solutions that preserve our natural resources, build healthy communities, and sustain a vibrant economy. CLF has long experience in designing and implementing regulatory reform to promote environmental protection. With advocacy centers in Massachusetts, Vermont, New Hampshire, Maine and Rhode Island, CLF works in four program areas: Healthy Communities and Environmental Justice; Ocean Conservation; Clean Energy and Climate Change; and Clean Water and Healthy Forests. CLF tackles some of New England's most pressing environmental and health issues through its Farm and Food Initiative, working to help shape and foster the development of a robust regional food system.

Northeast Sustainable Agriculture Working Group (NESAWG)

NESAWG is a 12-state food system social impact network. Founded in 1992, NESAWG engages over 500 organizations in food systems change work. NESAWG has been a national leader in regional approaches and solutions to food systems issues. NESAWG works on public policy at all levels, bringing voices from across the food system spectrum to the table. NESAWG's work groups focus on issues such as labor in the food chain, infrastructure, research, food safety, distribution, and food systems planning. It holds an annual conference, publishes reports, leads projects and builds network capacity.

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ACRONYM GUIDE

Acronym	Full Name	State
AFT	American Farmland Trust	
AMA	Agricultural Management Assistance	
APR	Agricultural Preservation Restriction	Massachusetts
BFRDP	Beginning Farmer and Rancher Development Program	
CCPI	Cooperative Conservation Partnership Initiative	
CDC	Centers for Disease Control and Prevention	
CGMP	Current Good Manufacturing Practice	
CIG	Conservation Innovation Grants	
CIS	Cooperative Interstate Shipment	
CISA	Community Involved in Sustaining Agriculture	Massachusetts
CLF	Conservation Law Foundation	
CONEG	Coalition of Northeastern Governors	
CREP	Conservation Reserve Enhancement Program	
CRP	Conservation Reserve Program	
CSA	Community Supported Agriculture	
DoD	Department of Defense	
EBT	Electronic Benefit Transfer	
EQIP	Environmental Quality Incentives Program	
FDA	Food and Drug Administration	
FDCA	Food, Drug, and Cosmetic Act	
FINE	Farm to Institution New England	
FLSA	Fair Labor Standards Act	
FMIA	Federal Meat Inspection Act	
FMNP	Farmers' Market Nutrition Program	
FPPA	Farmland Protection Policy Act	
FRPP	Farm and Ranch Lands Protection Program	
FSA	Farm Service Agency	
FSIS	Food Safety and Inspection Service	
FSMA	Food Safety Modernization Act	
FSNE	Food Solutions New England	
GAP	Good Agricultural Practices	
GHP	Good Handling Practices	

ACRONYM GUIDE

Acronym	Full Name	State
GIS	Geographic Information System	
HACCP	Hazard Analysis and Critical Control Points	
HNE	Harvest New England	
IDA	Individual Development Account	
MILC	Milk Income Loss Contract	
MOU	Memoranda of Understanding	
NASDA	National Association of State Departments of Agriculture	
NCIC	National Center for Interstate Compacts	
NEASDA	Northeastern Association of State Departments of Agriculture	
NEFFSI	New England Farm and Food Security Initiative	
NESAASA	New England States Animal Agriculture Security Alliance	
NESAWG	Northeast Sustainable Agriculture Working Group	
NIFA	National Institute of Food and Agriculture	
NOAA	National Oceanic and Atmospheric Administration	
NRCS	Natural Resources Conservation Service	
OPAV	Option to Purchase at Agricultural Value	Massachusetts and Vermont
PACE	Purchase of Agricultural Conservation Easements	
PMO	Pasteurized Milk Ordinance	
PPIA	Poultry Products Inspection Act	
QR	Quick Response	
REAP	Rural Energy for America Program	
RGGI	Regional Greenhouse Gas Initiative	
RPS	Renewable Portfolio Standard	
SFMNP	Senior Farmers' Market Nutrition Program	
SARE	Sustainable Agriculture Research and Education	
SNAP	Supplemental Nutrition Assistance Program	
TCI	Transportation and Climate Initiative	
TTIP	Transatlantic Trade and Investment Partnership	
USDA	United States Department of Agriculture	
WHIP	Wildlife Habitat Incentive Program	
WIC	Women, Infants and Children	

New England Food Policy: Building a Sustainable Food System

PROJECT AND REPORT BACKGROUND

This report contributes to efforts across New England to promote a more regionally focused, healthier, economically vibrant, resilient, just and environmentally sustainable food system for New England. It reflects the collaborative work of three partners: American Farmland Trust (AFT); Conservation Law Foundation (CLF); and Northeast Sustainable Agriculture Working Group (NESAWG). As co-leaders of a two-year New England regional food system policy project, AFT, CLF and NESAWG analyzed policy barriers and gaps around increasing production and consumption of New England-sourced food consistent with the New England Food Vision. This analysis, along with policy suggestions, is presented here. It constitutes the first phase of the project. Its purpose is to provide groups and advocates with information, support and inspiration to promote local, state, regional and federal policy changes that could have the most significant impact on expanding production, strengthening food supply chains and enhancing multistate cooperation toward a more robust and resilient regional food system.

The report is intended as a tool to guide citizens, organizations, coalitions, agencies and policymakers to pursue supportive public policies and remove policy barriers. It focuses on public policy issues in five areas:

- » Land: Reducing Conversion, Increasing Permanent Protection and Expanding Access
- » Food Production
- » Food Safety, Processing, Aggregation and Distribution
- » Markets
- » Waste Streams

Our analysis is based on research conducted by AFT and CLF staff, with input from interviews with regional leaders and numerous stakeholders. In each area, the authors present a scan of the policy landscape. Each section identifies key public policy barriers and gaps at the state level, with reference to federal policy obstacles that affect our region. Sections also highlight supportive state and federal programs and policies. We note that this report was researched, written and finalized before the 2014 Farm Bill was passed; references in our analysis to the “next farm bill” should be read with the understanding that the 2014 Farm Bill was passed while this report was in final production. Similarly, the 2012 Census of Agriculture was released while this report was in final production.

We also conducted a scan of regional models for states working together to achieve shared goals. Some examples are drawn from within food systems. Some models come from other regions of the United States. Each model is potentially useful depending on the problem being addressed. The purpose of this unique research is to suggest additional ways that New England states could most effectively cooperate on strengthening our region’s food system.

This report provides an unprecedented examination of policy challenges and opportunities in the six New England states. That said, the five areas we investigated do not cover every possible food system topic, and do not address many private sector efforts that are important to the region's food system. Nor does the report substantively address fundamental food system issues such as equity and food access. Policy actions at all levels will need to integrate these and other elements and considerations.

Action: A Summary of Policy Suggestions

In each of the five sections, the authors present policy suggestions to address the identified barriers and gaps. We focus on state-level policy but also draw attention to federal policy challenges where these surfaced. This discussion is broken into three areas, though not every subsection contains suggestions in each area:

1. Support for existing programs;
2. Needed research and analysis; and
3. Policy options.

These policy suggestions are summarized below.

I. LAND: REDUCING CONVERSION, INCREASING PERMANENT PROTECTION AND EXPANDING ACCESS

1.1 REDUCING FARMLAND CONVERSION

CURRENT USE PROPERTY TAX VALUATION

Research and Analysis

- Analyze current use enrollment data at the state level to help policymakers evaluate program effectiveness.
- Gather and analyze feedback from landowners, assessors and municipal planning officials to assess the impact of current use programs on development patterns.
- Examine the impact of Massachusetts' right of first refusal policy to determine its effectiveness in helping towns protect farmland.
- Explore current use programs as a potential policy vehicle to expand farmland access.

Policy Options

- Allow municipalities to retain recapture penalties and direct them toward municipal farmland protection projects.
- Incorporate a right of first refusal into the program, allowing a town to purchase a farm parcel or assign the purchase to a land trust in the event the parcel is being developed.
- Through current use programs, encourage farming in urban and suburban areas and encourage more secure tenure for farmers leasing land.
- To incentivize conservation stewardship practices, adjust valuation guidelines to provide greater tax relief on land being farmed using key conservation practices or in conformance with a conservation plan.

- Provide towns with additional property tax tools to protect farmland, as Maine's Voluntary Municipal Farm Support Program does.
- Consider changes to current use statutes to incentivize additional leasing to farmers and longer lease terms.

STATE AND FEDERAL ESTATE TAXES

Research and Analysis

- Analyze how changes proposed in the Family Farm Estate Tax Relief Act of 2010 (H.R. 5475) would impact New England farms.
- Explore the connection between and opportunities for synchronizing state current use provisions for property taxes and federal and state estate tax provisions relating to special use valuation assessment.

Policy Options

Federal

- Revise the special use valuation assessment to incentivize keeping agricultural land in production.

State

- Consider special provisions for farms under the state estate tax, including provisions to exempt agricultural assets from estate taxes.

PLANNING AND LAND USE

Support for Existing Programs

- Maintain support for the federal Partnership for Sustainable Communities program, which provides funding for regional planning around food systems, including agricultural land use.
- Continue providing communities with financial and technical assistance to help them develop plans and zoning regulations that encourage smart growth, support farming and protect farmland.

Policy Options

- Require all local and regional plans to incorporate smart growth techniques, and require that local zoning conform to state and local comprehensive plans.
- Use technology such as GIS mapping and extrapolation software to demonstrate the effects on agriculture of current and past planning strategies, and to show the impacts of potential future policies.
- Amend state zoning laws to permit plant agriculture in all zoning districts, in order to encourage better use of agricultural land.
- Incentivize municipalities to designate growth areas that can support increased development density.
- Explore creation of sub-state regional transfer of development rights programs, and needed state-level enabling legislation, or possible incentives to promote such programs.

FARMLAND MITIGATION

Policy Options

Federal

- Strengthen the federal Farmland Protection Policy Act by:
 - » Requiring federal agencies to alter projects to avoid or minimize farmland conversion where possible; projects could be held to a “no feasible alternative” test.
 - » Covering agricultural farm parcels that are in urbanized areas or consist of fewer than 10 acres of land.
 - » Mitigating conversion when farmland is developed with funding from federal agencies.
 - » Creating additional opportunities for the public and key stakeholders to review and challenge decisions.
- Strengthen the role of U.S. Department of Agriculture’s Natural Resources Conservation Service (NRCS) by:
 - » Granting that agency the authority to determine whether a site contains farmland and is therefore subject to the Farmland Protection Policy Act.
 - » Providing NRCS with greater authority in the final review process and decision.
 - » Mandating reporting by agencies to NRCS and the public; create measures to evaluate effectiveness of the Farmland Protection Policy Act.

State

- States that have not done so should consider implementing a strong farmland mitigation policy that achieves the following:
 - » State funds and federal funds administered by state agencies should not be used for the conversion of agricultural land to other uses when feasible alternatives are available.
 - » Where farmland must be converted, mitigation should be required.
 - » Any project proposed by a municipality, nonprofit or private party that requires state approval, permit or assistance should be reviewed by the state to determine if agricultural land will be converted to nonagricultural use.
 - ~ The conversion of agricultural land to other uses should not be allowed when feasible alternatives are available.
 - ~ If the avoidance of farmland loss is not possible, mitigation should be required.
 - » Options for mitigating the loss of farmland to nonagricultural uses include:
 - ~ The permanent protection of farmland on-site;
 - ~ The permanent protection of agricultural land off-site; or
 - ~ Financial contributions to a state, municipal or nonprofit farmland protection program.

1.2 INCREASING PERMANENT PROTECTION

Support for Existing Programs

- Continue and expand funding for the federal Farm and Ranch Lands Protection Program, which is an important source of matching funds for state and local farmland protection efforts.

- Increase funding for the region's state Purchase of Agricultural Conservation Easements (PACE) programs, several of which are not meeting demand.
- Reauthorize the enhanced federal tax incentive for conservation easement donations.

Research and Analysis

- Model future land use trends and land use needs for agriculture, especially in light of climate change.
- Analyze how effective the Massachusetts refundable conservation tax credit is in protecting farmland.

Policy Options

Federal

- Funding for federal farmland protection should be significantly expanded and used to leverage additional state funding.
- Administer the Farm and Ranch Lands Protection Program in a way that recognizes the long-standing expertise of state PACE programs in protecting farmland, and defers to state programs on easement terms and conditions.
- Find ways to permanently protect productive farmland now in sod and turf production, as well as currently forested land on prime farmland soils.

State

- Adopt mechanisms like Massachusetts's Community Preservation Act that enable and incentivize communities to help finance farmland protection efforts.
- Provide additional funding for the long-term monitoring and enforcement of agricultural conservation easements; consider creating a dedicated trust fund for this purpose.
- Consider adopting an Option to Purchase at Agricultural Value (OPAV) in PACE programs to keep farmland affordable for both established and new farmers.
- Encourage greater communication among state land conservation agencies, farmers and land trusts to foster better understanding of easement terms and conditions, as well as how they affect farm viability.

1.3 EXPANDING LAND ACCESS

URBAN AGRICULTURE: ZONING

Policy Options

- Examine whether state laws can be amended to prohibit local zoning regulations from unnecessarily hampering the expansion of urban agriculture.
- Update comprehensive plans to explicitly include goals supporting urban agriculture.
- Reduce local regulatory barriers by making zoning ordinances less restrictive or ambiguous toward urban agriculture:
 - » Reduce special permitting obligations for agricultural land uses.
 - » Use interim zoning if immediate zoning relief is necessary while a more comprehensive reform effort is underway.

- » When comprehensive zoning reform is not possible, more localized or temporary efforts, such as urban agriculture overlay districts, provide an opportunity to carve out large or small areas where urban agriculture is allowed regardless of underlying zoning restrictions.
- Provide frequent opportunity during policy development processes for community input and education around public health concerns related to urban soil contamination.

URBAN AGRICULTURE: SOIL CONTAMINATION

Research and Analysis

- Encourage and make routine the implementation of best management practices for growing in soils that are not contaminated by legal standards, but may still have background levels of contaminants that pose public health threats.

Policy Options

- Update soil contamination laws and programs to anticipate agriculture as a future land use for remediated properties.

FARM LINKING PROGRAMS

Support for Existing Programs

- Reauthorize and fully fund the federal Beginning Farmer and Rancher Development Program in the next farm bill, as the program has provided important resources for organizations and agencies providing services to new and beginning farmers in New England.
- Help support farm linking services with resources directed to state or private sector programs.

LAND LEASING

Research and Analysis

- Analyze a state-level beginning farmer tax credit linked to property taxes to understand its potential impact and benefits.
- As urban land may not be enrolled in or be eligible for a state's current use property tax program, states should consider a per-acre and per-credit cap to enable all eligible landowners to participate, regardless of the amount of property tax they pay.
- States that have not yet done so should inventory state-owned lands to determine their suitability for agricultural production.
- Encourage dialogue between state and federal natural resources agencies, state agriculture agencies and farmers to address management concerns around leasing public land for agriculture.
- Analyze the potential for using state-owned forestland for silvopasture and the cultivation of agricultural products.

Policy Options

- Permanently protect productive state-owned farmland.
- Encourage state conservation agencies to incorporate agricultural production into their land management strategies, where feasible and appropriate to do so.
- Consider strategies to improve tenure security, such as longer or rolling lease terms and ground leases.

FINANCING LAND ACQUISITIONS

Research and Analysis

- Survey new and beginning farmers in the region to determine their interest in and ability to invest in individual development accounts.
- Research the region's Farm Service Agency (FSA) loan and land portfolios to determine the amount of land currently in the agency's inventory and the amount of land the agency has foreclosed on within the past five years.

Policy Options

Federal

- Appropriate funding for the Beginning Farmer and Rancher Individual Development Accounts and include at least one New England state in the pilot program.
- Lift the restriction on future subdivisions of protected farms from the Farm and Ranch Lands Protection Program to allow appropriate subdivision of large farms into smaller farm parcels in order to provide access to land for new and beginning farmers.
- Require the Farm Service Agency to permanently protect farmland on which it forecloses, and to sell the land with an OPAV provision attached.

State

- Fund state PACE programs to meet demand.
- The Land Access Project has a series of recommendations aimed at making farmland more affordable for new and beginning farmers, including:
 - » Include the Option to Purchase at Agricultural Value in all state PACE programs to keep farmland affordable.
 - » Lift the restriction on future subdivisions of protected farms to allow appropriate subdivision of large farms into smaller farm parcels in order to provide access to land for new and beginning farmers.
 - » Develop entirely new offerings within existing PACE programs and gear them specifically to new and beginning farmers.
- Consider expanding existing state individual development account programs, or establish new programs in those states without one, to specifically include the purchase of farmland as an authorized use; increase the annual cap on participant savings that can be matched.

1.4 INCREASING AVAILABLE FARMLAND

Research and Analysis

- Conduct more research on the potential carbon impacts of conversion of forestland to agriculture, and on ways to minimize those impacts.
- Create a regional inventory of land that was once in agriculture and is now inactive or under forest cover.
- Conduct an analysis of the Connecticut Farmland Restoration Program to assess its effectiveness in increasing agricultural production and its impact on the environment.

- Encourage expansion of conservation tillage and no-till agricultural practices to improve soil health and carbon sequestration.
- Encourage federal cost-share assistance for silvopasture practices through the Environmental Quality Incentives Program and Conservation Stewardship Program, and analyze effectiveness of practices for food production.
- At the state level, consider the priorities of current forestland protection programs to see if they might be expanded or modified to focus on the protection of prime and important agricultural soils.

II. FOOD PRODUCTION

2.1 HUMAN RESOURCES

FARM LABOR AND WORKFORCE DEVELOPMENT

Research and Analysis

- Investigate the Fair Labor Standard Act's definition of agriculture and whether it allows the type of collaborative processing and marketing practices that are increasingly common in New England. (Harvard Law School's Food Law and Policy Clinic is currently analyzing this issue, and will have recommendations in 2014 that may prove valuable to federal lawmakers.)
- Where states have not done so already, undertake a comprehensive assessment of state food system workforce needs.
- Consider convening a regional conference around food and agriculture workforce development to encourage cross-state collaborations such as multistate training programs.

Policy Options

- Enact a new federal agricultural guest-worker program such as was included in S. 744, the Senate-passed immigration reform legislation.

BEGINNING FARMERS AND NEW FARM AND FOOD ENTERPRISES

Support for Existing Programs

Federal

- Renew and increase funding for the USDA Beginning Farmer and Rancher Development Program in the next farm bill.
- Support the Farm Service Agency's new microloan program.

State

- Promote state-supported business planning programs, including state farm viability programs, which are fostering new farm and food enterprises.

Research and Analysis

- Develop more rigorous data and evaluation on the impact and effectiveness for beginning farmers of state business planning and farm viability programs, to build broader and deeper support for these programs from state lawmakers.

- Research the need for and potential cost of a state Aggie Bond beginning farmer loan program or program similar to the Maine Agricultural Marketing Loan Fund for new and beginning farmers.

Policy Options

Federal

- Reduce the experience requirement for the Farm Service Agency's direct farm-ownership loans to two years, and give FSA authority to increase the loan limits for direct farm-ownership loans in areas of the country with higher real estate prices.
- Employ specially trained FSA agents to assist young and beginning farmers in each county office, or specialists serving multiple offices in a region.
- Make loan pre-approval available to beginning farmers.

State

- Consider creating an Aggie Bond program in each state to support new and beginning farmers, or a broader Aggie Bond program in which beginning farmers could participate.

2.2 NATURAL RESOURCES AND ENVIRONMENTAL COMPLIANCE

MAXIMIZING ENVIRONMENTAL BENEFITS AND MINIMIZING ENVIRONMENTAL IMPACTS FROM AGRICULTURE

Support for Existing Programs

Federal

- Maintain or increase funding for federal conservation programs that help the region's farmers comply with federal and state environmental regulations and encourage farmers, as well as farm and forest landowners, to adopt conservation practices.
- Maintain or increase funding for federal Conservation Technical Assistance and farm bill program technical assistance to enable the Natural Resources Conservation Service to meet demand from farmers and landowners for conservation planning.
- Retain the regional equity provision of the farm bill.

State

- Continue state conservation cost-share programs that are helping farmers leverage federal dollars.
- Support soil and water conservation districts, which play an important role in educating and providing technical support to farmers and farmland owners about conservation programs and practices.

Research and Analysis

- Analyze conservation cost-share programs' effectiveness in meeting state and federal environmental objectives and the degree to which these programs have leveraged federal and private resources.

Policy Options

- Encourage state environmental regulatory agencies to work closely with state agriculture agencies, NRCS, conservation districts and state farm organizations on agricultural environmental impact concerns.

FARM ENERGY NEEDS AND OPPORTUNITIES

Support for Existing Programs

Federal

- Maintain funding at levels adequate to meet demand for the Rural Energy Assistance and Environmental Quality Incentives programs, both of which provide support for energy efficiency and renewable energy projects.

State

- Maintain funding for state farm energy programs at levels adequate to meet demand.
- Consider convening state-based working groups to guide state farm energy programs and improve coordination with USDA, state utilities and clean energy industry.

Research and Analysis

- Investigate policy mechanisms to align utility energy audit and efficiency programs, interconnection requirements and net metering regulations with farm needs.

Policy Options

- Encourage creating state-level farm energy programs in states without such programs.
- Consider funding state-level farm energy programs through systems benefit charges billed to ratepayers or through state renewable energy funds.
- Consider creating an ombudsman in each state to help farm businesses identify and develop applications for sources of grant funding.
- Consider further legislative and regulatory efforts to expand incentives for energy efficiency and renewable energy projects that are specifically tailored to farm and food business applications, and support deploying innovative technologies such as high-efficiency processing equipment and anaerobic digesters.

ACCESS TO WATER

Research and Analysis

- States that have not done so already may want to undertake a comprehensive planning process to better understand their water resources.
- States should perform a baseline assessment of wetlands permitting programs, and convene panels of farmers, environmentalists, agency officials and researchers for recommendations related to the permitting process.

Policy Options

- States may want to consider enacting policies to allow for sustainable inter-basin water transfers.

2.3 BUSINESS DEVELOPMENT AND CHALLENGES

RESEARCH, DEVELOPMENT AND EXTENSION

Support for Existing Programs

- Continue federal and state investments in agricultural research and extension, which will prove even more important in a changing and more volatile climate, and as growers are required to comply with new production practices, record-keeping and tests through the Food Safety Modernization Act.
- A number of smaller federal farm bill research programs, including the Specialty Crop Research Initiative, the Organic Research and Education Initiative, and the Beginning Farmer and Rancher Development Program, are valuable to the region but not mandatory programs. They need to be reauthorized in a new farm bill or they will have no working budget.

Policy Options

- Put new emphasis on federal and state research around controlled-environment agriculture and opportunities for year-round food production.

BUSINESS PLANNING AND ASSISTANCE

Support for Existing Programs

- Continue support for state farm viability and other business development programs, which have been effective in fostering new agriculture business models and opportunities, and in leveraging significant private investments in on-farm agricultural infrastructure.

Research and Analysis

- Measure indicators such as net farm profits and farm operator investments in expansion through state farm business development program evaluations.

Policy Options

- The Vermont Working Lands Enterprise Fund offers an interesting model of state investment in agricultural business and job creation, funding both individual farm operations and statewide high-impact projects.
- The Massachusetts Agricultural Investment Program provides business planning and implementation grants to permanently protected farms that are not eligible for the state's Farm Viability program. Other states might consider similar investments in permanently protected farms.

RISK MANAGEMENT

Support for Existing Programs

- Continue support for state-level programs providing income support for dairy farmers.

Research and Analysis

- Analyze the impact of state dairy programs on farm profitability in Connecticut and Massachusetts.
- Analyze the insurance needs of New England farmers, to inform the development of a workable whole-farm-revenue insurance product for the region.

Policy Options

Federal

- Include the Dairy Market Stabilization Program in the final version of the next farm bill, as it is an important component to the suite of federal dairy programs.
- Consider crop insurance provisions that encourage more coverage of specialty crops, including funds allocated for education efforts in underserved regions and for specialty crop agents serving specialty crops.
- Simplify the Adjusted Gross Revenue and Adjusted Gross Revenue-Lite revenue insurance products to encourage more participation among Northeast farmers.
- The National Sustainable Agriculture Coalition recommends establishing a new whole-farm-revenue insurance product for specialty crop producers and dairy operators, offered at the same coverage levels and with the same options as other revenue products. The new insurance product should work for farmers engaged in value-added agriculture and direct-to-consumer marketing.

III. FOOD SAFETY, PROCESSING, AGGREGATION AND DISTRIBUTION

3.1 PRODUCE

Support for Existing Programs

- At the federal level, support the following programs:
 - » Rural Business Enterprise Grants;
 - » Rural Business Opportunity Grants;
 - » Business and Industry Guaranteed Loan Program;
 - » Value-Added Producer Grants Program; and
 - » Specialty Crop Block Grant Program.
- At the state level, support the following programs:
 - » Farm viability and reinvestment programs in Connecticut, Maine, Massachusetts, Rhode Island and Vermont; and
 - » Working Lands Enterprise Fund in Vermont.

Research and Analysis

- Analyze the cost of compliance with the Food Safety Modernization Act's proposed Produce Safety and Preventive Controls rules for various types of farm operations in the region.
- Determine the costs to New England states for implementing the Food Safety Modernization Act.
- Analyze private and philanthropic resources and the economic impact of federal and state investments in food aggregation, processing and distribution infrastructure.
- Continue to research food hub business models, especially those that can be self-supporting and provide a fair return to farmers.
- Research whether the scale and management system of a produce operation affects the risk of contaminating its product.

Policy Options

- Continue to advocate for modifications to the proposed Food Safety Modernization Act's Produce Safety and Preventive Controls rules.
- Support the development of food aggregation centers for small- and medium-sized producers, coordinated with an appropriately scaled distribution plan and network.

3.2 DAIRY

Support for Existing Programs

- Continue to provide business planning and grants for dairy farms to develop additional on- and off-farm processing capacity.

Research and Analysis

- Analyze the economic impact of federal and state investments in dairy processing infrastructure.

Policy Options

- Build support for the federal and state programs that are investing in dairy processing infrastructure and technical assistance.
- Raise the cap on the dairy producer-handler exemption under the federal milk marketing order to allow dairy producers to process more of their milk outside the federal milk market pool.
- Establish workforce development programs for dairy processing, or expand current state workforce development efforts to include dairy processing.
- Improve access to information regarding the requirements for Hazard Analysis and Critical Control Points (HACCP) so that farmers and food entrepreneurs have the tools they need to make informed decisions regarding expanded marketing opportunities and value-added processing while promoting food safety.

3.3 MEAT AND POULTRY

Support for Existing Programs

- At the federal level, support the following:
 - » Rural Business Enterprise Grant Program; and
 - » Rural Energy for America Program.
- At the state level, support the following:
 - » Farm viability programs in Connecticut, Maine, Massachusetts and Vermont; and
 - » Vermont Working Lands Enterprise Fund.

Research and Analysis

- Analyze the success of state farm viability programs in leveraging state and federal investments and improving the profit margins of slaughter and processing facilities.
- Explore the feasibility of on-farm slaughter facilities to process livestock from other farms.

Policy Options

- Develop a more workable plan than the Cooperative Interstate Shipment program to allow shipment of meat across state lines.
- Develop state-funded, low-interest loan programs for capital improvements to new and existing slaughterhouses. Such improvements could include the development of satellite processing sites and additional on-site storage to maximize the facility's kill-floor capacity.
- Provide business assistance to slaughter and processing plants, allowing them to improve their services and overall profitability.
- Decrease the costs of slaughterhouse and processing operations; provide access to technical assistance and funding to address energy efficiency opportunities; develop risk management training to reduce insurance premiums; and explore the potential for pooled liability insurance.
- Continue to provide regulatory support and training on standard operating procedures and HACCP plans for small-scale slaughter and processing facility operators.
- Encourage the development of livestock cooperatives that are able to address holistically the slaughter, processing and marketing needs for a given commodity or region.
- Streamline the regulatory structure for mobile poultry processing units and the Modular Harvest System.
- Provide educational opportunities and incentives for training skilled workers to meet increased processing demands.

3.4 SEAFOOD

Research and Analysis

- Determine the viability of smaller-scale and regionally distributed multi-species processing of harvested finfish, as identified by the breakout session on seafood supply chain at the 2013 New England Food Solutions Summit.
- Examine different types of processing facilities from technical, regulatory and economic perspectives.
- Support efforts to research and find actions to countermand the impacts of ocean acidification, the green crab invasion, stormwater runoff and other human-induced changes to the ocean environment.

Policy Options

- Expand efforts to educate consumers about other species of locally sourced fish available for consumption, and continue policy efforts to market sustainably harvested fish or environmentally sensitive aquaculture seafood.
- Foster innovative approaches to processing, distributing and marketing under-utilized fish species.
- Create a campaign that parallels the success of farm-to-table and farmers' markets programs.

- Advocate for a simplified, streamlined and comprehensive regulatory structure for the aquaculture industry that capitalizes on opportunities, adequately addresses environmental challenges and provides aquaculture businesses sufficient flexibility to grow.

IV. MARKETS

4.1 BRANDING AND MARKET PROMOTION AND DEVELOPMENT PROGRAMS

Support for Existing Programs

Federal

- Maintain or increase funding for USDA'S Rural Business Enterprise Grant and Specialty Crop Block Grant programs.

State

- Continue state investments in targeted market promotion that are helping consumers find local farms, local food and farm products, as well as businesses that source products locally.

Research and Analysis

- Additional market research is needed on consumer willingness to pay for local and regional food, especially in large retail and institutional markets. Baseline market research surveys coupled with periodic updates could help state agencies and nonprofit organizations measure the effectiveness of local and regional branding programs.
- Analyze how combining state brand identification with environmental and food safety standards through the Massachusetts Commonwealth Quality Program has affected consumer demand.
- Market research could help determine the value of an expanded Harvest New England or other regional branding program.

Policy Options

State Branding Programs

- Consider using public-private partnerships to create, promote and police brand standards.
- Track the effectiveness of state branding campaigns through market research.
- Sustain local, state and/or federal support for branding programs at multiple levels. Require more robust marketing and brand promotion strategies for recipients of federal or state micro-financing programs or business planning assistance.
- Consider increasing consumer exposure and recognition of brands through targeted local advertising that capitalizes on messaging that is persuasive at the local or regional level, and that clarifies what the brand stands for.

Regional Branding and Promotion

- Consider ways, through Harvest New England or other branding efforts, that regional foods can be better identified through regional wholesale and institutional food distribution channels.
- Improve recognition of the regional nature of New England's milk supply.

4.2 PURCHASING AND PROCUREMENT PREFERENCES

Research and Analysis

- Evaluate whether state procurement preferences for environmentally preferable products can and/or should be used to support procurement of in-state or New England-sourced food.
- Develop a tiered regional procurement preference that could be adopted by each New England state, where in-state food products receive the highest preference, regional food products receive a lesser preference, and out-of-region food products receive no preference. Further research is needed on the constitutionality of such preference tiers.
- Explore the use of rebate or so-called volume discount practices, which are widespread in the food management industry and appear to be a barrier to institutions sourcing more local and regional food.

Policy Options

- Consider implementing the Harvard Food Law and Policy Clinic tiers of procurement policy types:
 - » Policies that give in-state products what is essentially a “tie goes to local” preference: If all other factors — including quality, quantity and cost — are equal, the state entity will purchase the local product.
 - » Policies that go one step further than the “tie goes to local” laws, requiring a comparison of the bid price when in-state bidders compete against out-of-state vendors. These policies either provide a differential cost preference to in-state bidders by a set percentage and/or increase the bid price of out-of-state bidders by a set percentage.
 - » The Harvard clinic also suggests an alternative procurement mechanism: a statutory target, requiring state agencies, colleges and universities to purchase a certain percentage of their food from local sources and to include language to such effect in their contracts with food management companies.
- Consider strengthening state procurement statutes and policies to:
 - » Go beyond “tie goes to local” to include a differential cost preference for in-state foods or to create a statutory local food target;
 - » Include state colleges and universities specifically, where they are not already included;
 - » Clarify that, where not included now, preference applies to any entity procuring food for a state institution, including distributors and food management companies;
 - » Create a method to track purchases of local food in order to measure the impact of and track compliance with state regulations; and
 - » Allow the purchase of local agricultural products directly from farm businesses without seeking quotes through the normal bidding process, as long as the purchases are worth less than \$25,000 each, for example.
- Encourage state agencies, colleges and universities to split contracts between local, regional and nonlocal foods to accommodate local growers.
- Consider adopting a regional procurement preference by all six New England states.
- Consider what role state government can play in educating students about diet and nutrition, including climate implications of current diets.
- Urge the U.S. Trade Representative and Members of Congress to reject procurement commitments in international trade agreements that would limit the ability of state and local governments to institute local and regional food procurement preferences.

4.3 RETAIL MARKETS

Support for Existing Programs

Federal

- Maintain funding for USDA's Farmers Market Promotion Program, which helps communities support local food systems through direct marketing ventures such as farmers' markets, roadside stands, community supported agriculture, agritourism and other direct-to-consumer marketing opportunities.

State

- Continue support for the promotion and development of farmers' markets and mobile markets, with a special eye on enhancing consumer convenience through longer hours of operation, better locations and greater diversity of products.
- Continue support for state programs that are helping farmers with the business plans and infrastructure needed to develop retail opportunities.
- Where they are not now doing so, states should consider additional funding for Double Value Coupon Programs.

Research and Analysis

- Explore using forward contracting and supply agreements, which offer growers greater price certainty, with retail and institutional buyers to see if these instruments spur additional production, especially of fruits and vegetables.

Policy Options

- Consider whether uniform food safety and health regulations around farm retail opportunities are feasible in states that historically have left these issues to local control.
- Consider standardizing state zoning regulation of farm stands and farm stores, or creating model regulations for towns that do not have the capacity to pay professional planners.
- Give priority in the federal Healthy Food Financing Initiative and similar state financing programs to projects that offer a double bottom line of expanding access to healthy food in underserved communities and expanding market opportunities to farmers in the state or the region. Consider the relevance of benefit corporation legislation as well.
- Support expanding federal nutrition incentives in the next farm bill.
- Encourage states that currently are not participating in the Farmers' Market Nutrition Program to participate, as they are leaving federal funding on the table.

4.4 INSTITUTIONAL MARKETS

Support for Existing Programs

- Continue state investments in farm to school programming, which is helping to leverage private resources, expand economic opportunities for farmers, and educate children about local food and farming.
- Continue support of USDA's Farm to School Program, as it is fostering innovative approaches and collaborations in the region.

- Continue support for the USDA Foods Program, which provides needed foods, especially proteins, at low costs to budget-sensitive school districts.
- Continue support for the Department of Defense Fresh and USDA Fresh Fruits and Vegetable Program, which are improving nutritional health while providing expanded market opportunities for the region's produce growers.
- Maintain funding for the USDA's Specialty Crop Block Grant Program, which provides critical food safety training for producers, and is helping to break down barriers for many growers selling to institutions.

Research and Analysis

- Analyze the USDA Foods Program including:
 - » State administrative costs associated with the program;
 - » State utilization rates of entitlement dollars;
 - » Opportunities for state-level agreements with processors in the region;
 - » Opportunities for additional collaboration among school districts to attract regional processors; and
 - » The potential regional economic impact of a voluntary cash-in-lieu-of-commodities option for school districts with annual commodity entitlement value less than \$50,000.
- Analyze whether changes to the DoD Fresh Program over the past 18 months have resulted in additional procurement of local and regional fruits and vegetables by New England schools.
- Research the use of forward contracting between farmers and institutions, to encourage farmers to plant specifically for an institutional customer.

Policy Options

- Consider limiting the rebate practices of large food vendors and distributors.
- In states that do so, repeal limits on the number of schools and the percentage of USDA Foods Program entitlement dollars that can be spent on DoD Fresh.
- Consider tasking a state food policy council or state agency with monitoring implementation and impact of a state procurement policy.

V. WASTE STREAMS

5.1 BENEFICIAL REUSE OF ORGANICS

Policy Options

- Early success in Massachusetts and Vermont has followed careful planning, regulatory changes and phasing in organics bans. These states' models suggest that in order to create a robust state-wide infrastructure for the beneficial reuse of organics, states should take several steps:
 - » Analyze their existing legal and physical infrastructure and plan for organics diversion.
 - ~ Identify regulatory barriers to a robust composting infrastructure.
 - ~ Take stock of capacity for on-farm and commercial composting and capacity for feeding organic material to anaerobic digesters to produce heat and energy.

- Amend regulations as necessary to prepare for a phased-in organics ban that will eliminate barriers to composting infrastructure, ensure quality and protect human health.
- Take active steps to implement organics diversion and phase out landfilling, including phasing in bans and incentivizing municipal participation in organics phase-outs.

VI. FRAMEWORKS FOR REGIONAL FOOD SYSTEM COORDINATION

REGIONAL STRUCTURES AND PROCESSES

- Analyze and apply appropriate models for states to work together toward shared food system goals. Develop networks and relationships that promote trust and collaborative action.
- Explore a regional food system planning entity to chart a course for greater regional coordination and collaboration. It could be organized as, for example, a regional food policy council or an ad hoc task force. The body could address specific regional-scale issues identified in state food system plans, or develop a strategic regional plan to achieve jointly identified goals. Such an entity could be initiated by formal government action or as an outgrowth of the New England Food Vision and efforts of the New England Farm and Food Security Initiative and/or Food Solutions New England.

AREAS FOR GREATER REGIONAL COORDINATION AND COLLABORATION

- **Farm Bill:** A frequent refrain of stakeholders is the need to strengthen New England's voice in establishing and implementing the provisions of the federal farm bill through regionally based coordination and advocacy.
- **Federal Food Safety Modernization Act:** Implementation of the new requirements of the federal Food Safety Modernization Act is a clear potential focus for regional coordination, information-sharing and advocacy at the federal level for needed regulatory changes, as well as evaluation of the impacts across states of the act's implementation.
- **Cooperative Extension Programs:** Stakeholders identified a need for further efforts to promote regional resource sharing, coordination and communication among the states' cooperative extension programs above and beyond the New England Extension Consortium.
- **Food System Workforce Coordination:** Stakeholders addressing fair labor and workforce development in the food system suggested a regional repository of model state policies and legislation, coordination of university and other training programs, and educational and licensing reciprocity agreements among the New England states.
- **Institutional and Nutrition Program Procurement:** Stakeholders pointed to regional sourcing and branding of food products as a strategy that could be coordinated with institutional and federal nutrition program purchasing.
- **Meat Processing:** Stakeholders discussed meat processing and related federal and state regulatory requirements as a potential area for regional agreements, regulatory harmonization and better coordination to improve market opportunities and slaughterhouse capacity.

- **Federal Programs and Funding:** A potential focus of regional coordination is the use of federal programs and funds, so that underused resources could be shifted to other states in the region where demand and program use are higher. Likewise, in those cases where a large number of New England farms fail to qualify for certain federal programs or funding, the states could explore regionally oriented approaches and consider pooling financial resources to provide similar grants and incentives to a broader group of New England farms.
- **Assessment of Regional Branding:** Stakeholders noted that the role of state and regional branding efforts is an important and evolving issue, suggesting that such efforts may require additional market research, clearer standards and ongoing monitoring and assessment to ensure that these efforts provide value and contribute to successful marketing.
- **Soil Contamination Issues:** Given divergent state regulatory approaches, urban agriculture efforts throughout New England could benefit from a common set of regional best practices for due diligence, environmental liability protection and soil remediation where urban land or brownfields are being converted to agricultural uses.
- **Regulatory Harmonization, Reciprocity and Cross-Pollination:** There appear to be a number of promising areas where state laws and regulations could be better harmonized to facilitate regional markets, such as food safety and processing, and where best practices should be shared among states, including current-use taxation, access to state lands for farming, and water resources management.
- **Coordinated Research:** It could prove beneficial to coordinate research on topics of shared interest, including land access mechanisms, food transportation options, supply network options, and water and marine ecosystem protection and restoration.
- **Greater Food Access, Justice and Equity:** Rates of food insecurity have escalated throughout New England during the past 10 years. Many people of color and people living in poverty continue to have unequal access to healthy foods. Federal food programs are not keeping pace with demand. Purposefully addressing race and economic disparity among the structural causes of food system inequities should be a cornerstone of a regional food system vision.

New England Food Policy: Building a Sustainable Food System

Many citizens, organizations and public agencies in the six-state New England region are working toward broadly shared goals of increased environmental, economic and social sustainability in our food system. A sustainable food and farming system in New England is key to creating a healthy region that is resilient, just, economically viable and environmentally sound. There is no one clear scenario, but several initiatives have identified opportunities for greater regional collaboration.

In 2010, the chief agricultural officers from each New England state identified, at the request of the region's governors, barriers to and opportunities for increased production and consumption of New England-grown farm and food products. The agricultural officers also considered ways to keep New England farmland in farming. A complementary initiative, the New England Food Vision, has already been developed.

The Food Vision suggests what a sustainable regional food system might look like by 2060 and lays out what is possible in terms of food production and sustainable seafood harvests. The research presented here considers policy changes that could increase the region's food production and consumption consistent with the Vision.

This report reflects the collaborative work of three partners: American Farmland Trust (AFT), Conservation Law Foundation (CLF) and Northeast Sustainable Agriculture Working Group (NESAWG). As co-leaders of this regional food system policy project, AFT, CLF and NESAWG undertook an analysis of policy barriers and gaps related to implementing the New England Food Vision.

The report focuses on public policy issues in five areas:

- Land;
- Food production;
- Food safety, processing, aggregation and distribution;
- Markets; and
- Waste streams.

Our analysis is based on research conducted by AFT and CLF staff. We conducted 23 interviews with leaders across the region's food system. We gathered input from several delegates to the 2013 Food Solutions New England Summit and invited the interviewees and other key stakeholders to comment on a draft of the report. This material was synthesized into the sections presented here. In some instances, more elaboration is contained in an appendix.

In each area, the authors identify key policy barriers and gaps at the state level, as well as federal programs and policies that affect our region. It is important to note that the report does not claim to include all policies and all programs in each topic area from every state. In each section, the authors present ideas and suggestions for supporting existing state and federal programs, areas where additional research and analysis is needed, and policy actions that are needed to address identified barriers and gaps.

Admittedly, there are distinct limitations to this investigation. The project did not cover the entire food system. Equally important topics such as food access, certain aspects of urban farming, farm and food-chain workers, seafood and aquaculture, and nutrition merit comparable investigation. We focus on commercial farming, and do not consider backyard and community gardening. Nor does this report delve into fundamental issues of equity, fairness and opportunity across the food system. Other groups are working on these topics and issues, and policy actions at all levels will need to integrate these additional elements and considerations. We also note that this report was researched, written and finalized before the 2014 Farm Bill was passed; references in our analysis to the “next farm bill” should be read with the understanding that the 2014 Farm Bill was passed while this report was in final production. Similarly, the 2012 Census of Agriculture was released while this report was in final production.

The authors recognize, as do food system leaders in each state, that implementing policy changes to create a more robust, resilient and sustainable regional food system will require multiple levels of engagement. Local and state efforts are necessary, but to be truly effective, they must connect to a broader regional framework and effectively leverage federal policies and resources. Perhaps more than any other multistate area of the country, New England has a history of cooperation. This offers promise for our states to work together on food system issues, using tools that range from informal and ad hoc to more formal and structured.

To inform multistate approaches and solutions, we conducted a scan of regional models for states working together to achieve shared goals. Each model has potential usefulness depending on the problem being addressed. This research is described, along with suggestions for action, in the final section of this report.

Taken together, the report sections comprise an agenda for action. We hope it will guide food system leaders in each New England state to identify, support and implement public policies that could have the most significant impact on strengthening our New England food system.

Land

Reducing Conversion, Increasing Permanent Protection and Expanding Access

Farmland is essential to New England's food system, and is a finite resource that has disappeared at an alarming rate. A century ago, the region had about 6 million acres in agricultural use; today the total area devoted to crops and pasture has shrunk to less than 2 million acres.¹ This represents just 5 percent of the region's total land base, or less than a quarter of an acre per person.² While some of this land was abandoned and could be reclaimed for agricultural use, a significant portion has been permanently lost to development, especially in the more densely populated southern New England states and along the coasts of northern New England. In the past 30 years alone, New England developed almost 300,000 acres of crop and pastureland and nearly 1 million acres of forested land, much of which was once farmland.³ Four states lost more than 10 percent of their farmland to development in this time period: Connecticut and New Hampshire both lost 13 percent; Massachusetts lost 18 percent; and Rhode Island lost 22 percent.⁴ As farmland has grown scarcer, farmland values have risen. The average farmland value in the region is more than \$7,000 per acre, well over twice the national average.⁵ Not surprisingly, interviewees cited the lack of access to affordable land as one of the chief impediments to expanding the region's food production.

Stopping the loss of productive farmland will require new and improved policy tools — from more effective planning and zoning, to estate and other tax policy changes, better mitigation requirements, and increased investments in permanent farmland protection at all levels of government. New policy innovations will also be needed to promote environmentally sound farmland reclamation and to help the next generation of farmers — many of whom do not come from farm families — gain access to land. This chapter explores some of these new policy options, as well as state and federal policies that are currently helping to reduce farmland conversion, increase permanent protection and help new and established farmers gain access to land.

Highlights

- Access to affordable farmland is a significant barrier to expanded food production in New England. Improving land access will require new policy tools, including tax policy changes to promote the sale or lease of land to farmers.
- Stopping the loss of productive farmland will require additional investments in farmland protection, as well as new protection strategies, strengthened farmland mitigation policies and more aggressive state incentives for urban infill development.
- Less restrictive or ambiguous local zoning ordinances are needed to encourage urban agriculture.

1.1 REDUCING FARMLAND CONVERSION

CURRENT USE PROPERTY TAX VALUATION

Introduction

Every New England state has a program that permits taxation of agricultural land based on the actual, ongoing use of the land rather than its full market value or highest and best use. In most parts of the region, highest and best use is usually considered residential or commercial development. American Farmland Trust's Farmland Information Center cites three purposes of "current use" programs:

- Helping farmers stay in business by reducing their real property taxes;
- Treating farmers fairly by taxing farmland based on its value for agriculture, rather than at fair market value, as if it were in residential use; and
- Protecting farmland by easing the financial pressures that force some farmers and farmland owners to sell their land for development.⁶

The second purpose is borne out by American Farmland Trust's Cost of Community Services studies. Averaging the more than 150 Cost of Community Services studies that have been conducted around the country, American Farmland Trust estimates that farmland and other open space requires, on average, less than 35 cents in municipal services for every dollar that it contributes in municipal property taxes. Conversely, land in residential development requires, on average, \$1.16 in services for every dollar it contributes in local property taxes.⁷

Discussion

Each state has its own set of program rules and eligibility requirements. Below is a comparison of some of the key provisions of current use statutes around the region. For more information about current use statutes, see the Appendix.

ELIGIBILITY

All six New England states authorize participation in current use valuation by landowners who farm their own land and by those who lease their land to farmers for agricultural purposes. Eligibility is generally based on three criteria: parcel size, income generation and continuity of use

on the land. Vermont is the only state to require non-farming landowners to have a three-year written lease with a farmer in order to qualify for current use.⁸

Size

New Hampshire, Massachusetts, and Maine have minimum acreage requirements to qualify for current use valuation; Connecticut, Rhode Island, and Vermont do not.⁹ In Connecticut, local assessors determine eligibility, and acreage is one of the factors they may consider.¹⁰ Rhode Island has the most flexible approach and allows parcels of any acreage as long as the parcel's primary purpose is agricultural and it yields agricultural products grossing at least \$2,500 in sales annually.¹¹ The director of Rhode Island's Department of Environmental Management reviews applications and on a case-by-case basis can authorize participation by owners of parcels smaller than five acres.¹² Rhode Island's flexible approach recognizes the potential of small farm parcels to generate high yields.¹³

Income

Several states require parcels to gross an agricultural income of between \$500 and \$5,000 before the landowner applies.¹⁴ These income requirements are often required for several successive years.¹⁵ Massachusetts and Connecticut are exceptions. Massachusetts law requires only that the land be used with the purpose to gross the minimum income, insulating farmers from lean years.¹⁶ The Connecticut statute does not set an income threshold, but local assessors may consider it in determining eligibility.¹⁷ Vermont has an income exemption for orchard land that is planted to fruit producing trees, bushes or vines that are not yet of bearing age.¹⁸

Vermont and Massachusetts both have a graduated income threshold. Massachusetts requires \$500 of gross income on the first five acres, and an additional \$5 for every acre thereafter, with an exception for wetlands and woodland, which only need to produce 50 cents per acre.¹⁹ Vermont requires \$2,000 for any plot up to 25 acres, and an additional \$75 for each acre over 25 acres, up to \$5,000. While Massachusetts requires a five-acre minimum, the Vermont approach, with no minimum acreage, allows small parcels to qualify as long as the parcel is producing \$2,000 in income annually.

Continuous Agricultural Use

Typically landowners must show continuous agricultural use on the parcel. Statutory requirements often call for a demonstration that landowners have met the size and

acreage requirements for one out of two years or three out of five years before a landowner submits an application for current use assessment.²⁰

Connecticut has no state-level requirements for size, income or continuity. Farmers can qualify for current use valuation on fallow fields, as long as the reason for its disuse is “soil nutrient replenishment, crop rotation, ... market conditions or various other reasons that might result in a less productive use of the land.”²¹ The state explicitly recognizes that beginning farmers may take several years to see meaningful returns, and therefore does not include an income threshold in its current use valuation statute.²² While this state policy encourages the inclusion of most farm parcels, the program is administered at the local level and town assessors can set more restrictive eligibility requirements, which may exclude some parcels, especially those on smaller acreage.²³

Farm Buildings

Vermont includes farm buildings in its current use program. Farm buildings located on land enrolled in current use, including farmworker housing, are taxed at zero percent for property tax purposes. Up to \$100,000 of the valuation of a farm facility that processes crops produced on the farm may also be included.²⁴

Connecticut allows municipalities to elect to exempt from property taxes any building used exclusively in farming or that provides housing for seasonal employees, up to a value of \$100,000 per building.²⁵

New Hampshire also allows towns to assess farm structures at “no more than their replacement costs less depreciation.”²⁶

APPLICATION

Farmland under current use valuation is generally assessed at “the price per acre which the land would command if it were required to remain henceforth in agriculture.”²⁷ In most states, state boards establish guidelines or a recommended schedule of land use values for current use valuation, typically based, in part, on farmland rental rates, farm product values and farmer-to-farmer land sales. Assessors are allowed to deviate from these recommendations and consider other factors, provided the valuations they use are supported by data.²⁸ If an application for current use is denied, or if a landowner contests the valuations used by local assessors, landowners typically have the right to

seek abatement and to appeal decisions to a state property tax review board.

ENROLLMENT

Data detailing the percentage of eligible land enrolled in current use programs in each state is not readily available. In New Hampshire, landowners have enrolled nearly 3 million acres, though this total includes all lands in the program, not just farmland. In western Massachusetts, 40 percent of the region’s eligible farmland is enrolled in the state’s current use program. Better statewide enrollment data could help inform outreach strategies and program implementation.

PENALTIES FOR WITHDRAWAL FROM THE PROGRAM

All New England states charge landowners a recapture tax when they take land out of current use valuation for development.²⁹ This “land use change tax” penalty generally decreases the longer land is in the program.³⁰

Massachusetts has strong incentives to keep land enrolled in its program. In addition to the recapture tax levied on the original owner, the Commonwealth charges a conveyance tax on the new owner taking the land out of the program.³¹

Additionally, Massachusetts law provides a right of first refusal to municipalities hosting enrolled farmland proposed for sale and conversion. The right of first refusal gives a municipality the option to buy land under the current use valuation program ahead of potential developers or conversion by the existing landowner.³² A landowner with enrolled land must notify the municipality prior to converting the land to a non-qualifying use, or prior to selling to a bona fide purchaser who intends to convert the property.³³ After receiving notice in the former scenario, the municipality has 120 days to purchase the land for conservation purposes by paying fair market value — as determined by an independent appraiser — to the landowner.³⁴ In the latter scenario, the municipality can purchase the land by matching the sale price being offered by the bona fide purchaser.³⁵ In either case, a municipality may assign its right of first refusal to a qualified conservation organization that can purchase the land and subject it to a permanent conservation easement before deeding it back to the municipality.³⁶

New Hampshire gives municipalities the option of directing money from land use change taxes to a town conservation fund.³⁷ These funds are administered locally, and municipalities can use the money to purchase conservation easements, among other options.³⁸ Currently, 160 communities in New Hampshire have chosen to direct these land use change taxes to conservation funds, which in one recent year grossed more than \$7.5 million.³⁹

MAINE’S VOLUNTARY MUNICIPAL FARM SUPPORT PROGRAM

Maine has added to its property tax toolbox a new program for towns that enables them to further reduce local property taxes. Under the Voluntary Municipal Farm Support Program, a community can adopt a local program that lowers property taxes on participating farms beyond the reduction available through current use taxation. In exchange for this additional tax relief, a farmer must place an agricultural conservation easement on his or her land that remains in effect for at least 20 years. The program is intended to boost farm profitability while helping communities protect farmland without having to raise capital to purchase an easement. To be eligible for the program, state rules require that the parcel be at least five acres; the parcel produce at least one agricultural crop that generates an annual gross income of at least \$2,000; and eligible farm buildings be used for producing or processing agricultural crops.⁴⁰

Action

Research and Analysis

- Better current use enrollment data is needed at the state level. Most states do not have available data on the percentage of eligible land that is enrolled in the program. State-level analyses, including enrollment patterns by town or county, landowner and/or commodity type, and withdrawal data, would help policymakers evaluate the program’s effectiveness.
- Additional analysis based on a survey of landowners, assessors and municipal planning officials would help measure the impact of current use programs on development patterns. Are current program withdrawal penalties acting as an adequate deterrent to developing farmland? Are current use programs steering development to unenrolled parcels? Insights on these questions could help state policymakers tailor programs to more effectively reduce farmland conversion.

- The impact of Massachusetts’ right of first refusal policy should be examined to determine its effectiveness in helping towns protect farmland.
- Current use programs offer a potential policy vehicle to expand farmland access. Increasing thresholds for income generated from the farmland could encourage non-farming landowners or hobby farmers to increase use of their land for agriculture. This, in turn, could lead to more land leased to farmers. Examining the impact that such an increase in income thresholds would have on agricultural production, land availability and current use enrollment could help policymakers determine whether such a policy shift would have the desired effect.

Policy Options

- More can be done to improve the effectiveness of these programs in reducing farmland conversion. Potential program improvements include:
 - » Allowing municipalities, as New Hampshire does, to retain and direct recapture penalties toward municipal farmland protection projects, including, where applicable, the exercise of a right of first refusal on lands coming out of current use protection. States might also revisit the current penalty structure, where tax disincentives decrease over time.
 - » Incorporating a right of first refusal into the program, as Massachusetts does. The practice enables a town to purchase a farm parcel or assign the purchase to a land trust in the event the parcel is going to be developed. This process ensures that landowners are compensated for their land at the highest and best use value, while offering towns the opportunity to protect land they consider agriculturally important to the community.
- Current use programs can also be used to encourage farming in urban and suburban areas and to encourage more secure tenure for farmers leasing land. Possible policy options in this regard include:
 - » Eliminating minimum acreage requirements and shifting eligibility to meaningful income thresholds to ensure that enrolled parcels are being actively farmed.
 - » Requiring a multiyear written lease, as Vermont does, from a landowner that is leasing land to a farmer.
- To incentivize conservation stewardship practices, adjust valuation guidelines to provide greater tax relief

on land being farmed using key conservation practices or in conformance with a conservation plan.

- Provide towns with additional property tax tools to protect farmland, as Maine's Voluntary Municipal Farm Support Program does.
- Consider changes to current use statutes to incentivize additional leasing to farmers and longer lease terms.

STATE AND FEDERAL ESTATE TAXES

Introduction

Historically, state and federal estate taxes have sometimes caused farm families to sell land and other farm infrastructure, either before the death of the senior generation to avoid taxes or after, in order to pay those taxes. The appreciation of value in a New England farm — including land, buildings, equipment and livestock — often triggers significant state and federal estate taxes upon the death of the farmer or surviving spouse. The increase in the federal estate tax exemption to \$5.25 million has significantly reduced the number of farm families potentially subject to the tax in New England. While more than 5,000 farms have farm real estate values alone higher than \$1 million, and almost 2,000 have values higher than \$2 million, just 1 percent of farms in the region — about 345 — have a farm real estate value higher than \$5 million.⁴¹ These figures do not include other farm assets, however, so the number of farms subject to the federal estate tax may be higher. Modifications to federal and state estate tax policies could help reduce the loss of farmland and farm infrastructure during farm transitions and encourage a next generation of farmers on the land. (For more information about the value of total farm assets, see the note in the Appendix.)

Discussion

FEDERAL ESTATE TAX

The 2013 federal estate tax applies to the amount of an estate's value that exceeds \$5.25 million, and the tax rate is capped at 35 percent.⁴² This relatively high exemption, enacted by Congress in 2011, was an important priority for many farm advocates, as estate taxes would otherwise have returned to the previous \$1 million valuation exemption and a top tax rate of 55 percent.

In determining the value of an estate, Internal Revenue Code section 2032A applies a special use valuation assessment rather than fair market value to farmland. To qualify, the property must have been used as a farm for five of the last eight years before the farmer died; the decedent or a member of his or her family must have participated in the farm business; and the property must be passed to an heir. The use value tax benefit is lost if the property is sold to a non-family member or if it ceases to be used for farming within 10 years of the original farmer's death.⁴³ The use value tax benefit is capped, however, at \$1 million, which limits its usefulness for many New England farms.⁴⁴ (For more information about the federal estate tax, see the Appendix.)

STATE ESTATE TAXES

Connecticut

Connecticut's estate tax currently applies to the amount of an estate's value that exceeds \$2 million per individual, a reduction from the \$3.5 million exemption in place in 2011. Given Connecticut's high farmland values, 530 farms are adversely affected by this lower exemption level, or at least 11 percent of all farms in the state, without accounting for other non-real estate assets.⁴⁵

Maine

Effective January 1, 2013, the Maine estate tax applies to the amount of an estate's value that exceeds \$2 million; this exemption was increased from \$1 million in 2011.⁴⁶ Based on farm real estate values, at least 125 farms in the state are potentially affected by the current state estate tax.⁴⁷

Massachusetts

The Massachusetts estate tax applies to the gross value of an estate higher than \$1 million per individual.⁴⁸ Approximately 1,800 Massachusetts farms have a current farm real estate value that alone exceeds \$1 million, and therefore could be subject to the state estate tax. This represents approximately 23 percent of the state's farms.⁴⁹

New Hampshire

New Hampshire has no state estate or inheritance tax.⁵⁰

Rhode Island

Rhode Island has the second highest farm real estate values in the country and the lowest exemption level in the region. The Rhode Island estate tax applies to the amount of an estate's value that exceeds \$910,000 per individual, an increase from the \$675,000 exemption in place in 2010. More than a quarter of all farms in the state — 325 total

— have farm real estate values worth more than \$1 million. In 2013, however, the state legislature approved a bill to assess farmland at its use value for estate tax purposes. By not assessing farms at the highest use value, many will be valued under the state exemption level.⁵¹

Vermont

The Vermont estate tax applies to the amount of an estate's value that exceeds \$2.75 million per individual, an increase from the \$2 million exemption in place in 2011.⁵² Vermont's estate tax, however, is tied to the federal estate tax, and state estate taxes are reduced by the portion of the estate comprised of farm assets. For example, if the farm business makes up 50 percent of the federal adjusted gross estate, the Vermont estate tax will be reduced by 50 percent.⁵³ There is no available data to indicate how frequently this reduction has been used. Approximately 230 Vermont farms have farm real estate values alone that exceed \$2 million, and thus would be subject to the Vermont estate tax.⁵⁴

Action

Research and Analysis

- The federal estate tax special use valuation assessment allows farmland to be valued for estate tax purposes at its agricultural use value, but limits the exemption to \$1 million. The Family Farm Estate Tax Relief Act of 2010 (H.R. 5475) proposed to eliminate the cap for use value assessment, retained the recapture provision if the property or a portion is sold or ceases to be used for agricultural purposes, and added an adjustment of the recapture tax to reflect any increase in the farmland's value. An analysis of how an increase in the exemption would affect New England farms would be helpful, as would an analysis of the changes proposed in H.R. 5475.
- Explore the connection between and opportunities to synchronize state current use provisions for property taxes and federal and state estate tax provisions relating to special use valuation assessment.

Policy Options

Federal

- There are many legislative proposals to revise the federal estate tax. One such proposal, developed by American Farmland Trust, proposes to revise the

special use valuation assessment to provide a significant incentive to keep agricultural land in production. The proposal would eliminate many of the restrictions on eligibility for special use valuation assessment while maintaining the requirement that the property continue to be used for farming and preserving the current valuation methodology. These changes would enable anyone whose land is devoted to agriculture to avoid estate tax on the entire value beyond its agricultural value provided that the land continues to be used for agriculture. Specifically, it would:

- » Eliminate the requirement that the property pass from the decedent to a family member.
- » Eliminate the requirements that the decedent or members of the family have "materially participated" in the operation of the property prior to the farmer's death and continue to do so after the death of the decedent.
- » Eliminate the requirement that to qualify for special use valuation the real and personal property devoted to a qualified use must comprise at least 50 percent of the value of the decedent's estate.
- » Expand the recapture period from 10 to 30 years.
- » Allow property that has been valued using IRS Code section 2032A to be freely transferred without triggering recapture — as long as it is maintained in its qualified use— and eliminate recapture on conservation easement sales.
- » Eliminate the cap on the amount by which an estate's value may be reduced.

State

- Vermont and Rhode Island are the only states in the region with special provisions for farms in their estate tax. Changes to estate taxes have been urged by farm advocates in several New England states, including Maine. Legislative Document 490, introduced in the Maine legislature in 2011, proposed to exempt from the state estate tax the value of any land classified as farmland under the state's farm and open space tax law for five years preceding the death of the owner.
- States in other parts of the country have enacted provisions to exempt agricultural assets from estate taxes. Pennsylvania, for example, exempts land used for farming purposes entirely. The state also exempts other agricultural real estate, such as buildings, if certain criteria are met, including that the transfer must be within the family; the farm business must continue

for seven years after the farmer's death; and the farm must produce a gross income of at least \$2,000 annually for the seven years.⁵⁵

PLANNING AND LAND USE

Introduction

Sprawl⁵⁶— the pattern of low-density residential and commercial development that characterizes many New England suburban areas — has helped drive the conversion of farmland around the region. Farmland conversion rates throughout New England between 1982 and 2007 ranged from a low of 4 percent in Vermont, to an astounding 22 percent in Rhode Island.⁵⁷ U.S. Department of Agriculture (USDA) Natural Resources Inventory data through 2013 will not be available until 2015⁵⁸, so each state's conversion rate is not available yet for the immediate past five years. Due to the 2008 recession, however, it is likely that conversion has slowed. Market demand and public policies have also helped to encourage denser development in the region's urban areas. Eight of the region's 12 major metropolitan areas increased their rate of infill development since 2000.⁵⁹ As housing development begins picking up again, the region's most productive farmland, which is also its most developable land, will continue to be at risk.

Within New England, municipalities have varying degrees of autonomy to pass local laws without permission from the state. Several New England states are "Home Rule" states, while others follow "Dillon's Rule." In Home Rule states, the state constitution or legislation provides that municipalities enjoy the freedom to pass laws and govern themselves as they see fit.⁶⁰ In Dillon's Rule states, however, municipalities may pass laws that are only specifically permitted by state statute.⁶¹ Accordingly, land use plans and zoning around agriculture differ from town to town, in some cases with little coordination or oversight from state government. While several states have state planning offices and statewide planning efforts, only Vermont and Rhode Island have statewide planning statutes requiring towns to coordinate their land use planning efforts with state land use policies.

Reducing farmland conversion will require new and better coordinated policies at the state and local levels. State policies can do more to incentivize denser development in both city centers and rural village centers, while helping

communities plan and zone in ways that support farming and save farmland. State climate change mitigation strategies should include strategies aimed at retaining working lands.⁶²

The federal government's support for sustainable communities over the past few years has encouraged local and regional planning around food systems, and could be better integrated with USDA programs and priorities in the region. The USDA's Know Your Farmer, Know Your Food Compass is an interactive mapping project using data for the years 2009 to 2012 that shows how the Department of Agriculture and other federal partners are supporting local and regional food economies.⁶³

Discussion

STATE GOALS AND PLANNING

All states have codified smart growth goals or strategies, or at least included them in policy statements, but each state implements these strategies differently.⁶⁴ Some states encourage municipalities to follow those growth principles,⁶⁵ and some, including Rhode Island and Vermont, require town plans to be consistent with broad state land use policies.⁶⁶ With the exception of Vermont's statewide structure for regulating land use under Acts 250 and 183 (described below), no state conducts comprehensive land use planning at the state level.

Vermont's Act 250 regulates development through a statewide permitting system: Most moderate and large subdivisions and many new commercial land uses trigger Act 250, under which the appropriate regional district commission reviews the proposed project for environmental effects, infrastructure impacts and consistency with local and regional plans.⁶⁷ Projects that do not trigger Act 250 are subject to local zoning requirements.⁶⁸ To guide local planning in a way that channels development and preserves the state's rural character, Vermont has also enacted Act 183, which sets forth smart growth guiding principles for municipalities, establishes a process for designating growth areas, and provides communities with regulatory and financial incentives to drive development to these areas.⁶⁹ Act 250 specifically recognizes the protection of the state's prime agricultural soils as a goal; Act 183 recognizes the need for smart growth in order, in part, to strengthen the state's farm and forest economies and prevent farm and forest land fragmentation.⁷⁰

STATE ASSISTANCE FOR SMART GROWTH REGIONAL PLANNING

Most New England states offer municipalities grant money or direct technical assistance from planners, consultants or mapping software to create and implement plans or projects around smart growth or sustainable communities.⁷¹ While some states condition all development-related grant money on the municipality-applicant adhering to smart growth techniques, others simply give preference to applicants who incorporate smart growth strategies. At least one state, Vermont, created a competitive grant fund in the state treasury that allocates money toward regional planning projects, including acquisition of real estate in order to preserve farmland identified as “requiring special consideration.”⁷² The Vermont fund is called the Municipal and Regional Planning Fund.

While some states assist only with drafting regional plans, Vermont and Connecticut go one step further by offering grants toward actual development projects. Under Vermont’s Designated Growth Center program, a municipality may apply to have its downtown area classified as a growth center.⁷³ Once designated, Vermont municipalities become eligible for some funding benefits;⁷⁴ designation unlocks state permission to use tax-increment financing to fund projects within that growth center.⁷⁵ Connecticut prioritizes grant money for development projects located in designated growth areas.⁷⁶

Alternatively, New Hampshire and Massachusetts have compiled model zoning ordinances, smart growth handbooks, and other educational or advisory literature to help municipalities develop smart growth-oriented land use ordinances and bylaws.⁷⁷

These programs are crucial components of state-level smart growth policy in New England, in particular because many New England municipalities lack professional planning or legal staff and rely on volunteer land use and planning boards to review development proposals and to draft local zoning and development rules.

REGIONAL PLANNING COMMISSIONS

Nearly all New England states have some form of sub-state planning entities, which may be more or less comprehensive and wield varying amounts of power from state to state.⁷⁸ Although no state commands its municipalities to work together regionally, some states incentivize such cooperation. Most states facilitate that

cooperation by creating regional planning commissions or councils of governments — organizations composed of representatives from towns in a certain region, as well as planning experts.⁷⁹ Vermont, for example, divided the state into regional planning districts, and then by statute made each town a member of its respective regional planning commission.⁸⁰ A municipality is not required to pay dues to its regional planning commissions, nor adhere to any regional plan the commission creates.⁸¹ Nevertheless, Vermont towns actively participate in regional planning, in part because the commissions offer technical and legal assistance⁸² partially funded by the state.⁸³ The regional planning commissions also provide a useful framework for towns to mold their individualized plans.

Many regional planning commissions around New England have been active in food system planning. Much of this work has been funded through grants from the federal Partnership for Sustainable Communities, a program sponsored by the Environmental Protection Agency and the U.S. Departments of Housing and Urban Development and Transportation.⁸⁴ For instance, the Berkshire Regional Planning Commission in Massachusetts has used part of its federal grant to create a Local Food and Agriculture plan that will be integrated into a larger Sustainable Berkshires comprehensive plan. The plan focuses on strengthening the economics of farming to ensure that farming remains viable in the county.⁸⁵ Similarly, Boston’s Metropolitan Area Planning Commission is using Sustainable Communities funding to work with 13 communities in its service area on a comprehensive agricultural plan, intended to increase the economic viability of farming in the region and protect sustainable “foodsheds.”⁸⁶

One avenue for further exploration in these regional planning efforts is the potential for a regional transfer of development rights program. Transfer of development rights programs allow towns or counties to shift development from agricultural land to designated growth zones. Programs that allow the transfer of development rights have been used most effectively around the country at the county level, where there is sufficient scale to incorporate both farmland to be protected and growth areas, into which development rights can be transferred. Montgomery County, Md., for instance, has permanently protected more than 50,000 acres of farmland through its program.⁸⁷ Few towns in New England have authorized development rights transfer programs, largely because towns with significant farmland resources do not also have sizeable areas of development where growth can be

channeled. A regional program could provide the needed geographic diversity; depending on the state, state enabling legislation may be needed for such a program.

OPTIMIZING ZONING STATUTES

Some states have facilitated municipal-level smart growth policy by amending zoning enabling acts to eliminate contradictory provisions and strengthen municipal land use tools that facilitate mixed-use and high-density development.⁸⁸ Even in Home Rule states, the state government can limit or expand municipal power to a great extent.⁸⁹

In 2004, Massachusetts adopted the Smart Growth Zoning Overlay District Act, which created overlay zoning districts with smart growth requirements.⁹⁰ These districts, for example, must permit infill development and achieve a high minimum housing density.⁹¹ Municipalities must apply to the Department of Housing and Community Development to place these zones, but the state grants money to towns that adopt them.⁹² As of 2009, 27 overlay districts had been placed in Massachusetts.⁹³ Pending legislation in the Massachusetts legislature (H. 1859) would update the state's zoning, subdivision and planning laws to encourage balanced development and land preservation.⁹⁴

Rhode Island has encouraged integrating agriculture into mixed use and dense urban development by amending its state zoning legislation to make plant agriculture a permitted use in every zoning district in the state, whether residential, industrial or commercial.⁹⁵ Rhode Island's Comprehensive Planning and Land Use Act seeks to formally connect the State Guide Plan and municipal planning, by requiring local comprehensive plans to meet certain minimum standards, including the identification of prime agricultural soils and ways to protect them. The act requires local comprehensive plans to conform to the State Guide Plan and municipalities to pair their zoning with their comprehensive plans.⁹⁶

MAPPING

Most states now use Geographic Information System (GIS) mapping to aid their land use planning process. Technology now allows states to see precisely where and when changes in land use, population growth, and infrastructure have occurred over time. The Massachusetts Office of Geographic Information, for example, has created a comprehensive, statewide database of spatial information for mapping and analysis supporting environmental

planning and management, transportation planning, and economic development. Municipal staff and the general public can access mapping information through an online GIS viewer called MuniMapper, which creates maps with dozens of map layers of interest to municipal staff.

Connecticut also has an interactive GIS map on its website, which highlights the state's main growth corridors, tracking major highways.⁹⁷ Connecticut's Conservation and Development Plan — a smart growth-oriented list of goals and strategies to control the location and type of development — refers to that map.⁹⁸ Together, the map and plan implement a point system for determining priority funding, based on color-coordinated areas designated for either conservation or development.⁹⁹ One version of the map specifically identifies farmland protected through the state's Farmland Preservation Program.¹⁰⁰

Action

Support for Existing Programs

- The federal Partnership for Sustainable Communities provides funding for regional planning around food systems, including agricultural land use.
- States offer communities financial and technical assistance to develop plans and zoning that encourage smart growth, support farming, and protect farmland.

Policy Options

- States can do more to maximize the impact of codified smart growth principles by requiring all local and regional plans to incorporate smart growth techniques. Rhode Island's Comprehensive Planning and Land Use Act provides a useful framework of coordination between state and local planning, and conformance of local zoning to local comprehensive plans.
- States can use technology to unify state, regional and local planning. GIS mapping and extrapolation software visually demonstrate the effects on agriculture of current and past planning strategies, and can show the impact of potential future policies. After studying potential effects, states can designate areas for varying levels of growth, from prime agricultural lands to dense urban infill.
- Amend state zoning laws to permit plant agriculture in all zoning districts, as Rhode Island has done.

- Incentivize municipalities to designate growth areas that can support increased development density. Massachusetts' Transit Oriented Development Infrastructure and Housing Support Program, for example, offers financial grants through state agencies to municipalities for bikeways, pedestrian improvements, park-and-ride lots, and other transportation projects located within half a mile of a public transit station.¹⁰¹ Vermont's Act 183 offers an example of the type of state incentives that can be used to help drive smart growth at the local level.
- Explore creation of sub-state regional transfer of development rights programs and needed state-level enabling legislation or possible incentives to promote.

FARMLAND MITIGATION

Introduction

With fewer than 2 million acres in active agricultural use and more than 14 million residents, New England is a densely populated region, with less than one-fifth of an acre of farmland per person. Continued loss of farmland in the region, especially its most productive land, threatens the region's future production capacity as well as its economy and environment. Since 1982, 10 percent of the region's crop and pastureland has been converted to development; some states, such as Rhode Island and Massachusetts, have had significantly higher conversion rates (22 and 18 percent, respectively).¹⁰²

Government policy at the federal, state and municipal level has often, intentionally or not, been a driver in farmland conversion. At the federal level, the Farmland Protection Policy Act, enacted in 1981, was intended to reduce the federal government's role in farmland conversion, but has been less than effective in doing so. Across the region, some state governments have taken steps to address state and municipal actions that contribute to farmland conversion, and, as importantly, are using state policy to encourage more compact and infill development and to avoid or mitigate the conversion of productive farmland.

While the concept of mitigation has been widely used for wetlands protection, it has been applied less frequently to farmland. Farmland mitigation policies could

be strengthened around the region to deter farmland conversion and finance permanent protection efforts.

Discussion

FEDERAL

The National Agricultural Land Study of 1980-81 found that millions of acres of farmland were being converted in the United States each year and that much of the sprawl was the result of programs funded by the federal government. As a result, the Farmland Protection Policy Act (FPPA) was passed as part of the 1981 Farm Bill. The stated purpose of the law is to minimize the impact federal programs, including construction projects such as highways, airport, dams and buildings, have on the conversion of farmland to nonagricultural uses, and to ensure that federal programs are compatible with state and local programs and policies to protect farmland.¹⁰³

For projects that are supported or financed partially or entirely by the federal government, the FPPA requires federal agencies to examine the impact before approving any activity that would convert farmland. To do so, agencies request assistance from the NRCS for a land evaluation and site assessment. Based on this analysis, a federal agency can deny assistance to private parties or to state and local governments undertaking projects that would convert farmland. USDA is not granted the authority to stop projects of other agencies.¹⁰⁴

In fiscal year 2011, NRCS received 3,154 requests for assistance in evaluating projects from 29 federal agencies. These assessments found that a total of 202,513 acres of land were proposed for conversion to nonagricultural uses.¹⁰⁵ Federal agencies do not report their final decisions to NRCS and therefore the impact of the assessments on projects is unknown.¹⁰⁶

While the Farmland Protection Policy Act has helped identify federally funded projects that may convert farmland, it has done little to stop or mitigate the impacts of those projects. Specifically, agencies may deny funding based on the analysis of impact to farmland, but the FPPA does not require federal agencies to alter projects to avoid or minimize farmland conversion. The only recourse for reviewing decisions is litigation brought by state governors; no other entity has the authority to challenge federal action under the act. Other shortcomings of the Farmland Protection Policy Act include:

- Agencies supporting the development can determine whether a site contains farmland and thus is subject to the act.
- Although the Natural Resources Conservation Service evaluates the land, the final review relies on site assessments performed by agencies that are not concerned with farmland protection.
- The act lacks reporting requirements and measures to evaluate effectiveness.¹⁰⁷

STATE

Connecticut

Under Connecticut General Statutes Section 22-6, the commissioner of agriculture is empowered to review any proposed capital project receiving state funding that would convert 25 acres or more of prime farmland to nonagricultural use. The commissioner must report to the state Bond Commission whether the project “promotes agriculture or the goal of agricultural land preservation or if there is no reasonable alternative site for the project.” The statute does not specifically empower the commissioner to require mitigation.

The statute has been used in at least one instance where state funding was used for the development of nearly 100 acres of prime farmland. Through negotiations after a project review, state funding for the project included a condition that the town create a Farmland Preservation Committee that was charged with developing a farmland preservation strategy and identifying farms for conservation.¹⁰⁸

In 2004, Connecticut enacted a municipal farmland mitigation policy that requires towns that take agricultural land by eminent domain to mitigate this loss. Local governments may either purchase an agricultural conservation easement on comparable land within its jurisdiction or, if no land is available, pay a mitigation fee to the state’s farmland protection program to be used to protect farmland of similar size and quality elsewhere in the state. The state’s municipal farmland mitigation policy is limited in scope as it only applies to the taking of farmland by eminent domain. It does not appear that any municipality has been required to take action pursuant to this policy.

Massachusetts

Two policies are used to mitigate the loss of farmland in Massachusetts. Issued in 1991, Executive Order 193 declares it “essential to ensure that the Commonwealth’s agricultural land remains available for present and future generations.”¹⁰⁹ This order directs state agencies to avoid and mitigate against the conversion of farmland. State funds and federal grants administered by the state cannot be used to encourage the conversion of agricultural land to other uses when feasible alternatives are available. Mitigation must be provided in cases where state-owned farmland is converted to non-agricultural uses.

The second policy, the Massachusetts Environmental Policy Act, requires that state agencies study the environmental impact of their actions and take all feasible measures to avoid, minimize and mitigate damage to the environment.¹¹⁰ In cases where there will be an effect on the environment, the Massachusetts Environmental Policy Act requires enforceable mitigation commitments, which become permit conditions for the project if and when it is permitted.¹¹¹ The act applies to projects that are either proposed by a state agency or are proposed by municipal, nonprofit or private parties and require a permit, financial assistance, or land transfer from state agencies.¹¹² Specifically, the Massachusetts Environmental Policy Act applies to the conversion of land in active agricultural use to non-agricultural use if the land includes prime or important soils.¹¹³

Based upon Executive Order 193 and the Massachusetts Environmental Policy Act, the Department of Agricultural Resources reviews projects involving state funds and privately funded projects that affect agriculture. The secretary of energy and environmental affairs makes the decision to include mitigation when issuing a certificate for projects. Under its Agricultural Land Mitigation Policy, when the avoidance of farmland loss is not possible, the Department of Agricultural Resources requires that for every acre of farmland converted, one acre of agricultural land of comparable or greater agricultural viability be permanently protected for future use. This is accomplished, in order of preference, by:

- The permanent protection of farmland on-site;
- The permanent protection of agricultural land off-site, but where possible in the same community or a contiguous community; or

- A financial contribution of \$10,000 per acre to the state farmland protection program, or to “a qualified non-profit farmland preservation organization or municipal farmland preservation program” as approved by the commissioner.¹¹⁴

Massachusetts’ farmland mitigation policies have been successfully integrated into existing environmental review processes and used on many occasions to limit the impact of new development and finance the protection of agricultural land when development does occur. Although recent data is not available, about 2,000 acres were protected and \$1.3 million contributed to farmland preservation through mitigation in Massachusetts from 1991 to 2001.¹¹⁵

Vermont

As described in the Planning and Land Use section above, Vermont’s Act 250 includes mitigation for the loss of farmland. For subdivisions or developments involving at least 10 acres or 10 units or more, a project must receive an Act 250 permit. Among other criteria, permits are granted to projects that will not result in reducing the potential of agricultural soils; if this is impossible, permits may require mitigation. Before mitigation of farmland loss is even considered as a condition for issuing a permit, the applicant must demonstrate that there are no feasible alternatives to the project’s impacts. When necessary, a formula is used to determine mitigation steps; this formula varies depending on the location of the project. In some cases developers must pay into the Vermont Housing and Conservation Board trust fund, which administers the state’s farmland preservation program; the price per acre values are determined by the Agency of Agriculture and based on recent values of agricultural conservation easements. In other cases compact development may be required to maintain agricultural land.

As in Massachusetts, the Vermont farmland mitigation policy is incorporated into the existing environmental review process and has been used to limit the impact of new development on farmland and finance the protection of agricultural land when development does occur. As of 2010, the Vermont Housing and Conservation Board had used approximately \$3 million in mitigation funds to protect farmland.¹¹⁶

Action

Policy Options

Federal

The federal Farmland Protection Policy Act has had limited effect nationally. There are several ways the act could be strengthened:

- Federal agencies could be required to alter projects to avoid or minimize farmland conversion where possible; projects could be held to a “no feasible alternative” test.
- The act currently excludes consideration of agricultural farm parcels that are in urbanized areas or consist of fewer than 10 acres of land. These types of farm parcels, especially with prime or statewide important soils, are increasingly important to farmers in the region, and should be covered by the act.
- When farmland is developed with funding from federal agencies, mitigate the conversion.
 - » Provide funding through the Farm and Ranch Lands Protection Program to ensure that each year, at a minimum, an equal amount of agricultural land of similar or greater soil value is protected as is unavoidably converted by federal projects and activities.
- Create additional opportunities for decisions to be reviewed and challenged by the public and key stakeholders. Currently, the only recourse for reviewing decisions is litigation brought by state governors.
- The role of the Natural Resources Conservation Service could be strengthened by:
 - » Granting that agency the authority to determine whether a site contains farmland and is therefore subject to the Farmland Protection Policy Act.
 - » Providing NRCS with greater authority in the final review process and decision.
 - » Mandating reporting by agencies to NRCS and the public, and creating measures to evaluate effectiveness of the Farmland Protection Policy Act.

State

States should enact farmland mitigation policies that achieve the following:

- State funds and federal funds administered by state agencies should not be used for the conversion of agricultural land to other uses when feasible alternatives are available.

- Where farmland must be converted, mitigation should be required.
- Any project proposed by a municipality, nonprofit or private party that requires state approval, permit or assistance should be reviewed by the state to determine if agricultural land will be converted to nonagricultural use.
 - » The conversion of agricultural land to other uses should not be allowed when feasible alternatives are available.
 - » If avoiding farmland loss is not possible, mitigation should be required.
- Options for the mitigation of farmland loss to non-agricultural uses include:
 - » The permanent protection of farmland on-site;
 - » The permanent protection of agricultural land off-site; or
 - » Financial contributions to a state, municipal or nonprofit farmland protection program.

1.2 INCREASING PERMANENT PROTECTION

Introduction

New England has long been considered a leader in farmland protection, and several interviewees reiterated the important role that state PACE programs — also known as “purchase of development rights” programs — play in keeping farmland more affordable for both new and established farmers. These programs also help farmers expand and reinvest in their farm operations.¹¹⁷ Since 1996, the federal Farm and Ranch Lands Protection Program (FRPP) has provided significant resources for farmland protection throughout the region, but the program has become increasingly inflexible and difficult for both partners and participating landowners to navigate. Funding for state PACE programs has been less predictable over the past few years as a result of the recession and tightening state budgets. States with dedicated revenue sources for PACE programs have been better able to maintain momentum in their protection efforts, even though they have not been immune to raids on their funding sources. State and federal conservation incentives have helped to encourage landowners to donate farmland conservation easements to land trusts, or to sell easements at less

than full fair market value. A comprehensive analysis of the effectiveness of these incentives has not yet been conducted. Farmland is also being protected through other state and federal land conservation programs in the region, but an estimate of land protected through these programs is difficult. A couple of interviewees expressed concern about the long-term viability of farmland that has been protected with easements through other programs that have multiple policy objectives.

Discussion

PURCHASE OF AGRICULTURAL CONSERVATION EASEMENT PROGRAMS

Every New England state has a program that purchases agricultural conservation easements from willing landowners. Each program has unique administration, eligibility rules and partners. Collectively, the region’s states have permanently protected close to 275,000 acres of farmland, investing \$447 million of state resources and leveraging more than \$262 million in federal and local funds.¹¹⁸ For details on programs by state, including acres protected and funding, see the Appendix.

The federal Farm and Ranch Lands Protection Program is administered by the Natural Resources Conservation Service and partners with state and local governments and land trusts to purchase agricultural conservation easements on eligible farmland. FRPP has provided significant leverage to state farmland protection efforts; in fiscal year 2012 alone, it provided almost \$30 million in funding to the region.¹¹⁹

The Farm and Ranch Lands Protection Program operates slightly differently in each New England state. In Vermont and Massachusetts, its primary partners are the state PACE programs. In the other four states, land trusts and towns partner more frequently with FRPP without the involvement of the state PACE program, either because the state program has insufficient funding or because the farmland to be protected does not meet the criteria of the state program. FRPP has become an increasingly problematic partner; according to a number of state PACE program managers and land trust staff, frequently changing program rules, inflexible easement terms, and delays caused by administrative reviews have led some states to return FRPP dollars and have caused some potential projects to fall through.¹²⁰

In 2013, American Farmland Trust teamed up with the University of Nebraska on a research study to determine the impacts of the Farm and Ranch Lands Protection Program. Because Farm and Ranch Lands Protection Program funding is used in coordination with most state PACE programs, the study findings can be extrapolated to these programs as well.¹²¹ According to the study:

- FRPP has provided liquid capital for farmers to invest in their operations. Eighty-four percent of landowners who sold easements on their land spent at least some of the proceeds for agricultural purposes. Nearly half used the money to construct, expand or repair agricultural buildings or structures including barns, greenhouses or buildings to process or market agricultural products.¹²²
- In tandem with state PACE programs, FRPP is helping farmers finance land acquisition: 55 percent of participants who sold easements used the proceeds to repay loans on land they owned or to purchase additional land. FRPP makes the price of land more affordable as well: Among the owners who purchased protected land, 65 percent reported that the price was lower than comparable unprotected land.¹²³
- FRPP has increased on-farm conservation practices. More than two-thirds of the owner-operators in the FRPP sample reported implementing practices to prevent soil erosion or to protect water quality. In comparison, only 23 percent of operators responding to the 2007 Census of Agriculture said they used conservation methods to achieve comparable outcomes. Among the landowners who initiated new practices since the execution of the easement, 48 percent reported that they had received “encouragement” from the farmland protection program, including education about the need for on-farm conservation and technical assistance in developing a conservation plan. Among the landowners who sold easements, 20 percent used proceeds to help install or expand conservation practices.¹²⁴

With the maturation of state PACE programs in the region has come more need for monitoring and stewardship of protected land. Programs continue to grapple with identifying funding for this purpose. The Vermont Housing and Conservation Board, for example, sets aside funding for stewardship as part of the costs of an easement purchase.¹²⁵ In Massachusetts, a state conservation coalition has proposed creating a \$20 million Land Protection

Capital Investment Trust Fund to be used for the permanent care, monitoring and enforcement of all state-held conservation easements.¹²⁶ State programs also continue to address emerging needs associated with next generation farmers on protected lands, including housing, subdivision and farm viability. In Massachusetts, the APR Improvement Program was established “to help sustain active commercial farming on land that has already been protected through the Department’s Agricultural Preservation Restriction (APR) Program.”¹²⁷ The competitive grants program provides technical assistance and business planning to farmers on APR land; it also provides grants to implement aspects of the business plan. In fiscal year 2013, the average grant award was \$70,000.¹²⁸ Two states have also adopted a mechanism to maintain farmland affordability, known as the Option to Purchase at Agricultural Value (OPAV).

Option to Purchase at Agricultural Value

To promote farmland affordability, Massachusetts and Vermont have added an OPAV to the conservation easements purchased on farmland in their states. This option gives the state, as easement holder, the option to purchase or assign its right to purchase a conserved farm at a predetermined agricultural value when a conserved farm is put up for sale. The provision was adopted to keep protected farmland affordable for farmers, eliminating the common escalation in value of many protected farms and farm parcels because of competition from estate buyers. The state may transfer the OPAV to a qualified third party, such as a land trust. Certain sales are exempt, including sales to family members and to “qualified farmers.” Vermont defines a qualified farmer as “a person who presently earns at least one-half of his or her gross income from the ‘business of farming’ (as defined by the IRS).”¹²⁹ For more information on the Option to Purchase at Agricultural Value programs in Massachusetts and Vermont, see the Appendix.

A recent study of the OPAV in Massachusetts and Vermont found that the mechanism has had the intended effect of keeping farmland in the hands of farmers.¹³⁰ According to the analysis, commissioned by Land For Good’s Land Access Project, the Option to Purchase at Agricultural Value is not, however, a tool that necessarily promotes farmland access for new and beginning farmers. The analysis found that established farmers with better access to credit and collateral typically are able to out-bid beginning farmers for protected farmland.¹³¹ Therefore, the mechanism is important generally in keeping land affordable for

farmers, but is not necessarily helping new farmers who lack capital resources to gain access to land.

FUNDING SOURCES FOR FARMLAND PROTECTION

The amount and source of funding for state PACE programs vary across the states. (For more information about PACE program funding, see the Appendix.) Three states rely in whole or in part on dedicated funding sources that fund either multiple programs or programs with multiple objectives. For instance, the Vermont property transfer tax helps to fund the Vermont Housing and Conservation Board, an agency that links affordable housing and community development with land conservation and historic preservation.¹³² Similarly, New Hampshire's deed recording fee funds the Land and Community Heritage Investment Program, a multi-purpose program that supports municipal land conservation and historic preservation projects. Connecticut uses its deed recording fee to fund multiple programs, including the state Farmland Preservation Program and a dairy support program. Massachusetts is the only state in the region to have a funding mechanism that incentivizes municipalities to raise local funds to leverage state dollars. While the Massachusetts' Agricultural Preservation Restriction Program is bond-funded, the state's Community Preservation Act allows communities, by ballot referendum, to impose a local property tax surcharge of up to 3 percent.¹³³ The level of local surcharge determines the level of matching funds from the state that are financed by a statewide deed recording fee. Community Preservation Act funds are spent locally and projects are selected by a local committee.¹³⁴ This provides towns with both the means to finance the local match required of state Agricultural Preservation Restriction projects, and to supplement APR funding for projects that exceed the program's per-acre cap.

While dedicated funding sources seem to be a more reliable revenue stream for state PACE programs, they are not immune to being raided for other purposes. For the past two budget years, the New Hampshire legislature diverted most of the funding for its Land and Community Heritage Investment Program for other state budget needs, providing just \$1.8 million to the program.¹³⁵ In 2013, full funding — \$8.45 million for the two-year term — was restored.¹³⁶ And in Connecticut, Gov. Dannel Malloy's administration proposed in 2013 to divert \$4 million in funding from the Community Investment Act for unrelated budget

purposes; this recommendation was ultimately rejected by the legislature.¹³⁷

Conservation Tax Incentives

State and federal tax policy has been used in several ways to encourage farmland protection. Two mechanisms appear to be helping to protect farmland in the region—state conservation tax credits and the federal enhanced conservation tax incentive.

State Tax Credits

A conservation tax credit is an income tax credit available to landowners who either donate a conservation easement or accept a discount in the sale of a conservation easement, known as a bargain sale. The donation must protect conservation values as defined by the program and must be made to an entity qualified to hold the easement. Tax credits are generally more beneficial to landowners with higher taxable incomes, although some programs allow credits to be refundable, carried forward and applied over multiple years, or transferred to a third party.¹³⁸ Massachusetts and Connecticut are the only New England states that have created conservation tax credit programs. In Massachusetts, the value of the credit is 50 percent of the donation's fair market value, up to a maximum value of \$50,000. The credit is refundable, making it especially valuable to farmers: In the year that the sale or gift was done, if a farmer or landowner does not have income against which to offset the credit, the state will refund to the landowner the difference, up to \$50,000 or 50 percent of the donated value, whichever is less.¹³⁹ The Connecticut credit is available only to corporations, and there is no data on its use. In Massachusetts, the tax credit has been used in conjunction with the protection of five farms since 2011. The 675 acres protected on these five farms accounts for 11 percent of the total acreage where the tax credit has been used.¹⁴⁰ For more information about these programs, see the Appendix.

Federal Enhanced Easement Deduction

The enhanced federal tax incentive for conservation easement donations allows qualified farmers and ranchers to deduct up to 100 percent of their adjusted gross income for donating a conservation easement. Non-qualified farmers can deduct up to 50 percent of their adjusted gross income annually. The donor can carry forward unused portions of the deduction for 16 years.¹⁴¹ The enhanced easement deduction, first enacted in 2006, has been reauthorized several times by Congress. Authority for the deduction expired at the end of 2013. Legislation

to make the enhanced deduction permanent has been filed and currently has 144 co-sponsors in the House and 15 in the Senate, including 20 from New England (16 in the House and four in the Senate).¹⁴²

Action

Support for Existing Programs

- The federal Farm and Ranch Lands Protection Program is critically important to the region's farmland protection efforts. In both the House and Senate versions of the next farm bill, this program has been reconfigured and renamed the Agricultural Lands Easement Program. The reconfigured program combines the Farm and Ranch Lands Protection Program with the Grasslands Reserve Program. The Agricultural Lands Easement Program is part of a larger Agricultural Conservation Easement Program.¹⁴³
- Interviewees underscored the importance of the region's state PACE programs to new and established farmers alike, but most programs are not meeting demand. Increased funding for these programs is needed.
- Reauthorization of the enhanced federal tax incentive for conservation easement donations is needed, to continue incentivizing landowners to protect farmland. An analysis of its impact on farmland protection in New England would help to build support for the incentive among federal policymakers.

Research and Analysis

- There is little analysis or modeling underway in any of the six New England states around land use trends and future development patterns, and how those will affect farming and farmland. There has also been little attention paid to future land needs for agriculture, especially in light of climate change. Research in this area would help states target both farmland protection dollars as well as technical and planning assistance to communities where development pressure is most likely to result in farmland conversion.
- Analysis of the effectiveness of Massachusetts' refundable conservation tax credit in protecting farmland is needed to inform the continued use of the credit for farmland protection in Massachusetts and potential use of such a credit in other New England states.

Policy Options

Federal

- In 2010, the six state chief agricultural officers called for an additional investment of \$50 million annually in farmland protection funding in the region. Funding for federal farmland protection should be significantly expanded, and used to leverage additional state funding.
- Implementation of the Farm and Ranch Lands Protection Program remains a challenge for many state PACE programs. The program should be administered in a way that recognizes the longstanding expertise of state PACE programs in protecting farmland, and defers to state programs on easement terms and conditions.
- In parts of New England, productive farmland is not eligible for FRPP, notably land in sod and turf production. Additionally, forested land on prime farmland soils may not be eligible. The Natural Resources Conservation Service should work with state PACE programs to devise ways to protect these lands.

State

- States should consider adopting mechanisms such as Massachusetts' Community Preservation Act that incentivize farmland protection efforts by communities.
- Additional funding is needed for the long-term monitoring and enforcement of agricultural conservation easements. States should consider creating a dedicated trust fund for this purpose.
- To keep farmland protected through PACE programs affordable, states that have not done so should consider adopting an Option to Purchase at Agricultural Value in their PACE programs.
- State land conservation agencies, farmers and land trusts should increase communication to foster better understanding of easement terms and conditions and their effects on farm viability.

1.3 EXPANDING LAND ACCESS

URBAN AGRICULTURE: ZONING

Farming is becoming more popular in cities across the United States, due to urban communities' interest in healthy and locally grown food. Many cities have also recognized the tangible environmental and economic benefits that urban agriculture can bring to their residents. The increased presence of agriculture in urban settings, however, is not universally supported; some residents do not want agricultural land uses in their cities, and some worry that prevalent soil contamination makes urban-grown food unsafe to eat. This section focuses on how zoning and soil quality regulatory schemes affect urban farming and suggests ways that states and municipalities can improve zoning and soil-contamination regulations to responsibly navigate the increased interest in urban farming.

Introduction

In order for farming activities to occur in any municipality, they must be permitted by applicable land use laws and regulations. Zoning regulations can be either a major barrier or an effective avenue for promoting urban farming, depending on how they are written. Because farming has historically not been a common practice in New England cities, until recently many urban zoning codes did not contemplate agriculture as a permitted land use, or included only limited or ambiguous language regarding urban farming. In an effort to increase the prevalence of urban agriculture, several cities in New England have begun to look at zoning regulations as a way to facilitate urban farming while minimizing health, safety and nuisance concerns. This section of the report examines the impact of state law and local zoning regulations on the practice of urban farming, and suggests methods for revising zoning codes in order to fully take advantage of the benefits of urban farming, while minimizing potential harms.

Discussion

STATE LAW

While regulation of local land uses is generally accomplished at the municipal level, several states in New England have overarching statutes aimed at minimizing the impacts of local zoning on agriculture. For instance,

in Massachusetts, General Law Chapter 40A, §3, prohibits local zoning ordinances and bylaws from regulating land used for the primary purpose of commercial agriculture, aquaculture, silviculture, horticulture, floriculture or viticulture. This provision, however, applies only to parcels that are at least five acres, or at least two acres if each acre produces more than \$1,000 in gross sales. Other state policies are less prescriptive: Connecticut provides that “zoning regulations shall be made with reasonable consideration for their impact on agriculture,”¹⁴⁴ and New Hampshire creates a presumption that agricultural activities are permitted wherever they are not explicitly excluded.¹⁴⁵ For a description of other New England state laws restricting the impact of local zoning regulations on agriculture, see the Appendix.

MUNICIPAL LAW

New England's urban zoning codes reflect a variety of approaches to regulating agricultural land uses. Below is a sampling of existing zoning regulations, or ongoing efforts to revise zoning codes, pertaining to agriculture in major urban areas in New England.

New Haven, Conn.

Agriculture, “excluding the keeping of livestock and commercial greenhouses and nurseries except for the keeping of hens,” which may not exceed six, is permitted as-of-right in several New Haven residential districts.¹⁴⁶ While the city is becoming more environmentally friendly and investing in small-scale community gardens, the perceived lack of available urban spaces impedes commercial agriculture.¹⁴⁷

Portland, Maine

Portland's zoning ordinance allows for agriculture as-of-right in low-density residential districts.¹⁴⁸ The ordinance broadly defines agriculture to include “nurseries, greenhouses, and truck gardens.”¹⁴⁹ The city also permits commercial sales of products grown on-premises, provided that a given farm stand does not exceed 200 square feet in floor area.¹⁵⁰

Boston, Mass.

Boston's zoning code was recently revised to permit urban agriculture in all districts of the City. Before leaving office in 2013, Mayor Thomas Menino created the Mayor's Urban Agriculture Working Group as part of a citywide rezoning initiative led by the Boston Redevelopment Authority. The working group was tasked with developing new policies to encourage urban agriculture.¹⁵¹ A new section of the

zoning code was drafted as a result of the group's work.¹⁵² Article 89, which aims to comprehensively reduce zoning barriers to commercial urban agriculture, touches on a wide range of issues including soil safety, aquaculture, the keeping of hens and bees, and market opportunities. The new article was adopted on December 20, 2013.

Burlington, Vt.

While state law prohibits local governments from regulating “accepted agriculture practices” as defined by the Department of Agriculture, Vermont does encourage municipalities to create agricultural districts.¹⁵³ Burlington established its agricultural district “to protect productive agricultural soils, provide opportunities for viable commercial agricultural production, and to protect natural resources and working forest lands.”¹⁵⁴

In 2012, the Burlington Urban Agriculture Task Force released an in-depth report “recommending to the City Council a cohesive urban agriculture policy, improved rules and regulations addressing urban agriculture and steps to promote better urban agriculture in Burlington.”¹⁵⁵ While this report does not address large-scale commercial agriculture, the task force’s efforts reflect the community’s desire to incorporate farming into their urban environment.

Action

Policy Options

- Consider amending state laws to prohibit local zoning regulations from unnecessarily hampering the expansion of urban agriculture.¹⁵⁶
- Update comprehensive plans to explicitly include goals supporting urban agriculture. Rhode Island’s Comprehensive Planning and Land Use Act states that any comprehensive plan must contain a land use component that designates the proposed general distribution, location and interrelationships for land uses, including agriculture.¹⁵⁷ Similar policies could be pursued in other New England states.
- Reduce local regulatory barriers by making zoning ordinances less restrictive or ambiguous toward urban agriculture:
 - » Reduce special permitting obligations for agricultural land uses, which add expense and regulatory uncertainty.
 - » Consider using interim zoning if immediate zoning relief is necessary while a more comprehensive

reform effort is underway. Interim zoning preserves the status quo and prevents additional development and other incompatible uses in designated areas while providing cities with time to update their comprehensive plans and amend their regulations relating to urban agriculture. This would prevent the usual flood of development that occurs when zoning revisions are proposed.¹⁵⁸

- » When comprehensive zoning reform is not possible, more localized or temporary efforts, such as urban agriculture overlay districts, provide an opportunity to carve out large or small areas where urban agriculture is allowed regardless of underlying zoning restrictions.
- Provide frequent opportunity for community input and education around public health concerns related to urban soil contamination during policy development processes.

**URBAN AGRICULTURE:
SOIL CONTAMINATION**

Introduction

Contamination issues may complicate or preclude the use of some property for agriculture due to public health concerns, both for farm employees and end consumers. Liability for clean-up costs is also a factor, as landowners may be responsible for remediating contaminated soil, regardless of fault. Understanding concerns related to soil quality is particularly important for urban agricultural operations, as soil in urban areas often contains contaminants such as lead, due to accumulated release from cars, paints and industrial activities.¹⁵⁹ Remediating contaminated properties for agricultural use is possible, but can be expensive, risky and challenging.

Discussion

**VOLUNTARY REMEDIATION AND
BROWNFIELD PROGRAMS**

Brownfield sites are plots of land that are known to contain, or are suspected to contain, hazardous substances. Potential liability issues often impede redevelopment of these lots. Federal and state brownfield programs are designed to incentivize the redevelopment of contaminated properties, which otherwise might sit unused for

long periods of time and become blighted. If remediated properly, brownfield sites can be used for agricultural purposes, although great care must be taken to eliminate public health and liability risks.

Brownfield programs may provide financial assistance for the site cleanup, liability protections and development costs. Assistance is generally provided in the form of low-interest loans, grants, tax breaks, technical support and covenants not to sue. A covenant not to sue is a legally binding promise by state or federal environmental agencies or attorneys general to provide liability relief in exchange for a commitment to clean up the site and return it to productive use.

BEST MANAGEMENT PRACTICES FOR PUBLIC HEALTH

Unless an environmental site assessment shows that soil on a given property is safe for growing edible products, one should not assume that is the case. Urban soils are often contaminated with background levels of lead or other potentially harmful contaminants that may not trigger legal reporting and clean-up requirements, but still pose health risks. The current accepted practice for minimizing health risks from contaminated soil is the use of raised beds with imported clean soil and geotextile liners underneath to prevent mixing native and imported soil.¹⁶⁰ Because contaminated soil is so prevalent in urban areas and can potentially contaminate imported soil, it may also be advisable to test the soil in raised beds regularly.¹⁶¹

Action

Research and Analysis

- States should encourage and make routine the implementation of best management practices for growing in soils that are not contaminated by legal standards, but may still have background levels of contaminants that pose public health threats.

Policy Options

- Update soil contamination laws and programs to anticipate agriculture as a future land use for remediated properties. Most policies currently include categories for future land uses such as residential, commercial and industrial, but do not have an agricultural category. This can make it difficult to interpret from remediation

records whether a property is sufficiently clean to be used for food cultivation.

FARM LINKING PROGRAMS

Introduction

Farm linking programs operate in various ways to connect farmers seeking land with owners of agricultural properties. In New England, some farm link programs are statewide; others serve a more local geography. Typically, a linking program maintains a list of farms and farmland and works to connect seekers with owners. Several linking programs screen applicants; some actively facilitate matches and farmer-landowner transactions.

Successful farm linking requires more than a list of properties. Many farm link and farmland access programs provide educational programs and technical assistance for seekers. Some also work with landowners, and some help farmers with succession planning.

Discussion

Around the country, a handful of state departments of agriculture manage farm linking programs. Several have been housed within state cooperative extension services; most are managed by nonprofit organizations.

Connecticut has the only state-managed farm linking program in New England. The Connecticut FarmLink program is financed through the state's Community Investment Act. Recent data showed the program had 53 landowners and 179 land seekers.¹⁶² The service does not actively match landowners with land seekers, though the Connecticut Department of Agriculture is considering making changes to the program.¹⁶³

Federal and state resources have been important to the development of several farm link services in the region. For instance, the regional online property clearinghouse New England Farmland Finder was developed through the Land Access Project, which was financed in part by a USDA Beginning Farmer and Rancher Development Program grant. State agencies such as the Maine Department of Agriculture have provided financial support to New England Farmland Finder as well. Public

agencies can be important participants in farm link services by posting available public properties for lease with linking programs.

Action

Support for Existing Programs

- The federal Beginning Farmer and Rancher Development Program has provided important resources for farm linking services in New England. The program should be reauthorized in the next farm bill and fully funded.
- States should help support farm linking services with resources directed to state or private sector programs.

LAND LEASING: BEGINNING FARMER TAX CREDIT

Introduction

The high cost of farmland in New England and competition for farmland among established farmers are barriers for new farmers to purchase land for a start-up farm enterprise. Leasing is often a viable and preferred alternative. There are currently about 624,000 acres of farmland rented out by nearly 20,000 farmland owners across New England.¹⁶⁴ While there is no way to easily measure the extent of vacant, underutilized or easily restored farmland that could be added to the pool of available farmland for lease, a beginning farmer tax credit is one tool that might encourage New England farmland owners to lease land to new and beginning farmers.

Discussion

Nebraska and Iowa have state income tax credit programs that encourage owners of farmland and other farm-related assets to rent to qualified new and beginning farmers. The programs include farmland as well as depreciable machinery or equipment, breeding livestock and buildings. To qualify, farmland owners must lease to beginning farmers whose net worth does not exceed a certain level and who have sufficient education and training to operate a farm. The programs require lease terms between two and five years, and the lease value must be at or near

market value. Tax credits are 5 percent to 10 percent of the rental income received for cash rent.¹⁶⁵ The programs are popular in both states: From 2007 through 2011, the Iowa program issued 2,624 credits at a value of more than \$15 million; and from 2005 through 2009, the Nebraska program issued credits to 435 asset owners at a value of \$1.9 million.¹⁶⁶

While the concept of a beginning farmer tax credit program has been discussed in several New England states, no legislation has been introduced. This is largely because farmers in New England pay much lower rental rates than farmers do in the Midwest. In some cases farmers are paying little to no rent at all for farmland, and a tax credit could incentivize raising rents. A report done in 2013 by the Land Access Project, however, proposes linking the income tax credit to property taxes paid by the landowner, to avoid putting upward pressure on farmland rental rates.¹⁶⁷

Action

Research and Analysis

- Undertake an analysis, as recommended by the Land Access Project, of a state-level beginning farmer tax credit linked to property taxes to understand its potential impact and benefits. Such an analysis might consider:
 - » Basing the amount of the income tax credit received on the property taxes paid by the landowner on the land subject to the lease.¹⁶⁸
 - » Requiring that any lease be for a minimum term of five years, and for a minimum of two acres of prime or statewide-important farmland.
 - » Requiring that the lease be with a new and beginning farmer as defined by the USDA.¹⁶⁹
- A two-acre minimum could encourage homeowners with large house lots that may include eligible farm soils to consider renting some of their excess land to new and beginning farmers. This would likely create opportunities for new and beginning farmers in urban and suburban areas. As urban land may not be enrolled in or be eligible for a state's current use property tax program, states should consider a per-acre and per-credit cap to enable all eligible landowners to participate, regardless of the amount of property tax they pay.¹⁷⁰

LAND LEASING: PUBLIC LANDS

Introduction

This subsection addresses state and municipal programs designed to provide opportunities to farm on public land. Expanding access to public lands suitable for agricultural activities is important for both new and established farmers. For example, in Durham, Conn., the benefits of leasing town-owned land are clearly explained by Melynda Naples of Deerfield Farm: “Without the ability to lease the land from Durham, we would not have been able to buy land and grow this farm business; the land is crucial to our farm’s viability.”¹⁷¹

This section spotlights some existing state and municipal farmland leasing models. Note that some public programs operate with licenses, not leases. The terms “lease” and “leasing” are intended here to cover both types of contracts. A license confers permission to use the property, whereas a lease provides the lessee with specific rights in the property.

Discussion

LAND

Open Land

Even in states where leasing programs exist for public farmland, more comprehensive, regularly updated surveys of public landholdings done with an eye toward identifying parcels suitable for commercially viable agricultural enterprises could enhance land access. Vacant land is often associated with state hospitals, prisons and other large public institutions. The best survey practices take parcel size, soil quality, drainage, slope, accessibility and surrounding uses into account; states can derive much of this information in a cost-effective manner from available GIS overlays.¹⁷²

In 2012, for example, New Hampshire established a committee to study the promotion of leasing state-owned land to beginning farmers. By participating in this study, the Department of Resources and Economic Development has cultivated additional contacts and anticipates leasing more field land to farmers in the future.¹⁷³ Massachusetts has a program within its Department of Agricultural Resources to license certain state-owned lands to farmers.

In 2009, the Connecticut legislature directed the Connecticut Farmland Preservation Advisory Board to review all state-held farm parcels and make recommendations, if appropriate, on how to permanently conserve those properties for agricultural use. The board conducted a study of state-held parcels, totaling approximately 1,300 acres, and set priorities. In 2013, the legislature passed a bill to protect 825 acres of state-owned farmland at the Southbury Training School. The bill transfers the land from the Department of Developmental Services to the Department of Agriculture and allows the commissioner of agriculture to grant a permanent agriculture easement to a nonprofit conservation organization.¹⁷⁴

Forests

Vermont identifies high-density, easily accessible maple stands for its sugar bush licensing program. The Vermont Department of Forests, Parks and Recreation has worked with the Vermont Maple Sugar Makers Association to get eight sites up and running.¹⁷⁵

TENANTS

The bidding and application process for public lands should be transparent and efficient. Several states have modified their existing request for proposal schemes to meet these objectives.¹⁷⁶ When weighing bids, some programs look at proposals holistically, giving attention to factors other than the bid price.¹⁷⁷ Some states issue farmer self-assessments, reducing paperwork and ensuring that applicants can determine whether they are suited to lease public land before bidding.¹⁷⁸

The Rhode Island Department of Environmental Management evaluates leasing proposals based on price-per-acre bids, the relevant experience of the prospective lessee, and the prospective lessee’s capability of managing the property in line with terms set out in the state’s request for proposals.¹⁷⁹

LEASE STRUCTURE

In general, the basic elements of a lease as a legal contract are simple and include the parties, property, consideration, start and stop dates, and signatures. However, most agricultural leases typically contain additional terms, and some — such as long-term leases, ground leases, leases on conserved land, and leases with public entities — require considerable detail. The following discussion touches on just a few of the considerations: term; rent; and

environmental stewardship. Other important elements of leases on public land include permitted uses, repairs and improvements, liability, default and monitoring.

Term

Ensuring an adequate lease term — defined as the period of time the lease covers — is important to attracting farmers to public land. What is adequate for the farmer depends on several factors. Many investments farmers make in improving the land, such as building up nutrients in or drainage of the soil, can take years to complete. Once a farmer finishes these improvements it may take additional growing seasons to realize a meaningful return on those investments. In such scenarios, multiyear leases are important. In some situations, annual leases meet the farmer's needs.

Five-year lease terms appear to be standard across a range of programs at state and municipal levels. Under Massachusetts' licensing program, farmers rent parcels of land for five years, with an option to renew for an additional five years. A one-year special permit is also available.¹⁸⁰ Connecticut has a program that allows the commissioner of agriculture to purchase and hold suitable land for the purpose of eventually reselling, exclusive of development rights, to a farmer "as soon as practicable."¹⁸¹ While the state holds the land, it may lease it to farmers for agricultural purposes under leases not to exceed five-year terms, with options to renew for additional lease terms not to exceed five years.¹⁸² The town of Durham, Conn., also offers five-year rolling leases that have proved successful with some farmers.¹⁸³

Rent

Rent is generally paid according to fixed cash or variable cash terms. The fixed price per acre on public land varies depending on the soil quality, slope, accessibility and other factors. In one state, the fixed rental rate for public land ranges from \$18 to \$100 per acre annually.¹⁸⁴ In another state, the cost of a sugar bush license varies based on the market price of the final product, in this case, maple syrup.

Cash rent is sometimes earmarked for the agencies administering public land leases to help make the programs financially self-sustaining.¹⁸⁵ For example, income from the licensing of Vermont's sugar bushes — 25 percent of the market rate for fancy and commercial-grade syrup, multiplied by the number of taps — goes to a revolving fund used to manage state parks.¹⁸⁶

Tenants compensate the New Hampshire Fish and Game Department by bartering to leave a portion of a corn crop for wildlife, by delaying mowing hay fields to allow bird nesting, or by mowing other fields that are not in agricultural use for habitat purposes.¹⁸⁷

Environmental Stewardship

Rhode Island's Department of Environmental Management's program is an example of one with specific environmental stewardship requirements for tenants on its land.¹⁸⁸ Lease conditions include measures recognized as effective for maintaining soil health, preventing runoff and enhancing wildlife values. These include mandatory cover cropping after the harvest of a principal crop, application of fertilizers and lime in compliance with specified best management practices, and planting a portion of the land with crops, such as corn, that must be left unharvested to provide wildlife habitat and forage.¹⁸⁹

Holders of Vermont sugaring licenses must comply with guidelines covering forest health maintenance, soil and water conservation, and limitations on outbuildings and other structures.¹⁹⁰ Fencing and other necessary improvements are often allowed if they do not interfere with other uses for the land.

Action

Research and Analysis

- States that have not already done so should consider taking an inventory of their state-owned lands to determine their suitability for agricultural production.
- Encourage dialogue between state and federal natural resources agencies, state agriculture agencies, and farmers to address management concerns around leasing public land for agriculture.
- Analyze the potential of state-owned forestland for silvopasture and cultivation of agricultural products.

Policy Options

- Encourage the permanent protection of state-held farmland, as Connecticut did in 2013 with the 825-acre Southbury Training School.¹⁹¹
- Where feasible and appropriate, encourage state conservation agencies to incorporate agricultural production into their land management strategies.
- Consider strategies to improve tenure security, such as longer or rolling lease terms and ground leases.

FINANCING LAND ACQUISITION

Introduction

The high cost of land in New England is one of the most significant barriers to both farm expansion and new farm start-ups. Competition for land continues to elevate prices beyond the reach of many established farmers and for most young and beginning farmers.¹⁹² The region has some of the highest farm real estate values in the country: In 2012, the six-state average per acre value was \$7,145 — more than 2.5 times the national average — and three New England states rank in the top five highest values in the country.¹⁹³

State PACE programs are making farmland more affordable to farmers, both by restricting the development potential of farmland and, in some cases, by including an affordability mechanism in the easement. Several other tools are available to help farmers finance land acquisition, including individual development accounts, as well as long-established farm lending programs. For more information about PACE programs, see the Increasing Permanent Protection section earlier in this chapter.

Discussion

INDIVIDUAL DEVELOPMENT ACCOUNTS

A tool that new and young farmers could use for land acquisition is the individual development account (IDA). All New England states have authorized the use of IDAs for income-eligible individuals and families to save for a first home, education or small business. The 2008 Farm Bill created an individual development account pilot program for beginning farmers to start their businesses and acquire land. Similar authorization and funding at the state level could expand use of these accounts for agricultural purposes.

Beginning Farmer and Rancher Individual Development Accounts

The Beginning Farmer and Rancher Individual Development Accounts pilot program, created in the 2008 Farm Bill, is designed to help new farmers and ranchers of limited means pay for their agricultural endeavors through business and financial education and matched savings accounts. Savings from the account can be used to purchase farmland, as part of a down payment on farmland, or to purchase breeding stock, farm equipment or similar

assets. Matched savings are capped at \$3,000 annually. The 2008 Farm Bill authorized appropriations of up to \$25 million — \$5 million per year for five years — for the Farm Service Agency to establish pilot projects in at least 15 states. Since funding was never appropriated, however, pilot states have not been selected.¹⁹⁴ The program is reauthorized in both the House and Senate versions of the next farm bill.¹⁹⁵

State Individual Development Accounts

At the state level, IDAs in New England are designed to help low-income families and individuals purchase assets, including a home, small business, post-secondary education or vehicle, or put a deposit on an apartment. Limits on annual contributions vary, but are generally rather low, ranging from \$500 to \$1,000. Many of these programs are administered by nonprofit and community organizations and data on their use is not readily available. It is unclear whether any of these state programs could be used for the purchase of farmland or farm equipment without statutory amendment. In some states, such as Connecticut, businesses that contribute to state IDA funds can receive tax credits.¹⁹⁶ (For more information about IDA programs by state, see the Appendix.)

Vermont is the only state in New England where an individual development account program for beginning farmers is in use. The Vermont Agriculture Individual Development Account Program was created with and is funded through a 2011 USDA Beginning Farmer and Rancher Development Grant. It is administered through the University of Vermont's cooperative extension. The program matches the savings of individuals up to \$1,000, and eligibility is limited to those between ages 14 and 21.¹⁹⁷

The California FarmLink IDA program, created in 2003, is the nation's most robust IDA program for farmers. California FarmLink raises funds from private sources to match farmer investments. Although aggregated data is not available, anecdotal data and highlighted case studies demonstrate that in several cases the funds have been used by farmers to purchase farmland in the region.¹⁹⁸

Other Financing Mechanisms for Beginning Farmers

The Land Access Project identified programs outside of New England that provide land financing for new and beginning farmers.¹⁹⁹ One such program is the Delaware Young Farmers Farmland Purchase and Preservation Loan Program, which facilitates the acquisition of farmland by young farmers while advancing state farmland protection

goals. The program is administered by the Delaware Agricultural Lands Preservation Foundation and makes zero-interest loans available for farmers between ages 18 and 40 to purchase farmland. Applicants must have at least three years of farming experience and a net worth of less than \$300,000. The farmland to be purchased must be located in Delaware and contain at least 15 tillable acres zoned for agricultural use. In addition, the land must not be subject to an existing conservation easement. The loan cannot exceed 70 percent of the appraised value of the conservation easement that will be placed on the agricultural land to be purchased, although the farmer can bid for less state funding. Development rights are determined by taking the difference between fair market value and agricultural value, up to \$500,000 — the maximum loan amount. Farmers in the program may also secure loans from commercial lenders, most commonly Mid-Atlantic Farm Credit, and are able to pay off the commercial loan first. Once the commercial loan is paid in full the farmer begins making payments on the 30-year loan to the state.²⁰⁰

Another suggestion from the Land Access Project is to make federal Farm Service Agency inventory lands available to new and beginning farmers.²⁰¹ The Farm Service Agency could work with the Farm and Ranch Lands Protection Program to place an agricultural conservation easement on all farms in its inventory and then give a preference to new and beginning farmers to purchase such properties when they are put up for sale. The easement could include an Option to Purchase at Agricultural Value mechanism to maintain future affordability.

For more information of financing mechanisms, including a discussion of Farm Credit, Farm Service Agency and Aggie Bonds, see *Beginning Farmers and New Farm and Food Enterprises*, section 2.1, chapter 2.

Action

Research and Analysis

- Survey new and beginning farmers in the region to determine their interest in and ability to invest in individual development accounts. Use the survey results to inform future policy decisions about the use of and funding levels for these accounts.
- Research the region's Farm Service Agency loan and land portfolios to determine the amount of land currently in the agency's inventory and the amount of land that the agency has foreclosed on within the past five years.

Policy Options

Federal

- Funding for the Beginning Farmer and Rancher Individual Development Accounts program should be appropriated, and at least one New England state should be included in the pilot to reflect the large number of new and beginning farmers in this region. Use the pilot program to determine how individual development accounts might best be structured to help new, beginning and limited-resource farmers purchase farmland.
- Lift the restriction on future subdivisions of protected farms in the Farm and Ranch Lands Protection Program.²⁰² Allowing appropriate subdivision of larger protected farms and farm parcels will not only help farms adapt to changing agricultural circumstances and needs, but can also provide opportunities for new and beginning farmers to gain access to smaller farm parcels at a more affordable price.
- Require the Farm Service Agency to permanently protect farmland on which it forecloses, and to sell the land with an Option to Purchase at Agricultural Value provision attached.

State

- State PACE programs provide a foundation of permanently protected land for the future. Even without the Option to Purchase at Agricultural Value, studies and farmer surveys show that protected farmland is more affordable to farmers than land that has not been protected. Accordingly, state PACE programs should be fully funded to meet demand.
- The Land Access Project has a series of recommendations aimed at making farmland more affordable for new and beginning farmers, including:
 - » Extending the Option to Purchase at Agricultural Value in all state PACE programs to help maintain future farmland affordability.²⁰³ State PACE programs could also consider purchasing an OPAV on farms and farm parcels already protected with traditional easements that did not include an Option to Purchase at Agricultural Value provision. Purchasing an OPAV on already-protected farms could target land that is most at risk for estate conversion and that offers ownership possibilities for new and beginning farmers.

- » In state PACE programs, where applicable, lift restrictions on future subdivisions of protected farms.²⁰⁴ Allowing appropriate subdivision of larger protected farms and farm parcels will not only help farms adapt to changing agricultural circumstances and needs, but can also provide opportunities for new and beginning farmers to gain access to smaller farm parcels at a more affordable price.
- » Within the existing PACE programs, develop entirely new offerings geared specifically to new and beginning farmers. A “starter farm” program within existing PACE programs would target the protection of smaller farm properties with housing. To encourage the property to remain a stand-alone farm, require that the house stay with the farm. To maintain its future affordability, consider restricting the size of the house.²⁰⁵
- Consider expanding existing state individual development account programs, or establish new programs in those states without one, to specifically include the purchase of farmland as an authorized use. Increase the annual cap on participant savings that can be matched.

1.4 INCREASING AVAILABLE FARMLAND

AGRICULTURAL LAND RESTORATION

Introduction

Meeting a higher percentage of New England’s food needs with regionally sourced food will require both more intensive use of current farmland and the cultivation of additional land. In some instances, farmers may be able to increase productive acreage by bringing brushy areas around fields into production. In other cases, farmers may explore expanding animal grazing areas into forests through the practice of silviculture. Any large-scale strategies to transition forested land to productive agricultural use must be carefully analyzed to address and avoid potential environmental impacts.

Discussion

PROGRAMS TO INCENTIVIZE AGRICULTURAL LAND RESTORATION

State Programs

Connecticut is the only New England state with a program that helps landowners restore farmland. Farmers can cost share with the Farmland Restoration Program to restore land with prime and important soils to active agricultural use. In evaluating applications, priority is given to food production, followed by livestock feed and forage, and lastly to other agricultural uses. Restoration practices approved for payment must be based on an approved conservation or farmland restoration plan. (For more details and a brief case study, see the Appendix.)

In Massachusetts, the Community Preservation Act is a funding mechanism used to preserve open space, farmland and historic sites, create affordable housing, and develop outdoor recreational facilities.²⁰⁶ Community Preservation Act funds can be used for the “rehabilitation or restoration of open space,” which includes agricultural land.²⁰⁷ The act allows communities to raise funds through a real estate tax surcharge that is matched at various levels by a statewide fund.²⁰⁸ While funds have been used to restore natural areas around rivers, ponds, wetlands and coastal areas, the act does not appear to have been used for the restoration of agricultural land.

Federal Programs

The Environmental Quality Incentives Program administered by the Natural Resources Conservation Service provides technical assistance and cost-share assistance to plan and implement conservation practices that address natural resource concerns on farm and forest land. The program can be used for water, air quality and the improvement or creation of wildlife habitat for at-risk species.²⁰⁹ It also provides funding for clearing trees and brush to improve a forest stand; brush removal for purposes of improving pasture or grazing land can be funded by the program.²¹⁰

Action

Research and Analysis

- More research is needed on the potential carbon impacts of conversion of forestland to agriculture in the region, and on ways to minimize those impacts.

- Create a regional inventory of land that was once in agriculture and is now inactive or under forest cover.
- Conduct an analysis of the Connecticut Farmland Restoration Program to assess its effectiveness in increasing agricultural production and its impact on the environment.
- Encourage expansion of conservation tillage and no-till agricultural practices to improve soil health and carbon sequestration.
- Encourage federal cost-share assistance for silvo-pasture practices through the Environmental Quality Incentives Program and Conservation Stewardship Program, and analyze effectiveness for food production.
- At the state level, consider the priorities of current forestland protection programs to see if they might be expanded or modified to focus on the protection of prime and important agricultural soils.

ENDNOTES

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- ⁹ See Conn. Gen. Stat. § 12-107a to 107f; 7 M.R.S. § 152; M.G.L.c. 61A §§ 1-15; N.H. Rev. Stat. Ann. §§ 79-A:1-14; R.I.G.L. § 44-27; 32 V.S.A. §§ 3751-63.
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- ¹⁵ N.H. Rev. Stat. Ann. §§ 79-A:1-14.
- ¹⁶ M.G.L.c. 61A §§ 1-3.
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- ³⁷ N.H. Rev. Stat. Ann. § 79-A:25-a.
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- ⁶⁶ *E.g.*, R.I.G.L. § 45-22.2-9; 24 V.S.A. §§ 4302(b) & (c).
- ⁶⁷ See *Act 250*, Vt. Natural Res. Bd.: District Commissions, <http://www.nrb.state.vt.us/lup/publications/nrb1.pdf> (Act 250 summary and guide developed by the Vermont Natural Resources Board).
- ⁶⁸ *Id.*
- ⁶⁹ See Jack Kraichnan, *Vermont's Act 183: Smart Growth Takes Root in the Green Mountain State*, 32 Vt. L. Rev. 583, 593 (2008).
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Food Production

Agriculture is inherently risky. It is becoming more so due to the impacts of climate change. Food production in New England in particular is challenged by many factors, including physical limitations, such as land and climate; input costs, such as labor, energy and feed; and other business expenses, such as taxes and regulatory compliance. The continued decline of agricultural support services in the region, such as research and extension, provides an additional challenge to producers trying to compete against food imports from around the country and the world, many of which benefit from government-sponsored research and technologies.

This chapter looks at public programs and policies that affect food production.¹ In some instances, public policy is helping farmers reduce costs, increase productivity and reduce risk. In other instances, public policy is falling short and will need to do more to help farmers address production challenges and improve profitability if the region hopes to increase its food production capacity.

2.1 HUMAN RESOURCES

FARM LABOR AND WORKFORCE DEVELOPMENT

Introduction

A resilient and robust New England food system offers new and expanding job opportunities and requires many types of skilled workers. Common core food system occupations and industries include farmworkers (production), slaughterhouse and other processing facilities

Highlights

- The availability of farm labor is a key impediment to increasing regional food production. Federal immigration reform legislation passed in the Senate in 2013 would effectively address this concern, by creating an agricultural guest-worker program administered by the USDA for both seasonal and year-round employees.
- Growing production risks associated with climate change will require increased state and federal investments in agricultural research and extension, and better risk management strategies.
- Public investments in farm and food business development appear to be creating new jobs and economic opportunities in agriculture; improved impact analysis would help make the case for sustained state and federal funding for these programs.

workers (processing), warehouse workers (distribution), grocery store workers (retail), and restaurant and food service workers (service).² According to the 2007 Census of Agriculture, New England's 33,000 farms employ 110,000 workers. This includes principal farm operators as well as seasonal workers, both domestic and foreign.³ A study done by Farm Credit East, the region's largest agricultural lender, estimates that there are 121,000 jobs in agricultural services, inputs and processing in the region.⁴ Similar estimates for jobs in distribution, retail and restaurant and food service that are closely tied to regional food production are not readily available. Some state-level estimates, however, have been done. The Vermont Farm to Plate Network, for example, estimates that the state's food system provides almost 58,000 jobs.⁵ A University of New Hampshire study estimated 81,000 jobs in that state's food system.⁶

On-farm labor costs and availability were identified by several interviewees as a major obstacle to expanding regional food production. As with New England's labor force as a whole, the region's farm labor costs are higher than those in many other parts of the country. According to a recent report from Farm Credit East, the six New England states have farm labor costs that rank in the top 20 nationally in relation to farm sales, with Connecticut ranking third and Massachusetts ranking fourth highest in the United States.⁷

Just like growers in other regions of the country, New England's fruit and vegetable growers rely heavily on temporary, seasonal laborers. A lack of skilled domestic farmworkers has caused many farms to rely on the federal H-2A temporary agricultural worker program. Other farmers, frustrated with that program's delays and regulations, rely instead on undocumented foreign workers. The region's dairy farms also rely heavily on immigrant labor, but because most of these jobs are year-round, permanent jobs, dairy operations cannot make use of the federal H-2A program. Of the approximately 1.2 million immigrants in the U.S. agricultural workforce, about 300,000 immigrants work on dairy farms.⁸ According to Farm Credit East, labor uncertainty is a significant problem for Northeast agriculture, and many in the region, including this lender, believe a new agricultural guest-worker program administered by the USDA for both seasonal and year-round employees is critically important.⁹

Renewed interest in the regional food system has fueled demand for worker training throughout the food chain.

More colleges and universities are joining the region's technical and vocational schools in offering degree and/or specialized training programs in areas such as agricultural production, food processing and institutional food preparation. As they see more economic opportunities in food and agriculture, state agencies are also beginning to focus on workforce development in this area. Additional on-farm employment opportunities in processing, tourism and marketing may help to retain and support farm laborers.

Discussion

FARM LABOR: H-2A TEMPORARY AGRICULTURAL WORKER PROGRAM

The H-2A guest-worker program allows agricultural employers who anticipate a shortage of domestic workers to bring foreign workers to the United States to perform agricultural labor or services of a temporary or seasonal nature. Jobs for temporary or seasonal workers must be for less than one year.¹⁰ As mentioned above, this program is important to fruit and vegetable growers, but not to dairy farms, which tend to need permanent year-round labor.

Prior to approval of an employer's petition for such workers, the employer must demonstrate that there are not sufficient able, willing and qualified U.S. workers available to perform the temporary and seasonal agricultural work, and that employment of H-2A workers will not adversely affect the wages and working conditions of similarly employed U.S. workers. In order to receive clearance to file an H-2A application, an employer must submit a job offer to a state workforce agency at least 60 days before the start date.¹¹

According to several interviewees, the use of temporary foreign agricultural workers is necessary because of the lack of skilled domestic farmworkers or laborers willing to do the type of agricultural work needed. While some farmers in the region make use of the H-2A program (in 2011, visas for 2,085 workers in New England were approved¹²), others are frustrated with the program's expense and associated delays, and rely on undocumented workers. The use of undocumented farmworkers by those disenchanted with the H-2A program has created a competitive disadvantage for those who operate within the legal system, as required wages — more than \$10 per hour, plus housing — are typically higher than those paid to workers without legal status.¹³ Some in the region believe that the U.S. Department of Labor has increased the employer

requirements for the H-2A program in order to encourage the employment of unemployed U.S. citizens.

Although the H-2A program includes safeguards to protect foreign workers, national farm labor advocates have criticized the structure of the program for allowing exploitation due to the dependence of workers on their employers.¹⁴ Advocates have also called for a new program that would better protect workers' rights, provide increased wages, and improve working conditions to make farm jobs more attractive.¹⁵

FARM LABOR: FAIR LABOR STANDARDS ACT

The Fair Labor Standards Act (FLSA) is the federal law that sets minimum wage, overtime, recordkeeping and child labor standards. Under the FLSA, farm employers must pay their employees the minimum wage, unless they fall into one of six exemptions; farm employers are not required to pay overtime as long as the employee is "employed in agriculture," as defined by Congress and the Department of Labor. Some farm employees, including minors under 16, family members and some local seasonal laborers are also exempt from minimum wage provisions.

The Department of Labor has broad discretion to determine what counts as being "employed in agriculture" — part of the inquiry examines whether a practice is an "ordinary" or "established" part of agriculture. Several interviewees expressed concerns that the FLSA does not reflect increasingly common agricultural practices on New England farms. According to the Massachusetts Farm to School Project, several farms in Massachusetts have been fined, or threatened with fines, for violating the law's overtime provisions, apparently because activities that farmworkers were engaged in — aggregating and processing products from their farm with product delivered from other farms — were considered outside the scope of the farm's agricultural operation and therefore subject to overtime provisions.¹⁶ The FLSA also governs the use of interns on farms. Under the law, an internship must meet six criteria:

- The training, even though it includes actual operation of the facilities of the employer, is similar to that which would be given in an educational environment or vocational school;
- The training is for the benefit of the trainee;
- The trainees do not displace regular employees, but work under their close supervision;

- The business that provides the training derives no immediate advantage from the activities of the trainees, and may in fact be impeded;
- The trainee is not necessarily entitled to a job at the conclusion of the training period; and
- The trainee understands he or she is not entitled to wages for the time spent in the training.¹⁷

The interpretation of these criteria has been problematic in places in New England. Despite the relative popularity of farm apprentices or interns in the region, these farm employment arrangements are often not considered internships by state or federal labor regulators. Many interns are, in fact, subject to standard FLSA labor provisions, unless the farm falls under the act's agricultural exemption.

There are additional regulatory requirements around meals and housing provided to employees in exchange for work. Essentially, any circumstance in which an employee's housing is provided by the farm is likely to require approval by a federal and/or state regulatory agency, and the standards for acceptable housing are stringent.¹⁸ In addition, there are limits on the deductions that employers can take for employee meals.¹⁹

WORKFORCE DEVELOPMENT

A limited skilled workforce appears to be restricting the growth of businesses along the food chain. Research conducted by the Vermont Farm to Plate Network found that "employers cannot find enough qualified employees to meet the needs of their businesses."²⁰ Employers stated that one of their biggest barriers to growth was the absence of entry-level employees ready to work. These employers were looking for people with more technical skills, such as basic animal care, culinary experience, and food safety and machining skills. Surveys revealed that hiring challenges prevent 40 percent of larger employers (those with at least 20 full-time staff) and 50 percent of smaller employers from growing as they would like.²¹

Around the region, food system-related workforce development is garnering attention. For example:

- The Connecticut Governor's Council for Agricultural Development is exploring the expansion of the state's existing manufacturing workforce development programs to include agriculture.²²

- The Vermont Farm to Plate Network undertook a Food System Workforce Needs Assessment that resulted in 10 recommendations, including development of a suite of certificate programs for some food-related careers — such as food manufacturing machining to allow specialization — to offer alongside traditional two- and four-year degree programs. The assessment also recommended establishing clear educational pathways to careers in the food system, beginning in seventh grade and extending to post-secondary courses.²³
- *Local Food, Local Jobs: Job Growth and Creation in the Pioneer Valley Food System*, a report by the Massachusetts Workforce Alliance, identified fields with the most significant and immediate job creation potential, including off-farm infrastructure and processing; on-farm season-extending and processing facilities; and infrastructure and systems relating to food waste.²⁴
- The Vermont Skilled Meat Cutter Training Program is helping address an identified workforce need. This two-year program teaches students specialized slaughter and meat-cutting methods, and offers instruction about food safety and sanitation.²⁵
- Existing agricultural workers who can document working a minimum number of days or hours in U.S. agriculture would be eligible for a blue card, indicating legal status. After five years, workers with a blue card who have no criminal record and have paid all taxes and fines would be eligible for a green card. This provision is very important to the region's dairy sector, as many farms employ immigrants who have been in the country for many years.²⁶
- The USDA would administer a new agricultural worker visa program, which would allow two types of three-year visas, with a one-time renewal. The current H-2A program would sunset in one year.
- Minimum wage rates would be established; housing or a housing allowance would be required; and transportation guidelines would be set for six occupational categories covered under the new agricultural worker visa program.

A detailed comparison of agricultural labor provisions of the House and Senate bills can be found on the American Farm Bureau Federation website.²⁷

Agricultural leaders interviewed for this project believe the Senate proposal for a guest-worker program would be extremely valuable for the region. The blue card system would allow existing workers to get legal status and provide more documented farmworkers. Administered by the USDA, the new program, which creates longer visa terms, would likely be more understanding of the needs of farmers than the existing Department of Labor program.

Action

FARM LABOR

Research and Analysis

- An important area of further investigation is the Fair Labor Standard Act's definition of agriculture and whether it allows the type of collaborative processing and marketing practices that are increasingly common in this region. Harvard Law School's Food Law and Policy Clinic is currently analyzing this issue, and will have recommendations in 2014 that may prove valuable to federal lawmakers.

Policy Options

Bills proposing a new federal agricultural guest-worker program have been acted on by both the U.S. House and Senate. In June 2013, the House Judiciary Committee approved H.R. 1733, the Agricultural Guestworker Act; no further action has been taken on that bill. Comprehensive immigration reform legislation passed by the Senate in 2013 — S. 744, the Border Security, Economic Opportunity, and Immigration Modernization Act of 2013 — includes the following provisions related to agricultural labor:

WORKFORCE DEVELOPMENT

Research and Analysis

- States that have not yet done so should consider a comprehensive assessment of their food system workforce needs, similar to the study done in Vermont. Those embarking on statewide food system strategic plans should include such an assessment in their planning processes.
- Given that workforce needs are similar throughout the region, a regional conference around food and agriculture workforce development could encourage cross-state collaborations such as multistate training programs.

BEGINNING FARMERS AND NEW FARM AND FOOD ENTERPRISES

Introduction

More than a quarter of New England's farmers are at or above retirement age, so encouraging a next generation of farmers is critical to expanding regional food production.²⁸ Defined by the USDA as having fewer than 10 years of farming experience, new and beginning farmers represent 32 percent of the region's farm operators.²⁹ Many of these new and beginning farmers are not, in fact, young, but are leaving or retiring from first careers to start farm businesses: 29 percent of beginning farmer primary operators in New England are 55 or older.³⁰ A USDA report found that 28 percent of local food producers in the Northeast are beginning farmers.³¹

Surveys of new and beginning farmers have identified a number of discrete challenges for this demographic beyond those that they share with farmers of all ages, such as profitability, government regulation and access to health care. Some of the challenges unique to new and beginning farmers include lack of capital; access to credit; access to affordable farmland; and business planning and marketing skills.³² To address these challenges, state agriculture agencies and the USDA are devoting additional resources to new and beginning farmers, both through their own programming and in partnership with a growing number of nonprofit organizations and agricultural service providers. Community colleges and land-grant universities are also significantly expanding educational options for aspiring and beginning farmers, and for students interested in food-related careers.

Discussion

NEW FARMER TRAINING

College and University Degree Programs

Around the region, a growing number of colleges and universities are offering agricultural degrees, from two-year associate degrees to doctorates. Degree programs range from animal science and horticulture to interdisciplinary sustainable agriculture. For example, the University of Maine's Sustainable Agriculture Program

offers an interdisciplinary bachelor of science program through the departments of plant, soil and environmental sciences; biology; and resource economics and policy.³³ The University of New Hampshire has had tremendous response to its eco-gastronomy minor, which can be paired with any number of majors, from dairy management to hospitality management. The University of New Hampshire also has a popular new associate degree program in integrated agriculture management, offered through its Thompson School of Applied Science.³⁴

In recent years, many of these programs have seen increased enrollment, and institutions are focusing resources accordingly. Enrollment at the University of Connecticut's College of Agriculture and Natural Resources, for example, more than doubled from 2004 to 2012, while the overall student body did not increase.³⁵ The University of Massachusetts Amherst will open an Agricultural Learning Center in 2014 to serve as a hands-on living classroom for students to learn about farming.³⁶

Some public universities are also providing non-degree farmer training programs. The University of Vermont, for example, offers a full-time six-month program that teaches aspiring farmers about sustainable agriculture. Participants manage a growing site, take classes from professors and farmers, and work on area farms. While data tracking the long-term success of program participants is not available, the program is popular. The 2013 program reached capacity quickly and applications for 2014 were accepted in advance.³⁷ The University of Vermont's Center for Sustainable Agriculture also houses the New Farmer Project, which brings together information and resources from extension services and other farm organizations to assist new farmers. The project includes a resource guide; business management and financial information; a land-access database; and marketing and production information. This project seems to compile successfully the many resources available to connect new and beginning farmers.³⁸ University of Massachusetts Extension holds a Green School every other year. The Green School is a comprehensive short course for green industry and agricultural professionals wishing to gain an understanding of plant care fundamentals and strategies and their relation to environmental quality.³⁹

BUSINESS PLANNING FOR NEW FARM ENTERPRISES

At least two state agriculture agencies offer business training that is directed, in part, to new and beginning farmers. The Agricultural Business Training Program, offered through the Massachusetts Department of Agricultural Resources, is divided into three multisession courses, the first of which — Exploring Your Small Farm Dream — is geared toward individuals interested in farming, and the last of which — Tilling the Soil of Opportunity — is designed for experienced farmers looking to expand or diversify their operation. The program is popular, and more than 475 agricultural enterprises have completed at least one of the courses. The Maine Department of Agriculture, Conservation and Forestry provides training to new farmers through its NxLevel program. According to John Harker, director of market development for the department, more than 200 individuals have been trained through the program since 2000.⁴⁰ Maine also offers a small, but popular, incentive for new and beginning farmers through the state's Farms for the Future Program.⁴¹ After completing the program, new and beginning farmers with a good business plan can then apply for a 2 percent interest rate through the state Agricultural Marketing Loan Fund.

Massachusetts is the only state in the region that has a business planning and implementation grant program developed specifically for new and beginning farmers. The Matching Enterprise Grants for Agriculture Program offers technical and business planning assistance, as well as financial help for equipment or other capital improvements to implement specific strategies identified through a business plan. Priority is given to new farm enterprises that have operated commercially for one to five years.⁴²

Some business training for new and beginning farmers is being financed outside of state or federal government, such as through Farm Credit East's FarmStart program, which also assists new agricultural cooperatives. This program is more fully described below.

ACCESS TO LAND

State purchase of development rights programs and the federal Farm and Ranch Lands Protection Program are helping new and beginning farmers gain access to land by reducing the purchase price of farmland.⁴³ Two states in the region, Massachusetts and Vermont, have adopted an

additional mechanism to address farmland affordability in their respective state programs. (For further discussion of these programs and other policy tools related to farmland access, see Expanding Land Access, chapter 1.3, and the Appendix.)

ACCESS TO CAPITAL

Farm Service Agency

The FSA provides direct and guaranteed loans to beginning farmers who are unable to get financing from commercial sources. The Farm Service Agency reserves a portion of several loan funds exclusively for beginning farmers and has three programs that directly target beginning farmers: the Down Payment Program, Loan Contract Guarantees and Microloan Program.⁴⁴

Down Payment Program

The Down Payment Program helps new and beginning farmers purchase a farm. To qualify, farmers must make a cash down payment of at least 5 percent and must not own a farm larger than 30 percent of the median farm size in the county. The maximum loan amount is 45 percent of the purchase price and may not exceed the appraised value or \$500,000. The loan term is 20 years, with an interest rate that is 4 percent lower than the regular FSA direct-ownership loan rate, but no less than 1.5 percent.⁴⁵

Loan Contract Guarantees

The Farm Service Agency also guarantees loans made by commercial lenders to new and beginning farmers purchasing farmland. The lender may request either a prompt payment guarantee — up to the amount of three annual installments plus the cost of related real estate taxes and insurance — or a standard guarantee of 90 percent of the outstanding principal balance. The purchase price of the farm cannot exceed \$500,000 and the farmer must not own a farm larger than 30 percent of the median farm size in the county.⁴⁶

Microloan Program

This new program is intended to help small and beginning farmers secure loans less than \$35,000. One benefit of this program is an application process that is less burdensome and more simplified than that used for traditional farm loans. In addition, the loan can cover start-up expenses, such as equipment, and/or annual expenses, such as seed, land rents and marketing, as well as distribution expenses, such as delivery vehicles.⁴⁷

According to the National Young Farmer's Coalition, there is little published data about the number of new and beginning farmers who participate in these three programs.⁴⁸ The coalition cites the following commonly raised issues with these programs:

- Farm Service Agency offices are inconsistent in knowledge and ability to work with new and diversified operations;
- Direct ownership loan requirements around experience disqualify many beginning farmers;
- Maximum direct ownership loans are too low given the high cost of land in many parts of the country; and
- FSA loans take 30 days to process and can take up to a year to release the funds, making them an unrealistic financing option for traditional real estate transactions.⁴⁹

Aggie Bonds

At least 17 states have Aggie Bond beginning farmer loan programs, which encourage lenders to offer reduced rates on loans that beginning farmers can use to purchase land, farm equipment, farm buildings and breeding livestock. Under an Aggie Bond program, a state creates a bond that allows lenders to earn federally tax-exempt interest on loans to eligible beginning farmers and ranchers. With these tax savings, lenders can offer reduced loan rates directly to farmers.⁵⁰ While not limited to beginning farmers, Maine's Agricultural Marketing Loan Fund is an Aggie Bond program that encourages new farmers to apply, as long as they have a business plan and some collateral. The fund has more than \$7 million in bond funds in use, and has done 107 projects to date.⁵¹

Farm Credit

The national Farm Credit System — a nationwide network of borrower-owned lending institutions and specialized service organizations established by Congress in 1916 — has three associations that operate in New England: Farm Credit East, which provides services in Connecticut, Massachusetts, New Hampshire and Rhode Island; Yankee Farm Credit in Vermont; and Farm Credit of Maine. (Pending approval by the Farm Credit Administration, Farm Credit East and Farm Credit of Maine plan to merge in early 2014.) All three Farm Credit associations in New England have programs geared specifically toward new and beginning farmers.

Farm Credit East and Yankee Farm Credit offer the Farm Start program, which provides working capital investments of up to \$50,000, effectively functioning as an operating line of credit to farmers who, generally, are in their first three years of business. In its first five years (2005–2010), Farm Credit East's Farm Start program provided more than \$2.5 million in loans to 65 participants.⁵²

In addition to offering loans described above that are guaranteed by the Farm Service Agency, Farm Credit of Maine also has a Young, Beginning, and Small Borrowers program, which offers crop insurance to beginning farmers.⁵³ At Farm Credit East, the Young, Beginning, Small Farmer Incentive Program provides discounts for up to five years on FSA-guaranteed loan fees; farm accounting and management software; tax preparation; consulting; and interest rate assistance.⁵⁴

USDA BEGINNING FARMER AND RANCHER DEVELOPMENT PROGRAM

The Beginning Farmer and Rancher Development Program (BFRDP) provides competitive grants to support training, education, outreach and technical assistance initiatives for beginning farmers or ranchers. In 2012, the program provided more than \$18 million through 40 grants. While its authority and funding expired in 2013, the Beginning Farmer and Rancher Development Program is reauthorized in both the House and Senate versions of the next farm bill.⁵⁵ Activities covered by the program include production and management strategies to enhance land stewardship; business management and decision support strategies that enhance financial viability; marketing strategies that enhance competitiveness; and legal strategies that assist beginning farmers with farm or land acquisition and transfer.

One example of a project through the Beginning Farmer and Rancher Development Program is the University of Connecticut Cooperative Extension System's three-year project, "Scaling Up — Helping Connecticut's Beginning Farmers Evolve from Small-Scale Enterprises into Viable Farm Businesses," which launched in 2012. The project is providing training and technical assistance to beginning farmers in several key areas, including sustainable agriculture practices; integrated pest management; farm business management; and farmland access.⁵⁶

For descriptions of 10 other New England projects funded through the Beginning Farmer and Rancher Development Program, see the Appendix.

Action

Support for Existing Programs

Federal

- The USDA Beginning Farmer and Rancher Development Program is providing funding for many successful projects to help young and beginning farmers in New England. This program should be renewed and funding increased in the next farm bill.⁵⁷
- The USDA Farm Service Agency's new microloan program is a positive step to address access to credit for beginning farmers. An analysis of its use in New England could help drive support for the program.

State

- State business planning programs, including state farm viability programs, appear to have been used successfully by beginning farmers to build their businesses. Where this has not already been done, an analysis of program effectiveness in meeting the needs of new and beginning farmers could help to better target relevant state programming. A portion of funding for state farm viability programs could be designated for new and beginning farm enterprises.

Research and Analysis

- More rigorous data and evaluation around the impact and effectiveness of state business planning and farm viability programs for beginning farmers could help build broader and deeper support for these programs from state lawmakers.
- Research is needed on the cost and impact that the Maine Agricultural Marketing Loan Fund and state Aggie Bond beginning farmer loan programs could have on beginning farm enterprises, and the cost and potential impact of such a state-level program in other New England states.

Policy Options

Federal

- The National Young Farmer's Coalition has recommended that:⁵⁸
 - » The experience requirement for USDA Farm Service Agency's direct farm-ownership loans be reduced to two years, from three.
 - » The USDA be given authority to increase the borrowing limits for direct farm-ownership loans, currently set at \$300,000, in areas of the country with higher real estate prices.
 - » The Farm Service Agency should become more accessible to beginning farmers by expanding online resources and by having specially trained agents to assist young and beginning farmers in each county office, or specialists serving multiple offices in a region.
 - » Loan pre-approval should be available for beginning farmers, as the current process is likely to take too long for farmers to purchase land in competitive real estate markets.

State

- New England states should consider creating an Aggie Bond program to support new and beginning farmers, or a broader Aggie Bond program in which beginning farmers could participate. These programs are cost-effective for states, as the loans are made by private lenders who assume the liability and administration costs.

2.2 NATURAL RESOURCES AND ENVIRONMENTAL COMPLIANCE

MAXIMIZING ENVIRONMENTAL BENEFITS AND MINIMIZING ENVIRONMENTAL IMPACTS FROM AGRICULTURE

Introduction

New England's farmers steward more than 4 million acres of land, or 10 percent of the region's land base. How they manage this land and other natural resources has an impact on the region's environmental health. Well-managed farmland can provide valuable environmental services, including water filtration, carbon sequestration and habitat for fish, plants and wildlife. Farmers are subject to a variety of federal, state and local environmental regulations, such as

those pertaining to pesticide use, wetlands protection, manure, wastewater and nutrient runoff. Given the environmental and regulatory challenges that farms face, as well as the environmental opportunities they offer, state and federal programs have been established to incentivize adoption of on-farm conservation practices and technologies. While interviewees cited the importance of these voluntary programs, several also voiced frustration with state environmental regulators, and stressed the need for regulators to communicate regularly with the agricultural community.

Discussion

FEDERAL PROGRAMS

USDA Natural Resources Conservation Service

The NRCS administers most of the USDA's farm conservation programs. As the University of Vermont's Center for Sustainable Agriculture has noted, "... historically and currently, USDA NRCS (using taxpayer dollars) has been the primary 'investor' in environmental conservation on farms across the United States."⁵⁹

Most NRCS programs are authorized through the federal farm bill, with the exception of conservation technical assistance, which allows NRCS staff to provide conservation planning assistance to farmers, landowners and communities outside of farm bill programs. NRCS programs are largely administered by state offices, with the help of state technical committees, and are implemented locally by NRCS staff and/or other technical service providers.⁶⁰ Local conservation districts around the region also partner with NRCS and assist with the implementation of federal conservation programs.⁶¹

Agricultural Management Assistance

Agricultural Management Assistance (AMA) provides financial and technical assistance to agricultural producers to address issues such as water management, water quality and erosion control by incorporating conservation into their farming operations. Producers may construct or improve water management structures or irrigation structures; plant trees for windbreaks or to improve water quality; and mitigate risk through production diversification or resource conservation practices, including soil erosion control, integrated pest management, or transition to organic farming. This assistance program is available in 16 states, including the six New England states. Payments are up to \$50,000 per participant per year, but total annual

funding to the region has been relatively small: \$780,000 in 2012.⁶² This program is likely to be significantly curtailed or eliminated in the next reauthorization of the federal farm bill: The Senate version of the 2013 Farm Bill eliminates the program altogether.⁶³ The House version amends it by eliminating some of the funded conservation practices and shifting funding from NRCS to USDA's Risk Management Agency.⁶⁴

Environmental Quality Incentives Program

The Environmental Quality Incentives Program (EQIP) provides technical assistance and cost-share assistance of up to 75 percent to plan and implement conservation practices that address natural resource concerns on agricultural and forestland. Agreements span up to 10 years. National priorities address:

- Impaired water quality;
- Conservation of ground and surface water resources;
- Improvement of air quality;
- Reduction of soil erosion; and
- Improvement or creation of wildlife habitat.⁶⁵

Interviewees recognized the Environmental Quality Incentives Program as one of the most important federal conservation programs available in the region, because of its funding for things such as manure storage systems for dairy farms; water management systems for cranberry bogs; energy efficiency improvements for greenhouses; and high tunnels for extending the growing season for vegetables. Decisions on the types of practices funded are typically made at the national level. Both House and Senate versions of the 2013 Farm Bill call for continuation of EQIP without significant changes, and at similar funding levels to the 2008 Farm Bill.⁶⁶

Conservation Innovation Grants and other EQIP Initiatives

Within the Environmental Quality Incentives Program is a carve-out for Conservation Innovation Grants (CIG), which is intended to stimulate the development and adoption of innovative conservation approaches and technologies. These grants may be awarded to government entities, nongovernmental organizations and individuals. A percentage of Conservation Innovation Grants are awarded at the national level; the remaining funds are awarded at the state level. In 2011 grant awards were up to \$1 million.⁶⁷ CIG requires a 50 percent match.⁶⁸ Both Senate and House versions of the 2013 Farm Bill retain the program.

In 2012, the University of Vermont was awarded a \$669,365 Conservation Innovation Grant to explore energy savings through livestock grazing and management. The project measured and analyzed energy inputs from 200 farms across the Northeast using a range of grazing management practices. The analysis of energy savings from feed or forage production, manure management and use of soil building techniques was intended to help farmers adopt grazing practices that reduce reliance on energy inputs.⁶⁹

The Environmental Quality Incentives Program has a number of other initiatives besides Conservation Innovation Grants. These include the Organic Initiative, which assists already certified producers, as well as those transitioning to organic with conservation practices, and the Seasonal High Tunnel Initiative, which helps producers extend the growing season for high value crops in an environmentally safe manner.⁷⁰ Both are important to New England producers.

Wildlife Habitat Incentive Program

The Wildlife Habitat Incentive Program (WHIP) provides both technical assistance and up to 75 percent cost-share assistance to establish and improve fish and wildlife habitat. Agreements generally last from one to 10 years and can award up to \$50,000. National priorities for the Wildlife Habitat Incentive Program include:

- Promoting the restoration of declining or important native fish and wildlife habitats;
- Protecting, restoring, developing or enhancing fish and wildlife habitat to benefit at-risk species;
- Reducing the impact of invasive species on fish and wildlife habitats;
- Protecting, restoring, developing or enhancing declining or important aquatic wildlife species' habitats; and
- Protecting, restoring, developing or enhancing important migration and other movement corridors for wildlife.⁷¹

Both the Senate and House versions of the current farm bill eliminate WHIP as a separate program and incorporate funding for wildlife habitat cost-share assistance into the Environmental Quality Incentives Program.⁷²

Conservation Stewardship Program

The Conservation Stewardship Program provides payments to farmers for conservation performance; the higher the performance, the higher the payment. The program's priority concerns are set at the state level, and may include:

- Soil quality;
- Soil erosion;
- Water quality;
- Water quantity;
- Air quality;
- Plant resources;
- Animal resources; and
- Energy.

A range of practices are covered and include wildlife friendly fencing, drainage water management, use of legume cover crops as a nitrogen source, and intensive rotational grazing. Contracts are limited to five years and payments are capped at \$40,000 per year.⁷³ Nationwide, payments average \$18 per acre, but vary considerably depending on the type of land.⁷⁴ Because of the relatively low payment rates, few producers in the region participate in the program; only \$710,000 in these contract payments went to New England producers in 2012.⁷⁵

The proposed changes to the Conservation Stewardship Program in both the Senate and House farm bills attempt to make the program easier to use and implement by establishing a "science-based stewardship threshold" for each of the priority resource concerns.⁷⁶ Both bills place a greater emphasis on new conservation activities, as opposed to established and on-going activities. Both versions also remove the 10 percent enrollment cap on private forestland acreage, which may encourage enrollment of New England forestland.⁷⁷

Cooperative Conservation Partnership Initiative

The Cooperative Conservation Partnership Initiative (CCPI) takes a landscape-scale approach to the delivery of conservation programs, leveraging the technical resources of nonfederal partners. Through regional partnerships, the Natural Resources Conservation Service makes resources from the Environmental Quality Incentives Program, the Wildlife Habitat Incentive Program and/or the Conservation Stewardship Program available to owners and operators of agricultural and nonindustrial private

forestlands. State and local governments, producer associations, farmer cooperatives, institutions of higher education and nongovernmental organizations are eligible.⁷⁸

Both the Senate and House versions of the 2013 Farm Bill combine the Cooperative Conservation Partnership Initiative with other regional programs to create a new Regional Conservation Partnership Program, which would continue the partnership model to address priority resource concerns. In the newly proposed structure, the USDA would use a competitive process to select projects and enter into partnership agreements for up to five years to implement a regional or watershed-based conservation project. Partners would be expected to contribute a significant portion of the overall costs of the project. The basic level of funding for the regional projects would be \$110 million per year nationwide. In addition, NRCS would be required to set aside for regional conservation projects about 8 percent of funding or acreage provided by certain conservation programs, including the Environmental Quality Incentive Program, the Conservation Stewardship Program, the Healthy Forest Reserve Program, and the Agricultural Conservation Easement Program. (For more information about the Agricultural Conservation Easement Program, see *Increasing Permanent Protection*, Chapter 1.2.) Between the basic level of funding and the amount NRCS must set aside, a total of \$380 million could be available for regional conservation projects per year nationwide.⁷⁹

Conservation Reserve Program and Conservation Reserve Enhancement Program

The Conservation Reserve Program (CRP) and Conservation Reserve Enhancement Program (CREP) are administered by the Farm Service Agency. The Conservation Reserve Program provides annual rental payments and cost-share assistance to establish long-term, resource conserving cover crops on eligible farmland. Participants enroll in CRP contracts for 10 to 15 years. Because the Conservation Reserve Program is essentially a land retirement program, it is not used much in New England, where cropland is at a premium. As of October 2012, the program covered 27 million acres across the country, with less than .05 percent of that in New England states.⁸⁰

A subset of the Conservation Reserve Program is the Conservation Reserve Enhancement Program, which focuses on riparian buffers. The enhancement program pays producers to remove lands along waterways from agricultural production, and to plant native grasses, trees and other vegetation in order to reduce sediment runoff

and improve the quality of water and wildlife habitat. The Conservation Reserve Enhancement Program is run in conjunction with state agencies. Vermont is the only state in New England with a CREP program.⁸¹

Regional Equity

Until 2002, federal conservation program funds were allocated to states based on formulas that favored states with significant acres of farmland in production. Accordingly, New England states received relatively few conservation program dollars. This changed in the 2002 Farm Bill, with enactment of a regional equity provision designed to ensure that historically underserved states, including all six New England states, receive at least \$15 million annually in federal working lands conservation program funding. In order to be eligible for this annual minimum, each state must have sufficient approved applications for those programs. It is unclear yet whether the \$15 million minimum allocation will remain or be replaced in the next farm bill. The Senate version of the bill proposes replacing the fixed minimum allocation with a formula that provides regional equity states with a percentage of total conservation program funding.⁸²

State Programs

Connecticut, Maine, Massachusetts, New Hampshire and Vermont currently offer state-level conservation programs. These programs often work in conjunction with federal conservation programs, helping farmers with the matching funds required to participate in programs like EQIP. Accordingly, these programs leverage federal funding, and NRCS often directs farmers to these state programs.⁸³

The Connecticut Partnership for Assistance on Agricultural Waste Management Systems offers technical and financial support to address farm waste issues and develop Comprehensive Nutrient Management Plans. These plans are whole-farm, progressive documents that contain records of the current activities on a livestock operation, an evaluation of the existing conditions, and proposals to reduce the risk of negative impacts to the environment while meeting production goals. For large operations, a Comprehensive Nutrient Management Plan and approval or permit may be required. The Partnership team is comprised of the Connecticut Department of Agriculture; the Natural Resources Conservation Service; the Farm Service Agency; University of Connecticut Cooperative Extension System; and the Connecticut Department of Energy and Environmental Protection. Eligible producers can receive funding to cover part of the cost of implementing the recommended conservation practices through the

federal Environmental Quality Incentives Program and the Connecticut Department of Agriculture's Environmental Assistance Program. The total combined federal and state grant available to a farmer cannot exceed 90 percent of the project cost.⁸⁴

In conjunction with the Maine Department of Agriculture, Conservation and Forestry, the Finance Authority of Maine administers the Nutrient Management Loan Program, which offers low-interest loans for agricultural non-point source pollution abatement projects. These loans have a 2 percent interest rate and are capped at \$450,000.⁸⁵

In Massachusetts, the Agricultural Environmental Enhancement Program helps agricultural operations install conservation practices that prevent direct impacts to water quality; ensure water conservation; and/or address impacts to air quality. Farmers are reimbursed for up to \$25,000 in materials and labor costs associated with the approved practice.⁸⁶

The New Hampshire Department of Agriculture, Markets, and Food's Agricultural Nutrient Management Grant Program provides financial, educational and technical assistance to livestock and other farms to prevent or mitigate water pollution. Funding for the program has been significantly reduced since 2008, but the department hopes to restore prior funding levels in the next state budget biennium.⁸⁷ The program is used most heavily by very small and beginning farmers, especially livestock owners, to help address water quality issues.⁸⁸

In Vermont, the Agency of Agriculture, Food and Markets offers a number of financial and technical assistance programs, primarily focused on reducing nutrient runoff from the state's dairy farms. As with the Massachusetts Agricultural Environmental Enhancement Program, Vermont's Best Management Practice program can be coupled with the federal Environmental Quality Incentives Program to increase cost-share assistance for implementing certain conservation practices. Vermont also helps dairy farms develop nutrient management plans, which are required for many of its dairy farms. Through the Farm Agronomic Practices program, for example, Vermont reimburses farmers for implementing such best management practices as cover cropping, no-till farming and crop rotation. The Alternative Manure Management program provides incentive dollars to farmers interested in implementing new technologies dedicated to enhancing water quality and improving waste management on the farm.

Action

Support for Existing Programs

Federal

- Several interviewees reiterated the importance of federal conservation programs in helping the region's farmers comply with federal and state environmental regulations and in encouraging more farmers and farm and forest landowners to adopt conservation practices. More severe weather events as a result of climate change will also increase the necessity for conservation practices on farmland. Among the federal cost-share programs, the Environmental Quality Incentives Program is by far the most in demand and most widely used; current funding levels for this program should be maintained in the next farm bill.
- Conservation technical assistance is also extremely important, allowing NRCS staff to work with landowners to develop conservation plans for their farms or forestland. Maintained or increased funding for conservation and farm bill technical assistance programs would enable NRCS to meet demand from farmers and landowners for comprehensive conservation planning.
- The regional equity provision of the farm bill is an enormously important funding mechanism for New England. It is vital to keep the \$15 million regional equity allocation minimum or the equivalent in formula funding in the next farm bill.

State

- Given that conservation cost-share assistance under the federal Environmental Quality Incentives Program typically pays only 50 percent of the cost of implementing conservation practices, state conservation cost-share programs have been important in helping farmers leverage federal dollars. This is especially important for the region's dairy farmers, who face significant costs in developing manure storage systems to reduce nutrient runoff. It is important to maintain or increase funding for these programs.
- Local soil and water conservation districts typically rely on both state and federal funding. Conservation districts play an important role in educating farmers and farmland owners about available conservation programs and resources, and often provide farmers with the technical support to implement specific practices.

Research and Analysis

- To encourage continued state-level investments in conservation cost-share programs, an analysis of the effectiveness of these programs in meeting state and federal environmental objectives and the degree to which they have leveraged federal and private resources would be helpful.

Policy Options

Federal

- For recommendations related to farmland protection, see Increasing Permanent Protection, chapter 1.2.

State

- State environmental regulatory agencies should maintain collaborative relationships with state agriculture agencies, NRCS, conservation districts, and state farm organizations to address concerns about the environmental impact of agricultural operations.

FARM ENERGY NEEDS AND OPPORTUNITIES

Introduction

Energy costs, including heat, electricity and transportation, are a substantial portion of operating expenses for the region's farms and food businesses.⁸⁹ Likewise, the volatility of unit costs for fossil fuels is a major financial risk factor that can undercut business profitability. Reducing energy use and expanding on-site renewable power generation through wind, solar and biomass are therefore important business strategies, as well as practices that will foster environmental sustainability. Farms, like many other types of businesses, however, often lack the financial capacity to make these capital-intensive investments, despite the likelihood of substantial savings in future years.

This section describes federal and state incentives that are specifically intended to increase energy efficiency and renewable energy generation on farms. It also looks at several obstacles associated with expanding renewable energy generation at the farm level.

Discussion

INCENTIVES FOR ENERGY EFFICIENCY AND RENEWABLE ENERGY

Taxpayer and ratepayer-funded incentives, including grants, subsidized loans and no- or low-cost technical assistance, have a track record of reducing payback times and otherwise encouraging investments in energy efficiency and renewable energy. At the same time, they offer substantial benefits to the recipients of such incentives, the public at large and the environment.⁹⁰ As many farms in the region are engaged not just in agricultural production, but processing and value-added production as well, this section looks at incentives available for a variety of farm and food businesses.⁹¹

Federal Programs

The USDA Rural Energy for America Program (REAP) offers funding in the form of grants and/or loan guarantees designed to allow farmers, ranchers and rural small businesses to install renewable energy systems and make energy efficiency improvements. Rural Energy for America Program grants cover up to 25 percent of total project costs but will not exceed \$500,000 for renewable energy systems and \$250,000 for energy efficiency improvements.⁹² Under the rural energy guaranteed loan program, project developers are expected to work with local lenders to secure an initial loan. The local lenders, in turn, can apply to the USDA for a loan guarantee of up to 85 percent of the loan amount.⁹³ REAP-guaranteed loans will cover up to 75 percent of total project costs but will not exceed \$25 million.⁹⁴

In order to be eligible for rural energy grants and/or loans, the USDA sometimes requires applicants to include an independent feasibility study in their completed application.⁹⁵ Through its Feasibility Studies Grants Program, the USDA offers applicants financial assistance of up to \$50,000 or 25 percent of the total project costs to help offset the financial burden associated with completing such a study.⁹⁶ Through its Energy Audit and Renewable Energy Development Assistance Grant Program, the USDA also provides grant assistance for conducting energy audits and disseminating information on renewable energy development assistance⁹⁷ to entities such as colleges and universities, as well as state and local governments, that are willing to help agricultural producers and rural small businesses become more energy efficient.

Cost-share assistance for on-farm energy efficiency and renewable energy projects is also available through the Environmental Quality Incentives Program. (For more information about EQIP, see the Maximizing Environmental Benefits and Minimizing Environmental Impacts from the Agriculture section, above.) Farmers eligible for both the Environmental Quality Incentives and Rural Energy for America programs may be able to combine grants or loans from the two programs.⁹⁸

State Programs

Connecticut

The Connecticut Farm Energy Program helps farms and agriculture-related rural small businesses learn about energy efficiency and renewable energy options, and provides grant-writing assistance to applicants for federal rural-energy grants.⁹⁹ It was developed in 2009 as a partnership between USDA Rural Development and the Eastern Connecticut Resource Conservation and Development Area, Inc.

Because federal rural energy grants only cover up to 25 percent of a given project, the Connecticut Farm Energy Program also helps applicants pair those grants with other funding sources, such as grants from the state's Agriculture Viability Grants Program.¹⁰⁰ The Connecticut Farm Energy Program has helped farmers and other business owners from the state secure more than \$410,000 in grants and loans.¹⁰¹ This program also provides farmers with useful information about energy upgrades through its Energy Best Management Practices Guide. However, due to uncertain funding, the program's future is unclear.¹⁰²

Connecticut also has a fledgling program that helps finance deployment of anaerobic digesters.¹⁰³

Maine

Harvesting Clean Energy is a technical assistance program of the Farm Energy Partners network at Maine Rural Partners. The program supports energy conservation and renewable energy production efforts, and its goal is to help Maine farmers determine if energy conservation or other energy applications make sense for their farms. Specifically, Harvesting Clean Energy provides four key services to farmers:

- Publications containing up-to-date information on energy conservation and alternative energy technologies;

- Presentations and workshops designed to clarify available conservation and renewable energy technologies;
- On-farm energy audits targeted toward helping eligible dairy farmers and greenhouse growers identify immediate steps that they can take to decrease their energy use and save money; and
- Tours that allow farms that have implemented energy efficiency and/or alternative energy projects to share their experiences with peers.¹⁰⁴

Massachusetts

The Massachusetts Farm Energy Program is a joint project of Berkshire-Pioneer Resource Conservation and Development Area, Inc., and the Massachusetts Department of Agricultural Resources. It offers financial incentives of up to \$5,000 per farm to reduce consumption of traditional energy sources and/or replace old energy systems with renewable energy technology.¹⁰⁵ Since its inception in 2008, this program has leveraged approximately \$4.2 million to help more than 300 farmers implement energy-saving upgrades. This effort has collectively saved participating farmers roughly \$740,000 annually.¹⁰⁶ Massachusetts also has specific financial incentives for deployment of anaerobic digesters.¹⁰⁷

In addition, the Massachusetts Farm Energy Program has developed a series of Farm Energy Best Management Practices guides that describe various factors farmers should consider before undertaking energy efficiency and renewable energy projects. These guides are organized by sector — dairy farms, greenhouses and nurseries, maple sugaring, orchards and vegetable farms, and renewable energy — and focus primarily on energy upgrades suitable for existing farming operations.¹⁰⁸

Vermont

Efficiency Vermont, a ratepayer-funded energy efficiency utility operated by the Vermont Energy Investment Corporation, offers rebates and incentives to help the state's farmers install new, energy-efficient equipment at their farms. Standard rebates cover alternative methods for lighting, refrigeration, heating, cooling and ventilation, for example.¹⁰⁹ Efficiency Vermont also considers requests for custom rebates to support additional projects not covered by its standard rebate program.¹¹⁰

Vermont is also home to the innovative Cow Power program, coordinated by Green Mountain Power, which enables its utility customers to support deployment of

anaerobic digester technology at dairy farms in the state.¹¹¹ Anaerobic digesters contain microbes that break down cow manure to allow the resulting methane to be recaptured as a fuel source for an electric generator that serves farm and nonfarm loads. These digesters substantially reduce farm methane emissions and present the opportunity to reuse other byproducts of the process, including heat and plant fibers. The program currently uses 10,000 cows across 12 relatively large dairy farms and generates 16 million kilowatt-hours per year, enough to power 2,200 average Vermont homes. Green Mountain Power customers can opt to buy all or part of their electric energy from the Cow Power program at a premium of up to 4 cents per kwh. This premium goes directly to farmers.

OBSTACLES

While federal grants are available for both farm energy efficiency and renewable energy projects, they typically cover less than half of project costs, and only some states in the region have programs that help farmers offset an additional portion of costs. In addition, coordinating requests to multiple funding programs and undertaking lengthy application paperwork present practical impediments to farmers and other small business owners considering projects.¹¹² The economics of renewable energy projects also may be uncertain or unworkable due to high interconnection costs, unpredictable returns from renewable energy credits, or state utility laws and regulations regarding net metering, which may allow renewable energy projects to offset farm electric bills, yet limit the potential revenues available from selling power to the electric grid.

Renewable energy projects often face nonfinancial obstacles, too. On-farm renewable energy generation can provide economic and environmental benefits that complement and support agricultural uses. However, solar, wind and methane digester projects — especially those that produce energy beyond what the farm needs — may face local zoning limitations. Some of these limitations, especially around solar “farms,” address reasonable concerns regarding long-term conversion of productive agricultural land to commercial energy use.

State regulations may also limit these projects. For instance, where methane digesters require additional organic matter beyond that produced on farm, state regulations around compost may limit the type and scale of compost produced off the farm that can be brought on

farm. (For more information about compost regulations, see chapter 5.) Massachusetts regulations concerning the compost of waste require operations that bring in off-farm materials to develop a plan, follow guidelines and register with the state Department of Agricultural Resources. If the operation does not conform to these guidelines, it must comply with more burdensome requirements from the Department of Environmental Protection’s Site Assignment Regulations for Solid Waste Facilities.¹¹³

Most of the region’s state farmland protection programs limit the scale of renewable energy projects allowed on protected farms to meeting the energy needs of that farm, regardless of whether the renewable energy production occurs on productive agricultural land. The rationale for this limitation is to prevent a protected farm from becoming an inviting energy investment, compromising its availability for agriculture in the future; the inclusion in an easement of an “Option to Purchase at Agricultural Value” as is used in Massachusetts and Vermont, however, can mitigate this concern. (For more information, see the Appendix.)

Action

Support for Existing Programs

Federal

- Maintain funding at levels adequate to meet demand for the Rural Energy Assistance and Environmental Quality Incentives programs. The 2013 Senate and House farm bills both provide funding for the Rural Energy for America Program, but at levels lower than the 2008 Farm Bill, which set mandatory funding at \$70 million per year for 2011 and 2012. The Senate bill authorizes \$48.2 million per year in mandatory funding, with authority for the appropriation of up to \$20 million per year. The House bill provides no mandatory funding but does authorize appropriations up to \$45 million annually.¹¹⁴

State

- Maintain funding for state farm energy programs at levels adequate to meet demand.
- Consider convening state-based working groups to guide state farm energy programs and improve coordination with USDA, state utilities and clean energy industry. State farm energy programs, like those in several New England states, can be effective tools

to ensure that farmers have full access to available incentives and technical assistance, and that those resources are well-publicized and cost-effectively deployed. Such programs could benefit from state-based working groups comprised of agricultural and energy sector stakeholders that would identify the appropriate role for the state program, implementation obstacles, potential program improvements, and further technical assistance needs.

Research and Analysis

- Investigate policy mechanisms to align utility energy audit and efficiency programs, interconnection requirements, and net metering regulations with farm needs.

Policy Options

- Encourage creating state-level farm energy programs in states without such programs.
- Consider funding state-level farm energy programs through systems benefit charges billed to ratepayers or through state renewable energy funds.
- Consider creating an ombudsman in each state to help farm businesses identify and develop applications for sources of grant funding.
- Consider further legislative and regulatory efforts to expand incentives for energy efficiency and renewable energy projects that are specifically tailored to farm and food business applications and support deployment of innovative technologies like high-efficiency processing equipment and anaerobic digesters.

ACCESS TO WATER

Introduction

While New England is considered a region with plentiful water, accessing safe and reliable quantities of water presents challenges to farmers in some areas. Residential and industrial water demands have led to intense competition. Extraction of both surface and ground water for any use has an impact on watersheds and regional ecology, as improperly managed withdrawal can cause drought and harm to ecosystems. Given the effects of over-extraction, state and local governments have implemented rules and regulations around water withdrawals, which can affect the use and cost of water by farms.

Discussion

Through federal and state initiatives, New England's water resources are becoming better understood every day. This improved knowledge is giving rise to sophisticated water planning programs. Actual use of water, however, is governed by a patchwork of permitting programs of varying effectiveness.

INVENTORY AND PLANNING

The federal SECURE Water Act, enacted in 2009, requires the U.S. Geological Survey to establish a "national water availability and assessment program."¹¹⁵ The director must prepare and maintain "a comprehensive national water-use inventory" and determine "indicators that reflect each status and trend relating to the availability of water resources in the United States."¹¹⁶ The director must provide a report every five years detailing, among other things, "the withdrawal and use of surface water and groundwater by various sectors, including the agricultural sector."¹¹⁷ This program provides a basic idea of how much water is available regionally and how much of that is being used for agriculture.

Some New England states have undertaken inventories of their own for planning purposes. In Massachusetts, for example, the Sustainable Water Management Initiative has produced a detailed study of water availability and a recommendation for a safe yield — the amount that can be extracted from a water body without causing drought or other ecological harm.¹¹⁸ In Rhode Island, the Water Resources Board inventories water availability, and the Division of Agriculture monitors stream flow with an eye to avoiding drought conditions for farmers.¹¹⁹

To provide a demand-centered view of water use, many states also require that water users report how much water they withdraw; however, these data present an incomplete picture, and farmers are often exempt from reporting requirements.¹²⁰

WITHDRAWAL

In most New England states, riparian doctrine governs water allocation.¹²¹ Under this doctrine, ownership of riparian land conveys the right to use adjacent water in a "reasonable" manner.¹²² Determining what is reasonable involves consideration of the purpose of the use, the suitability of the use to the water body, and the social and

economic value of the use.¹²³ Due to the complexity of this determination, most states require that owners get permits to use surface water.¹²⁴ The right to use groundwater varies much more significantly from state to state. Most commonly, the owner of the overlying land has a right to reasonable use of groundwater.¹²⁵

Some permitting programs are far from comprehensive. Connecticut's Diversion Act generally requires permits for water extraction but contains broad exemptions, most notably grandfathering pre-1982 water uses.¹²⁶ A report from Connecticut's Department of Energy and Environmental Protection has noted that "the vast majority of Connecticut's water diversions are grandfathered," preventing the state "from developing and implementing a comprehensive water allocation program."¹²⁷

Other permitting programs are more robust. Massachusetts, for example, requires that permitting authorities consider a water source's safe yield¹²⁸, and that permit applications include water conservation planning.¹²⁹ Additionally, permitting authorities must consider any state water resources plan by the state's Water Resources Commission.¹³⁰ Overall, Massachusetts law ensures that significant withdrawals of ground and surface water will be subject to careful analysis before being permitted.

Rhode Island is the only New England state that lacks a permitting program for water extraction.

Another practice that has the effect of reducing water availability is wetland development, which prevents groundwater from recharging and leads to drought. For this reason, most states require permits for wetland development; however, agricultural uses are sometimes exempted from this requirement.¹³¹

TRANSFER

In some parts of New England, farmers are challenged with water scarcity. Most states do not have laws that allow water transfers from one source to another; Massachusetts is the exception. That state's Interbasin Transfer Act provides a procedure that allows farmers to access water from a different basin while ensuring that the source basin does not get overdrawn and that other environmental protections remain in place.¹³²

Action

Research and Analysis

- States that have not done so already may want to undertake a comprehensive planning process to better understand their water resources. Specifically, states should identify sustainable yields from all water sources, especially those drawn on for agricultural use. Massachusetts has a strong example for designing and implementing this process in the Sustainable Water Management Initiative, which other states could look to for a model. States can only effectively avoid harmful drought conditions in times of intense local competition for water if they understand what constitutes sustainable yields.
- All New England states should perform a baseline assessment of wetlands permitting programs. States should convene panels that include farmers, government officials, advocates, academics and scientists, to figure out the effectiveness of wetlands permitting requirements generally, as well as agricultural exemptions. These panels should issue recommendations on how an ideal wetlands permitting regime would work.

Policy Options

- States may want to consider enacting policies to allow for sustainable interbasin water transfers, like Massachusetts's Interbasin Transfer Act. As a result, water may be available for transfer from areas high in supply and low in demand to areas low in supply and high in demand, giving farmers some insulation from drought.

2.3 BUSINESS DEVELOPMENT AND CHALLENGES

RESEARCH, DEVELOPMENT AND EXTENSION

Introduction

Similar to other business sectors, investments in research, development and education are key to sustained competitiveness and profitability in agriculture. Regardless of the sector, these investments have traditionally relied in part on government support. Historically, agricultural

research and development support has been provided at the federal level, primarily through the land-grant university system and its agricultural experiment stations, created by the Morrill Acts of 1862 and 1890 and the Hatch Act of 1887. Support for agricultural education has been provided through the Cooperative Extension system created by the Smith-Lever Act of 1914.¹³³ Federal funding has been supplemented by states, but decades of declining public resources for these functions at both the federal and state level have affected the region's agricultural competitiveness. Calls for renewed investments in research, development and education are beginning to be heeded at the state level, with a greater emphasis on public-private partnerships.

Discussion

USDA NATIONAL INSTITUTE OF FOOD AND AGRICULTURE

The National Institute of Food and Agriculture (NIFA) is one of four agencies that make up USDA's research, education and economic mission. It supports research, education and extension programs in the land-grant university system, at affiliated agricultural experiment stations, and at other partner organizations. While the National Institute of Food and Agriculture does not perform these tasks, it does provide funding and leadership. In its leadership role, the institute helps states identify research and extension priorities and create programs to respond to these issues.¹³⁴ NIFA provides funding to land-grant universities and competitively granted funds to researchers in land-grant and other universities in several ways.¹³⁵ In fiscal year 2012, total funding to the National Institute of Food and Agriculture was approximately \$1.3 billion.¹³⁶

Many of the institute's grant priorities and programs are important to New England agriculture, and researchers at many of the region's public and private universities and its state agricultural experiment stations have received NIFA grants.¹³⁷ One of the competitive grant programs within the National Institute of Food and Agriculture is the Agriculture and Food Research Initiative, which currently is focused on several challenges, including keeping American agriculture competitive while ending world hunger; improving nutrition and ending childhood obesity; improving food safety for all Americans; securing America's energy future; and mitigating and adapting to climate change.¹³⁸ The following competitive grant

programs are also part of the National Institute of Food and Agriculture:

- Integrated Research, Education and Extension Grants Program;
- Specialty Crop Research Initiative;
- Sustainable Agriculture Research and Education Program;
- Beginning Farmer and Rancher Development Program (for more information, see Human Resources, section 2.1 in this chapter);
- Organic Agriculture Research and Extension Initiative;
- Community Food Projects (for more information, see Retail Markets, chapter 4.3); and
- Risk Management Education (for more information, see the Risk Management section in this chapter below).

While federal funding for agricultural research grew steadily from the 1950s to the 1970s, it has remained relatively flat since then, and growth in funding has not kept pace with other federal science agencies. From 1983 to 2003, the annual growth rate of the research budget at the National Institutes of Health was eight times the growth rate of USDA research spending; the annual growth rate of all federal nondefense research and development spending was approximately four times that of USDA's.¹³⁹

AGRICULTURAL EXPERIMENT STATIONS

State agricultural experiment stations were created through the Hatch Act of 1887 and are funded through a combination of federal formula funds, federal competitive research grants, state appropriations and industry support. Every New England state has an experiment station, and services offered to farmers differ by state. The Connecticut Agricultural Experiment Station, for instance, provides soil testing services and research related to plant productivity, plant pests and diseases.¹⁴⁰ Federal funds must be matched one-to-one with nonfederal funds.

A new emphasis by USDA on multistate research has helped foster closer collaboration among some of the region's experiment stations. A new Northern New England Collaborative Research Funding Program, comprised of the Vermont, New Hampshire and Maine stations, was established in 2012 to catalyze coordinated regional research on high priority needs.¹⁴¹

On average, federal money accounts for 30 percent or less of total funding for agricultural experiment stations, while state funding comprises a significant remainder of their budgets.¹⁴² In the past few years, several New England states have either threatened to or actually cut their experiment station budgets.¹⁴³ For example, in Connecticut, more than 60 percent of the agricultural experiment station's budget is comprised of state funding, which has been in jeopardy recently.¹⁴⁴ In 2011, during negotiations with state employee unions, Gov. Dannel Malloy introduced a budget that, among other cuts, completely eliminated the agricultural experiment station. Union members and the governor came to an agreement and the cuts were avoided, but the situation demonstrated the unclear future for these institutions. Declining USDA support for agricultural experiment stations has led stations to look for other federal funding sources. In 1970, USDA provided 70 percent of all federal funds dispersed to experiment stations; by 2004, the department covered less than 50 percent of federal funds for agricultural experiment stations.¹⁴⁵ Some interviewees believe that this increased reliance by agricultural experiment stations on nontraditional funding sources has changed their research focus and resulted in less attention paid to issues and concerns of local farmers.

Increased federal and state baseline funding for agricultural experiment stations would enable agricultural experiment stations to remain focused on state-specific production challenges. And continuing research around production challenges and technologies will be crucial to increasing regional food production, especially given climate change and the region's higher-than-average production costs. Public investments in research and development have been demonstrated to result in agricultural sector growth. Studies have consistently found high rates of return on public agricultural research, ranging from 20 to 60 percent annually.¹⁴⁶

NORTHEAST SUSTAINABLE AGRICULTURE RESEARCH AND EDUCATION PROGRAM

The regional branch of the national Sustainable Agriculture Research and Education program is Northeast SARE. It serves the 12 Northeast states and Washington, D.C., and provides a range of grants to projects that “explore and address key issues affecting the sustainability and future economic viability of agriculture.” Grants are not restricted to research institutions; depending upon the grant, farmers, agricultural service providers, nonprofit

organizations and communities are also eligible to apply. In 2013, Northeast SARE awarded \$2.4 million in grants.¹⁴⁷

COOPERATIVE EXTENSION

Created through the 1914 Smith-Lever Act, the cooperative extension service is a partnership between USDA and the land-grant university system. Extension was established to develop, demonstrate and spread existing or new practices and technologies around agriculture, especially those developed through state land-grant universities and agricultural experiment stations. Every New England state has a cooperative extension service that undertakes a variety of agricultural research and educational activities. Agriculture-related services offered by extension around the region include:

- Research and education about livestock health and processing; plant pests; integrated pest management; pasture management; and production systems;
- Programming related to farm transfer, farmland access and land conservation; and
- New farmer training and support.

Several of the region's extension services also have significant programming around food safety, health and nutrition and youth development.¹⁴⁸

Federal formula funding for state extension programs has been declining, requiring state extension services to be more dependent on federal competitive grants.¹⁴⁹ Federal formula also requires a one-to-one nonfederal match, making state funding essential to the viability of each cooperative extension service. State support for extension, however, has also waned over the decades, and several interviewees for this project cited the loss of traditional agricultural extension agents as a limiting factor in increasing the region's food production capacity. For example, state funding used to account for more than 40 percent of the University of New Hampshire cooperative extension's budget. In 2011 this state allocation was cut by 23 percent, a reduction of \$1.7 million. Two years later the New Hampshire legislature restored funding for the university system — including extension and the Agricultural Experiment Station — to pre-2011 levels, but because they both rely heavily on state funding, these entities remain at risk.¹⁵⁰ With a loss of staff and resources, New Hampshire's extension service has been forced to look for alternative funding sources, such as grants, contracts, gifts and fees, which will likely result in greater specialization and

programs focusing in areas where funding is available. As a result, extension services may be further diverted from an agricultural focus.¹⁵¹

Increasingly, farmers are looking to extension personnel in neighboring states for traditional extension expertise where none remains in their own state,¹⁵² and extension services are collaborating more closely in this regard. An informal regional network of state extension services exists, and the groups making up this network meet frequently. They also coordinate regional events such as the New England Fruit and Vegetable Conference.

AGRICULTURAL INNOVATION CENTERS AND INITIATIVES

Two states in the region have experimented with virtual agricultural innovation centers, one focused on value-added agricultural businesses and the other on using public-private partnerships to promote economically viable and environmentally sustainable agriculture enterprises. The Vermont Agricultural Innovation Center was established in 2009 with \$469,000 of USDA funding to provide technical, marketing and organizational development services to value-added agricultural businesses. The center was administered by the Vermont Agency of Agriculture and operated for two grant rounds.¹⁵³ In 2010 and 2011, the center received \$1 million from congressionally directed USDA funding and focused on five project areas: technical and business assistance for value-added and agricultural related business; infrastructure development, such as processing and storage; market development; professional and organizational development; and workforce development. Funding levels and eligibility varied by category. The center has not received additional funding.¹⁵⁴

In Massachusetts, the Agricultural Innovation Center was also a virtual center, investing \$2.7 million in a number of large-scale projects aimed at improving output and developing new business opportunities. One round of grants was made through the program in 2007.¹⁵⁵

The Connecticut Governor's Council on Agricultural Development is currently exploring an Agricultural Innovation Initiative centered at the University of Connecticut to help advance and diversify agriculture. While still in development, the following areas have been identified as having the greatest need and potential impact:

- Increasing capacity for conducting economic analyses related to agriculture;
- Developing a green industry research and education center;
- Creating a food innovation center; and
- Establishing a food safety education program.

The initiative would focus in part on “controlled environment” agriculture, a potential source of significant food production in the region. While the greenhouse and nursery industry comprises half of the agricultural sector in Connecticut, it is challenged by regional, national and foreign competitors that can produce the same products for less and overcome Connecticut's geographic advantage. The future of this industry will rely on technology to reduce energy and labor costs, improve water-use efficiency, and produce a higher quality product. The development of new energy-efficient greenhouse designs, the use of renewable energy, the introduction of robotic systems and new low-energy lighting systems, and production innovations such as vertical growing systems are revolutionizing the industry. The Agricultural Innovation Initiative envisions creating a state-of-the art greenhouse that would serve as a research and education facility with a focus on examination of the latest technology, energy conservation and water-use management as it relates not only to horticulture production, but also to growing food. The initiative would also fund research exploring the economic drivers around controlled environment food production, helping to identify market opportunities for the state's growers.¹⁵⁶

Action

Support for Existing Programs

- Continued and sustained federal and state investments in agricultural research and extension will be increasingly important as the region's producers face a changing and volatile climate. According to a report released in 2013 by the Massachusetts-based Manomet Center, New England agriculture will likely need the following climate change adaptation strategies:
 - » Modifications to livestock buildings to address heat stress;
 - » Adjustments to livestock diets and feeding patterns to address heat stress;
 - » New management techniques for plant pest pressures;

- » Different crop varieties better suited to the changing environment; and
- » New technologies and techniques to address climate change impacts associated with specific crops, such as new sap collection technology for maple trees and water management needs for cranberry bogs.¹⁵⁷
- Growers will also need research and extension investments to help them comply with new production practices, record-keeping and tests required in the proposed Food Safety Modernization Act.
- A number of smaller federal farm bill research programs – including the Specialty Crop Research Initiative; the Organic Research and Education Initiative; and the Beginning Farmer and Rancher Development Program – are valuable to the region, but are not mandatory programs and therefore have no budget unless they are reauthorized in a new farm bill.

Policy Options

- A new emphasis is needed in federal and state research around controlled environmental agriculture and opportunities for year-round food production. A significant research initiative, such as that contemplated by the Connecticut Governor’s Council on Agricultural Development, could benefit the entire region, and collaboration among states and with the USDA could help raise additional research resources.

BUSINESS PLANNING AND ASSISTANCE

Introduction

Over the past few decades, New England agriculture has transitioned from being a sector largely oriented around wholesale markets to one with more market diversification and greater emphasis on direct-to-retail and value-added opportunities. With this shift has come a need for expanded business planning and for capital to support the processing and marketing infrastructure necessary to capture these new opportunities. State departments of agriculture have devoted significant resources in this area, largely through programs that provide business planning assistance to farmers, and, in some cases, grants to implement aspects of the business plans. Where grant funds are made available, farms are typically required in exchange to agree to a nondevelopment covenant on their land for

a period of years. These programs fall loosely under the term “farm viability” programs.

Discussion

FARM VIABILITY PROGRAMS

Connecticut

Through the Farm Transition program, the Connecticut Department of Agriculture offers grants of less than \$50,000 to:

- Provide support to farmers enhancing their agricultural operation and marketing strategies to increase profits;
- Help farmers diversify, transition into new production areas and/or expand existing production; and
- Support educational activities that help farmers diversify or transition toward new products or new market areas.¹⁵⁸

A different program, the Farm Reinvestment Grant program, is designed to provide funding for capital enhancements to farms. The funds may be used to expand existing agricultural facilities, or to diversify or expand into new production areas and site improvements related to such expansion or diversification. The program provides competitive grants of up to \$40,000.¹⁵⁹

Maine

The Maine Farms for the Future Program offers both business planning assistance and grants to implement elements of the business plans. Eligible farmers receive help creating a business plan, and then can apply for a grant of up to \$25,000 to implement some aspect of the plan. In exchange, farmers must sign a covenant agreeing not to develop their farmland for seven years. The grants can be used to invest in infrastructure, equipment or land to increase the viability of the operation.¹⁶⁰ A program evaluation found 66 percent of participants reported a net increase in profits after completion of the program.¹⁶¹

Massachusetts

The Farm Viability Enhancement Program, the first program of its kind in the region, helps participants develop and implement farm viability plans. In the first phase, the program provides technical and business planning assistance to expand, upgrade and modernize existing agricultural operations. In the second phase, farmers can access capital to implement the improvements recommended in

the viability plan in exchange for signing an agricultural covenant on the farm property for a fixed term.¹⁶² Grants of up to \$25,000 are offered in exchange for a five-year covenant, up to \$50,000 for a 10-year covenant, and up to \$75,000 for a 10-year covenant on farms with at least 135 acres. To be eligible, farmers must own at least five acres of land and have managed the land for at least three years.¹⁶³ Because of the covenant requirement, farms that have been permanently protected through the state's Agricultural Preservation Restriction Program are not eligible for the second phase of the program.

To meet the needs of these farms, the Commonwealth created a separate Agriculture Improvement Program, which provides technical assistance and business planning only to farms that are already protected in whole or in part through the Agricultural Preservation Restriction Program. Farmers who complete their plan and then move to a second phase may be eligible for a grant award of up to \$75,000, depending on factors including the number of acres protected, number of jobs that would be generated, and needs identified in the business plan.¹⁶⁴

New Hampshire

In 2005, the New Hampshire legislature authorized a Farm Viability Task Force to study and recommend policies and actions to promote the agricultural sector. Among the task force recommendations was the creation of a farm viability program to support agricultural operations with business planning and capital investments. The proposal mirrored the Massachusetts program and would make use of temporary land-use covenants in exchange for funding to implement a farm business plan developed with expert consultants. A farm viability program has not been created as of 2013.¹⁶⁵

Rhode Island

In Rhode Island, the Division of Agriculture provides grants between \$10,000 and \$50,000 to farmers or agricultural or educational organizations for:

- Research, promotion, marketing or trade enhancement related to agricultural product development or education;
- Projects having to do with nutrition, food safety, food security, plant health, product development, education or "buy local" initiatives; and
- Programs that provide for increased consumption and innovation, improved efficiency and reduced costs of

distribution systems, environmental concerns and conservation, and development of cooperatives.¹⁶⁶

The funding comes from the USDA Specialty Crop Block Grant Program, so the awarded grants must be used to further the competitiveness of specialty crops as broadly as possible and not just serve to enhance an individual farm's viability. Unlike several of the other state programs, grant funds in Rhode Island may not be used for construction projects.

In 2012, the Rhode Island legislature established a Local Agriculture and Seafood Small Grants and Technical Assistance Program. The program is intended to:

- Assist in the marketing of Rhode Island grown agricultural products and local seafood for the purpose of sale and promotion within the state of Rhode Island or United States;
- Enhance the economic competitiveness of Rhode Island grown agricultural products and local seafood;
- Provide financial and technical assistance support to organizations and farmers for activities and programs which enhance the economic viability of local agriculture, and support the development of a locally based, safe and sustainable food system;
- Provide individual farm grants to small or beginning Rhode Island farmers that support the entry or sustainability within the respective industry;
- Work with the state department of health to further develop and support food safety related programs and standards pertaining to local agriculture and seafood; and
- Perform other activities necessary to facilitate the success and viability of the state's agricultural and seafood sectors.

Funding for the program's first year was included in the fiscal year 2014 budget. Under the program, nonprofits and eligible farmers may apply for grants of up to \$20,000.¹⁶⁷

Vermont

Vermont's Farm Viability Enhancement Program offers business planning and technical assistance to enrolled farmers through farm business planners from partner organizations. Farmers and planning consultants meet and work together for approximately one year to produce a written business plan. In the second year, farmers

receive additional technical assistance and help updating their plans. When funding is available, farmers who have completed business plans with the program are eligible for grants of up to \$8,000 that they can put toward capital expenses or additional technical support to implement the plan.¹⁶⁸ Surveys conducted after the completion of the business plan and at the end of a second year show positive results: For farmers who completed plans in 2010, the average gross income increased 38 percent in the year after completing their business plan.¹⁶⁹

A separate program, the Working Lands Enterprise Initiative, was created in the 2012 legislative session. For fiscal year 2013, the initiative invested \$1 million in agricultural and forest based businesses through three grant programs. Investment decisions are made by a 12-person board composed of three state agency heads and nine appointed industry representatives. The goals of the enterprise fund are to:

- Stimulate economic development in the agriculture and forest product sectors by advancing entrepreneurship, business development and job creation;
- Increase the value of raw and value-added products by developing in-state and export markets;
- Attract a new generation of entrepreneurs to Vermont's farm, food system, forest and value-added chain by facilitating more affordable access to the working landscape; and
- Increase the amount of state investment in working lands enterprises.¹⁷⁰

The initiative includes three grant opportunities. Enterprise Investments provide grants between \$3,000 and \$15,000 to new or growing businesses, and offer business and technical assistance and infrastructure development to producers. Working Lands "Service Provider" grants between \$10,000 and \$100,000 are available to nonprofits, associations and colleges that address workforce needs and/or offer training; technical assistance; needs assessments; product research; marketing assistance; market development; business and financial planning; or access to capital. Working Lands "Capital and Infrastructure" investment grants between \$15,000 and \$100,000 are available to producers and nonprofit organizations, including food hubs, farmers' markets and shared processing facilities, for capital investments to increase operational capacity and influence the industry beyond their immediate business. Funding can be used to pay specialized personnel; to acquire land or easements; to pay for building and

equipment costs such as processing, storage or distribution; to put toward long-term working capital; or for other collaborative ventures that would open new markets or build capacity within the supply chain.¹⁷¹

Action

Support for Existing Programs

- State farm viability and other business development programs have been effective in fostering new agriculture business models and opportunities, and in leveraging significant private investments in on-farm agricultural infrastructure.

Research and Analysis

- States differ in their level of impact analysis around farm and food business development programs, with some states documenting the impact that each of their programs has on economic growth, job creation and farm profitability. More robust program evaluations could help build public and political support for these programs.

Policy Options

- The Vermont Working Lands Enterprise Fund offers an interesting model of state investment in agricultural business and job creation, providing funding to both individual farm operations as well as to statewide high-impact projects.
- In states with programs that provide business implementation grants in exchange for a nondevelopment covenant, consider a course similar to the Massachusetts Agricultural Investment Program, which provides grants for business planning and implementation to permanently protected farms that would not otherwise be eligible for the program. To qualify, farms should be required to document public benefits associated with the investment.

RISK MANAGEMENT

Introduction

Farming is an inherently risky business, and is likely to become riskier with a changing climate and more severe weather events. Government plays an important role in

administering programs and policies that help farmers manage their risk. Most risk-management tools used by farmers in New England are federal and are not, according to several interviewees, especially effective. For the region's dairy farmers, a proposed new revenue margin insurance program in the current House and Senate versions of the farm bill — in concert with a Dairy Market Stabilization Program — offers some hope of addressing the severe milk-price swings that have affected dairy profitability over the past decade. For the region's fruit and vegetable growers, improved crop and revenue insurance products could minimize the financial impact of crop losses due to adverse weather events.

Discussion

CROP AND REVENUE INSURANCE

USDA's Risk Management Agency administers the Federal Crop Insurance Corporation, which provides insurance through private companies for crops and livestock. While crop yield insurance covers only yield losses, crop- or whole-farm-revenue insurance protects against low revenue due to losses in production and declines in product quality and market price.¹⁷² Traditional crop insurance continues to be used in New England for some crops, and revenue insurance has become increasingly popular.

For many of the region's fruit and vegetable growers, traditional crop insurance is valuable for catastrophic crop losses, but does not pay for shallow losses, which can represent a farm's profit margin for the year. Crop insurance is also not available for certain specialty crops, such as lettuce, broccoli and spinach. In part for these reasons, specialty crops comprise only about 5 percent of crop insurance premiums despite accounting for nearly 22 percent of farm crash receipts.¹⁷³ The Risk Management Agency has been working to improve its Adjusted Gross Revenue and Adjusted Gross Revenue-Lite insurance products, which in theory are attractive for New England's diversified farms because they cover multiple crops under one policy and cover up to 35 percent of farm revenue from livestock and livestock products.¹⁷⁴ However, neither insurance product is used much in New England; fewer than 40 producers in the region purchased either product for the 2013 crop year.¹⁷⁵

DISASTER PAYMENTS

The 2008 Farm Bill created a permanent disaster program called the Supplemental Revenue Assistance Payments Program, which pays producers with crop insurance on eligible commodities for losses incurred as a result of diseases, adverse weather or other environmental conditions. The Noninsured Disaster Assistance Program is available to producers of crops for which crop insurance is unavailable.¹⁷⁶ These programs have not proven sufficient in cases of severe crop losses in New England. For instance, excessive rain in Connecticut during the 2013 summer growing season resulted in that state offering \$5 million in grants to producers who had suffered excessive losses. Grants were used to repair damaged property and equipment; replant lost crops; purchase feed to supplement lost hay, corn and other crops for livestock; or other similar purposes.¹⁷⁷

PRICE AND INCOME SUPPORT PROGRAMS

With the exception of dairy, USDA commodity programs are largely not used by New England farmers, as few farms plant significant acreage of covered crops. Dairy is considered a commodity crop, and current federal dairy policy is in flux. Of the five major dairy programs authorized through the 2008 Farm Bill, four remain in place:

- Federal Milk Marketing Orders, which effectively control the price of milk paid by milk handlers;
- Dairy Product Price Support Program, which acts as a floor for farm milk prices through the purchase by USDA of dairy products at set prices;
- Dairy Import Tariff Rate Quotas, which limit the import of lower-priced foreign dairy products; and
- Dairy Export Incentive Program, which subsidizes dairy product exports.

The Milk Income Loss Contract program (MILC) was the fifth dairy program in the 2008 Farm Bill that expired at the end of September 2013. In the suite of federal dairy programs, it was arguably the most important to New England's dairy farmers. The MILC program provided farm income support by giving participating dairy farmers a payment whenever the fluid milk price fell below a certain target price. Payments were limited to the first 3 million pounds of milk production per farm (equal to about 150 cows) annually, which limited payments to the region's larger dairy producers. An important addition to the program, though, in 2008 was a "feed adjuster,"

which allowed the MILC payment rate to rise if and when feed costs rose.¹⁷⁸ In the eleven years of the MILC program, payments to New England dairy farmers totaled \$162 million.¹⁷⁹

The Senate version of the 2013 Farm Bill eliminates MILC, the Dairy Product Price Support Program and the Dairy Export Incentive Program, and replaces them with two new programs: a Dairy Production Margin Protection Program and a Dairy Market Stabilization Program. These two programs are intended to work in tandem. The Dairy Production Margin Protection Program is an income-support program based on the margin between the national average all-milk price and a formula-derived estimate of feed costs, and the Dairy Market Stabilization Program acts as a supply-management program by reducing payments to producers when the margin falls below statutory thresholds. For smaller dairy producers, the Senate bill provides additional margin protection on the first 4 million pounds of production (about 200 cows). New England producers and dairy cooperatives are generally supportive of the Senate-passed bill.¹⁸⁰ The House bill includes the Dairy Production Margin Protection Program but not the Dairy Market Stabilization Program; for that reason, many of the region's dairy farmers oppose the House version of the farm bill.

Because federal policy has not been effective in stabilizing fluid milk prices or providing a meaningful safety net for dairy farmers when milk prices are especially low, several states have stepped in to create state-level safety net programs. These programs are described below.

CONNECTICUT AGRICULTURAL SUSTAINABILITY ACCOUNT

In 2009, Connecticut earmarked \$10 of a \$40 statewide deed recording fee imposed through the Community Investment Act to fund an Agricultural Sustainability Account, which provides grants to dairy farmers according to a formula based on the difference between the regional all-milk price and 82 percent of the cost of production. Grants are based on monthly production levels, and payments will be prorated if there are insufficient funds in the account to cover all producer payments.¹⁸¹

MAINE TIERED DAIRY STABILIZATION PROGRAM

The Tiered Dairy Stabilization Program, established in 2004, pays farmers directly from the state's general fund when the market price received for milk falls below cost of production. A producer's target price depends on which of four production range tiers he or she is in. All producers begin in the first tier at the beginning of the year. Some move into the second, third and fourth levels of production fairly quickly, while others never get out of the first tier. Since the program gets its resources from the general fund, it is subject to the state budget process. Milk handling fees, collected by the Maine Revenue Service, are sent to the general fund. Since 2007, at least \$30 million has been paid to milk producers through this program. The state legislature has frequently imposed an annual cap on program expenditures; in 2010 and 2011, the program was capped annually at \$13.3 million.¹⁸²

MASSACHUSETTS DAIRY FARM INCOME TAX CREDIT

Established in 2008 to offset the cyclical downturns in milk prices paid to dairy farmers, the Dairy Farm Income Tax Credit is activated every month that the Federal Milk Marketing Order's price drops below a trigger price established by the Massachusetts Department of Agricultural Resources. This trigger price is calculated from monthly costs-of-production figures, including hired labor and some portion of the value of unpaid labor; the amount of credit is based on volume of milk production. The credit is received when farmers file their annual taxes, and the pool of available credit is capped at \$4 million a year.

Action

Support for Existing Programs

- State-level programs providing income support for dairy farmers appear to be having a positive impact on farm profitability. Continued support for these programs is important to keep dairy farms viable and the land they steward in farming.

Research and Analysis

- Little analysis has been done in Massachusetts and Connecticut about the impact of their state dairy programs on farm profitability. Such analyses could help build sustained support for the programs.

- Additional analysis should be done about the insurance needs of New England farmers, to better inform the development of a workable whole-farm-revenue insurance product in the region.

Policy Options

Federal

- The Dairy Market Stabilization Program is an important component to the suite of federal dairy programs and should be included in the final version of the 2013 Farm Bill.
- As Farm Credit East suggested, consider crop insurance provisions to encourage more coverage of specialty crops including funds allocated for education efforts in underserved regions and for specialty crop agents serving specialty crops. The lender also supports simplifying the Adjusted Gross Revenue and Adjusted Gross Revenue-Lite insurance products to encourage more participation among Northeast farmers.
- The National Sustainable Agriculture Coalition recommends the establishment of a new whole-farm-revenue insurance product for specialty crop producers and dairy operations. The insurance product should be offered at the same coverage levels and options as other revenue products and should work for farmers engaged in value-added agriculture and alternative marketing.¹⁸³

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Food Safety, Processing, Aggregation and Distribution

This section explores the processing, aggregation and distribution of produce, dairy, meat and poultry, and seafood, as well as how food safety policies affect those industries. Over the last two decades, New England has seen exciting growth in both for-profit and not-for-profit ventures that are engaged in food aggregation, processing and distribution. Some are simply expanding the region's slaughter, processing and distribution capacity. Others are reconfiguring or creating new aggregation and distribution business models to expand access to healthy food, attract institutional buyers or shorten supply chains, which improves prices paid to farmers. Public investments that leverage millions of dollars from businesses and philanthropies have been critical to the redevelopment of the region's food system infrastructure. This infrastructure includes processing, slaughter and distribution facilities, and the businesses and services required to move food from farm or boat to table. Public investments in infrastructure are helping to expand the region's food processing, aggregation and distribution capacity, but food safety regulations limit the distribution of many products. This section recommends policy actions that address food safety issues while developing the capacity of the region's produce, dairy, meat and poultry, and seafood industries to build a robust food system in New England.

OVERVIEW OF FOOD SAFETY POLICY

Both public and private food safety requirements play a large role in how the region's food is produced, processed and distributed. Meat, poultry and dairy products must comply with federal food safety law in order to enter interstate commerce, and must comply with state law in order to be sold solely intra-state. In addition, private industry has, to date, largely required produce to meet voluntary food safety

Highlights

- For produce, advocate for changes to the Food Safety Modernization Act rules so that the regulations address food safety concerns, while minimizing the negative effects on farmers, food producers and the environment.
- For dairy farms, promote business planning and provide grants to develop additional on- and off-farm processing capacity.
- For meat and poultry, study methods of aggregation and distribution that can meet the region's growing demand for local meat and poultry products.
- For seafood, expand efforts to educate consumers about other species of locally sourced fish available for consumption, and continue policy efforts to market sustainably harvested fish.

standards. These requirements seek to curb foodborne illness, which has a considerable impact on health in the United States. The Centers for Disease Control and Prevention (CDC) estimates that “each year roughly 1 in 6 Americans (or 48 million people) gets sick, 128,000 are hospitalized, and 3,000 die of foodborne diseases.”¹ For years, the federal government has regulated meat, seafood and dairy product processing. But until recently, food safety standards for produce have been mostly voluntary, required only by markets that want assurance that the produce they sell will not sicken consumers. To this end, distributors, institutional buyers and grocery chains have required produce farmers to comply with a variety of food safety audits, most notably the Good Agricultural Practices (GAP). The USDA and state governments have helped train and certify farmers in these audits.

The Food Safety Modernization Act (FSMA),² signed into law in 2011, requires produce growers and processors to comply with food safety standards. At the time of this writing, the U.S. Food and Drug Administration (FDA) was still revising several draft rules that will implement the FSMA. When completed, the regulations will require a larger number of New England’s fruit and vegetable farmers to comply with new federal safety standards for how food is grown and processed. Ensuring that food is safe is vital to a healthy, functioning food system. However, many New England farmers and food businesses are concerned that several of the proposed rules will negatively affect farms, on-farm conservation practices, and food aggregation, processing and distribution businesses.

State and local public health and safety regulations also significantly affect food aggregation, processing and distribution in New England, and can create barriers to the interstate exchange of farm products. Meeting food safety needs in a way that does not chill expansion of the region’s food production will be an important public policy challenge over the next few years, especially as implementation of the FSMA begins.

FEDERAL OVERSIGHT

In the United States, federal oversight of food safety is fragmented. Fifteen agencies collectively administer at least 30 food safety laws. The two primary food regulatory agencies are the USDA — responsible for the safety of meat, poultry and processed egg products — and the FDA — responsible for regulating other food. The Government

Accountability Office found that this fragmented system has caused inconsistent oversight, ineffective coordination and inefficient use of resources.³

As required by law, the USDA’s Food Safety and Inspection Service (FSIS) conducts in-plant inspections of slaughter and processing facilities to protect consumers. The FSIS administers and enforces the Federal Meat Inspection Act (FMIA); the Poultry Products Inspection Act (PPIA); the Egg Products Inspection Act; portions of the Agricultural Marketing Act; the Humane Slaughter Act; and the regulations that implement these laws. This service is responsible for inspecting every animal before slaughter at USDA-inspected slaughter facilities and every carcass after slaughter.⁴ The USDA also administers the rules regulating pathogen reduction, as well as HACCP for meat, focusing on the prevention and reduction of microbial pathogens on raw products. All federal and state establishments that are inspected are required to have a HACCP plan.

The FDA is charged with administering the FSMA,⁵ which creates sweeping changes designed to prevent raw food contamination. Some changes go into effect immediately, others over time. Under the proposed food safety rules,⁶ certain raw produce and processed foods will be subject to HACCP-like standards for the first time. For more information about the Food Safety Modernization Act, see the Produce section below.

STATE AND LOCAL OVERSIGHT

In addition to federal oversight of food safety, New England states administer and enforce their own food safety laws that affect the production, aggregation and distribution of agricultural products.⁷ State regulations typically stipulate the conditions under which meat and poultry can be slaughtered, processed and sold within the state, and address the processing and sale of dairy and other food products. Across the region, municipal governments often impose an additional layer of local health and safety regulations. As a result, farmers and food processors face multiple layers of food safety regulations depending on what products they market and where they market them.⁸ The New England Extension Food Safety Consortium — a six-state collective — maintains a website with links to each New England state’s food safety laws.⁹

3.1 PRODUCE

Introduction

Food safety requirements present financial and logistical challenges for all produce farms, but particularly for smaller operations. These challenges may increase once the final food safety rules under the FSMA are implemented. Farmers, food businesses and policymakers throughout New England are struggling to understand the FSMA's proposed Produce Safety and Preventive Controls rules and their implications.

Discussion

FOOD SAFETY LAWS AND REGULATIONS

Produce safety law is a developing area, and mandatory federal regulation is replacing voluntary standards. The FDA recently published for public comment proposed rules for produce safety and preventive controls for human food.¹⁰ At the time of this writing, the FDA was redrafting significant portions of these rules and planning to release amended proposed versions for public comment sometime in the summer of 2014.

Currently, distributors (food aggregators, wholesalers, supermarkets and other large sellers of produce) largely dictate food safety standards for produce production, handling and processing by requiring farmers to comply with voluntary standards. Once finalized, the FDA's food safety rules will impose mandatory standards with the force of law. Until then, industry often wants growers to comply with a voluntary independent audit system focused on best practices to verify that fruits and vegetables are grown, packed, handled and stored in the safest manner possible to minimize the risk of microbial food safety hazards. These GAP and Good Handling Practices (GHP) audits were developed by the USDA in 2008. They verify that growers and processors have adhered to recommendations made in the 1998 FDA "Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables."¹¹ Around the region, distributors and their institutional customers, such as large grocery chains, have required GAP audits of produce farmers. In the past few years, a number of different food safety audit systems have been developed, prompting a new, "GAP Harmonized" audit,¹² which grocery chains in New England increasingly require. These industry standards often force smaller growers to comply with the same standards as larger growers in order to sell

their produce to institutional buyers. Some small farmers struggle to meet the costs associated with these voluntary audits, and instead limit their business to venues like farmers' markets.

The proposed food safety rules will move beyond voluntary GAP and impose mandatory safety standards in an attempt to significantly reduce produce contamination. The federal Food, Drug, and Cosmetic Act (FDCA) requires the FDA to issue food safety regulations for food products, including fruits and vegetables.¹³ The FSMA imposes the following changes:

- **Recalls:** The FDA can recall food products. Before the FSMA, recalls were voluntary.
- **Inspections:** More frequent inspections based on risk will occur. Foods and facilities that pose greater food safety risks will get more attention.
- **Imported food:** The FDA's ability to oversee food imported into the United States from foreign countries is significantly enhanced. The FDA has the authority to prevent food from entering this country if the facility, including those that produce, manufacture, hold, pack or distribute food, refuses U.S. inspection.
- **Preventing problems:** Food facilities must have a written plan that spells out possible food safety problems and steps the facility will take to prevent those problems.
- **Focusing on science and risk:** The law establishes science-based standards for the safe production and harvesting of fruits and vegetables. These standards will consider both natural and manmade risks to the safety of fresh produce.
- **Small businesses and farms:** The law provides some flexibility for smaller farms that sell the majority of their product direct to retail, such as through farmers' markets, farm stands and community supported agriculture (CSA) programs.¹⁴

Some believe that GAP audits already result in excessive paperwork, time and money. Once the final food safety rules are implemented, distributors and supermarkets may expect all growers to comply with the FSMA as well, even if a farm is exempt. Many small- and medium-scale growers already avoid this larger marketplace, thwarting their ability to scale up to the regional produce market.¹⁵ The new food safety rules may further restrict their ability to enter it.

Produce Safety Rule

The scope of the proposed Produce Safety Rule mirrors the FDA's 1998 GAP Guide and the Harmonized Standards, all of which cover the growing, harvesting and on-farm handling of fresh produce.¹⁶ Some experts believe that those in compliance with Harmonized GAP will likely be able to meet the final requirements of the Produce Safety Rule without changing practices or adding costs.¹⁷ Interviewees for this project stated that the rule will likely have a significant and detrimental impact on the region's produce growers, deterring efforts to scale up food production in the region.¹⁸ The National Sustainable Agriculture Coalition is one of many groups that filed comments on the proposed rule, stating that the data on which the FDA relied to draft the rule does not demonstrate that smaller operations pose the same food safety risks as larger ones; therefore, the data does not adequately establish a scientific basis for the proposed standards.¹⁹ While the proposed rule exempts some smaller farms, several interviewees said they believe distributors and other food buyers will demand compliance regardless of farm size, much as buyers have demanded GAP audits from small farms.²⁰

Under the proposed rule, a small-farm exemption applies to "small" and "very small" businesses.²¹ A "small" business sells annually no more than \$500,000 in all food sales, calculated on a three-year rolling basis.²² A "very small" business sells annually no more than \$250,000 in food, calculated on a three-year rolling basis.²³ (The farm exclusion, according to the proposed rule, applies to any farm with annual average food sales of \$25,000 or less, calculated on a three-year rolling basis.²⁴) Farms would be eligible for the exemption if, annually, the dollar value of direct sales to "qualified end-users" exceeds the dollar value of sales to all other customers, and total average annual food sales to all buyers is less than \$500,000, calculated on a three-year rolling basis. Qualified end-users are consumers, restaurants and retail food establishments that are either within the same state as the farm or within 275 miles of the farm.²⁵ Qualified farms may be subject to certain labeling requirements and the continued jurisdiction of FDA to oversee the qualified exemption.²⁶ The FDA will have discretion to withdraw the exemption as it deems necessary to protect public health.

The proposed rule may also cause significant environmental impacts. For example, as drafted, it requires a nine-month waiting period between applying untreated manure and harvesting a crop.²⁷ This length of time would necessitate manure application in the fall of the year before harvest, a practice that is discouraged because it

can lead to loss of nitrogen in the soil. Such a standard may force farmers to use chemical fertilizers over manure, threatening an organic farm's USDA organic certification, and degrading water quality with increased nitrogen loading in rivers and streams. Additionally, the proposed rule may cause farmers to remove native habitat around cropland in an attempt to keep wild animals from entering a field.²⁸ Such habitat is crucial for conserving biodiversity and protecting key pollinators. These are just two examples of the proposed rule's potential environmental impacts.

Key Areas of Concern

- Compliance costs may force some small- and mid-sized farms out of business, and the thresholds for exemptions may chill interest among farms in expanding production and sales.
- The standard for withdrawing the qualified exemption is ambiguous.
- The withdrawal process does not afford adequate due process to farms that qualify for an exemption.
- The proposed rule may negatively impact the environment.

Preventive Controls Rule

The proposed Preventive Controls Rule will apply to many domestic and foreign farms and businesses that manufacture, process, pack or hold human food. As the rule is currently drafted, facilities that process food must register under the FDCA but may qualify for an exemption under the Preventive Controls Rule. The rule has two major features:

- It contains new provisions requiring hazard analysis and risk-based preventive controls; and
- It revises existing Current Good Manufacturing Practice (CGMP) requirements found in 21 CFR Part 110.²⁹

The hazard analysis and risk-based preventive controls portion of the rule is similar to HACCP systems pioneered by the food industry for juice and seafood.

Covered "farm mixed-type facilities" — farms that manufacture or process food — and nonfarm food businesses may need to develop written plans that identify potential hazards; steps they will take to minimize or prevent those hazards; and actions that will correct problems that arise. The FDA will evaluate the plans and inspect facilities to ensure proper implementation of the hazard control plans.³⁰

The proposed rule provides an exemption for small and very small businesses conducting certain low-risk activities. Under the draft Preventive Controls Rule, a small business employs fewer than 500 employees.³¹ For the final rule, FDA is considering three possible definitions of a very small business:

- Less than \$250,000 in total annual food sales;
- Less than \$500,000 in total annual food sales; or
- Less than \$1 million in total annual food sales.³²

The Preventive Controls Rule also has the same direct-to-consumer exemption as the Produce Safety Rule. The CGMP provisions would still apply to exempt qualified facilities under the Preventive Controls Rule.³³

Farms working cooperatively may face additional challenges under the Preventive Controls Rule. Farms that purchase and sell produce from other farms, especially those that repackage or process off-farm produce in any way, may need to comply with not only the Produce Safety Rule, but also the Preventive Controls Rule. The cost and additional labor the proposed rule would require may discourage small- and mid-sized farms from working under these cooperative arrangements. Likewise, food hubs — entities that aggregate or distribute — may need to comply with the rule. In particular, the rule may dissuade food hubs that aggregate produce from small- and mid-sized farms in the region, and work to increase those farms' profits, from continuing their operations or starting such food hubs in the first place.

As with the Produce Safety Rule, small and very small businesses will have more time to comply with the final regulation. It will apply to small businesses two years after its effective date and to very small businesses three years after its effective date.

Key Areas of Concern

- Compliance costs may force out of business some small- and mid-sized farms with facilities that process food on-site.
- The standard for withdrawing the exemption from a qualified facility is ambiguous.
- The withdrawal process does not afford adequate due process to farms and facilities that qualify for an exemption.

PROCESSING

Expanding New England's fruit and vegetable processing capacity is increasingly important in meeting the growing year-round demand for local and regional produce. Produce processing in the region is diverse, ranging from light processing — such as washing, cutting and peeling performed on the farm or by distributors and food hubs — to flash freezing, canning, juicing and dehydration. Processing also includes more extensive value-added processing. While evidence of increased produce processing can be found around the region, there has been little analysis of the extent or economic impact of this growth.

State and federal investments in both on- and off-farm produce processing have been important in leveraging private and philanthropic resources. This is especially true for processing enterprises designed to spur food entrepreneurship or improve farm profitability. With USDA support, several food processing facilities, such as the Vermont Food Venture Center and the Western Massachusetts Food Processing Center, offer processing space to new food businesses; they also process fruits and vegetables for institutional customers in the region.³⁴ The Vermont Food Venture Center is a 15,000-square-foot food processing facility with a produce and preparation kitchen, a "hot pack" kitchen, dry and cold storage, semi-automated equipment, and a standard loading dock to receive and deliver pallets.³⁵ The Western Massachusetts Food Processing Center provides co-packing services to farms interested in selling value-added fruit and vegetable products, and is also working with a food service management company to create frozen vegetable mixes for the company's institutional customers in New England. Federal programs such as the USDA's Rural Business Enterprise Grants Program and the Business and Industry Guaranteed Loan Program have been especially important to the development of these food processing centers.³⁶ The USDA's Value-Added Producer Grant program has helped several farmers in the region expand their light processing capacity.

State funding has also played an important role in developing produce processing capacity around the region. State farm-viability programs in Connecticut, Massachusetts and Vermont provide business plan implementation grants that farmers can use to finance construction of on-farm processing facilities.³⁷ In Vermont, the Working Lands Enterprise Fund offers capital and infrastructure grants for processing facilities, including shared

facilities that have an impact on the industry beyond the host farm's immediate business. For example, funding was provided to Black River Meats to increase their volume of regionally produced meat.³⁸ The Vermont Economic Development Authority has also provided funding for processing businesses.³⁹

Federal funding has helped public schools rebuild kitchen infrastructure to enable them to use farm-fresh produce. The American Recovery and Reinvestment Act of 2009 provided \$100 million in food service equipment grants, which could be used for new coolers and freezers, slicers and choppers, and produce-washing sinks.⁴⁰ Approximately \$3 million was allocated to New England states through this one-time grant program.⁴¹

AGGREGATION AND DISTRIBUTION

The trend toward direct-to-consumer marketing in New England through farmers' markets, CSAs and farm stands has had a positive impact on farm profits and changed produce distribution patterns. However, direct-to-consumer marketing still represents only 5 percent of total farm sales in the region.⁴² Many fruit and vegetable growers continue to depend on selling a portion of their product through wholesale markets. The food service management companies that run cafeterias at many of the region's institutions buy a large portion of their produce from national broadline food distributors. Increasingly, however, institutional customers are turning to regional produce distributors in an effort to satisfy customer demand for local food.⁴³

In 2012, Farm to Institution New England — a network of entities seeking to expand institutional procurement in the region — interviewed 18 area distributors that sell to institutions.⁴⁴ These distributors cited several infrastructure-related challenges in handling and distributing local and regional produce. For example, farmers lack access to refrigerated transportation equipment and on-farm cooling and refrigeration facilities. They also lack on-farm infrastructure for storing, handling and light processing. Distributors also cited challenges related to on-farm packaging and handling, which must meet specific industry standards for weight and size. Additionally, distributors said that a number of produce farms are not GAP certified. These challenges point to the continued need for federal and state programs that provide cost-share assistance to farmers for post-harvest handling and storage facilities and equipment.

Around the region, many food hubs, which often are operated by nonprofit organizations with missions to support local farmers and/or to expand access to healthy food, have been beneficiaries of state and federal grants to develop new distribution models, expand cold storage and freezer capacity, and increase processing options.⁴⁵ Federal grants have also helped farmer cooperatives, such as Vermont's Deep Root Organic Cooperative, and established food businesses, such as Vermont Refrigerated Storage, which provides storage for much of Vermont's apple crop.⁴⁶

Whether New England can sustain a larger and more integrated regional produce market depends on expansion of aggregation and distribution opportunities, especially those that provide a fair return to farmers. As noted above, the FDA's proposed rules implementing the Food Safety Modernization Act present challenges for aggregators, especially farms seeking to serve in that capacity.

Food Hubs

In 2012, the USDA identified 32 food hubs operating in and serving various parts of New England.⁴⁷ Food hubs expand the availability of healthy, fresh food and in some cases target underserved communities to address food-access issues. The National Food Hub Collaboration defines a regional food hub as "a business or organization that actively manages the aggregation, distribution, and marketing of source-identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand."⁴⁸

According to a 2011 USDA survey, 60 percent of food hubs received government funding — federal, state and local — to begin operations, and at the time of the study, 30 percent were actively receiving government funding. The survey found that food hubs need to invest in additional infrastructure, such as larger warehouse space, trucks, forklifts, packing crates, sorting equipment, processing equipment and cooler and freezer units. Food hubs could not manage investing in those resources without relying on external support.⁴⁹ Many of the survey participants identified access to capital as a primary limiting factor to growth. This included a lack of capital for infrastructure investments along with difficulty securing short-term revolving credit lines to maintain adequate cash flow for payments.⁵⁰

Many federal and state grant and loan programs have already been, or could be, used to finance various aspects of food hub operations. The USDA “Regional Food Hub Resource Guide” has identified federal programs as possible funding sources for food hubs.⁵¹ Unfortunately, some of these programs may be underutilized in the region due to eligibility and geographic restrictions, or greater demand than available funding.

In Massachusetts, Red Tomato coordinates marketing, sales and wholesale logistics for a network of more than 40 farms in the region. It currently relies on the following funding sources:

- 60 percent from government, foundation grants and individual donations;
- 30 percent from income; and
- 10 percent from consulting.⁵²

The Mad River Food Hub in Waitsfield, Vt., which opened in 2012, relies on funding from a variety of sources, including the Vermont Sustainable Jobs Fund, the Vermont Housing and Conservation Board’s Farm Viability Program, the Vermont Agency of Agriculture’s Agriculture Innovation Center and the USDA Specialty Crop Block Grant Program.⁵³ Farm Fresh Rhode Island’s Market Mobile was originally funded by the Rhode Island Division of Agriculture and private funders.⁵⁴

Many food hubs are currently in a start-up or early development phase. The USDA reports that 60 percent of food hubs have been in operation for five years or less.⁵⁵ Training and support in business development is needed for some food hub operators. State farm viability programs have been used for processing and distribution projects — both for capital improvements and technical assistance or business planning. (For more information about these programs, see Food Production, Chapter 2.) However, these programs are available only to farm businesses, so food hubs may be ineligible. New food hub operators could benefit from technical assistance on facility design and operations, including equipment, floor plans and operating costs.⁵⁶

Action

Support for Existing Programs

Federal

- Rural Business Enterprise Grants.
- Rural Business Opportunity Grants.
- Business and Industry Guaranteed Loan Program.
- Value-Added Producer Grants.
- Specialty Crop Block Grant Program.

State

- Farm Viability and Reinvestment programs in Connecticut, Maine, Massachusetts, Rhode Island and Vermont.
- Working Lands Enterprise Fund in Vermont.

Research and Analysis

- Analyze the cost of compliance with the Food Safety Modernization Act’s proposed Produce Safety and Preventive Controls rules for various types of farm operations in the region.
- Determine the costs to New England states for implementing the proposed FSMA rules.
- Analyze private and philanthropic resources and the economic impact of federal and state investments in food aggregation, processing and distribution infrastructure.
- Continue to research food hub business models, especially those that can be self-supporting and provide a fair return to farmers.
- Research whether the scale and management system of a produce operation affects the risk of contaminating its product.

Policy Options

- Continue to advocate for modifications to the proposed FSMA Produce Safety and Preventive Controls rules.
- Support the development of food aggregation centers for small- and medium-sized producers.

3.2 DAIRY

Introduction

Dairy farming has been part of New England for centuries. In recent years, the number of dairy farms across the region has declined dramatically, largely driven by milk pricing. The pricing of milk has a long and complex history of federal and state supports and supplements. In 1937 Congress established the federal milk pricing system to maintain a stable milk supply. Two years later, Congress set a support price system for dairy farmers regardless of their proximity to the markets. Increasing technology and storage capacity for milk led to its production outstripping demand. Now, dairy policy in New England is a complicated mix of federal and state regulations around pricing, risk management tools, price-support programs and cost-share assistance for farm business planning, conservation practices and farm energy support. Some interviewees suggest that in order to maintain New England dairy farming and provide fresh, local dairy products throughout the region, dairy policy must better address costs of production and risks associated with increasingly severe price swings.

At the time of this writing, an updated federal farm bill had not yet passed. This legislation will likely replace the now-expired Milk Income Loss Contract program — a program that provided a needed safety net for the region's dairy farmers in times of low milk prices — with a new dairy margin protection program and, potentially, a market stabilization program. Regardless of the final configuration of dairy policy in the farm bill, federal policy alone is unlikely to ensure the future viability of the region's dairy sector.

Discussion

FOOD SAFETY LAWS AND REGULATIONS

All six New England states have adopted the Pasteurized Milk Ordinance (PMO), a model ordinance and code developed by the FDA's Public Health Service and other federal agencies. State and local milk-control agencies enforce it.⁵⁷ The ordinance is designed to promote effective and well-balanced milk sanitation programs in each state, to stimulate the adoption of adequate and uniform state and local legislation related to milk, and to encourage the application of uniform enforcement procedures through appropriate legal and educational measures. The PMO has been upheld by court actions and discourages states from

using local public health regulations to create trade barriers that thwart interstate commerce of milk. The ordinance also creates a uniform standard that makes possible other voluntary programs, such as the Interstate Milk Shippers certification.⁵⁸

The six New England states differ in their regulation of raw milk, and for purposes of food safety, raw milk cannot be sold across state lines.⁵⁹ Connecticut, Maine and New Hampshire allow retail sale of raw milk.⁶⁰ Massachusetts permits only on-farm sales of raw milk, and Vermont allows on-farm sales, as well as retail sales under certain conditions.⁶¹ In Rhode Island, it is illegal to sell raw milk from cows, but raw goat's milk can be sold directly to consumers with a prescription.⁶²

Dairy processing facilities, whether on- or off-farm, are subject to numerous state and federal food safety regulations. At the state level, the department of agriculture or the department of health typically regulates such facilities. The FDA primarily oversees these facilities at the federal level.⁶³

PROCESSING

New England's dairy farms produce an average of more than 4 billion pounds of milk a year. Almost all of that is processed in the region.⁶⁴ There are more than 300 off-farm bottling and dairy processing plants in New England, employing between 5,000 and 8,500 people.⁶⁵ Dairy cooperatives play a central role in getting milk from producers to processors, including, in some cases, owning and operating processing plants. The federal Milk Marketing Order System establishes minimum prices that milk handlers, typically processors, must pay for milk. Prices are set based on the eventual use of the milk. Producers receive a blended price that reflects the average price of all milk sold through the New England market-order pool.

To capture a greater percentage of the retail dairy dollar, a growing number of dairy farms in the region have developed their own processing capacity, allowing them to produce a farm-branded milk or dairy product. Dairy producers are typically marketing these products themselves through a variety of retail venues. In some cases, farmers are creating or joining cooperatives to manage the marketing. The number of farms bottling or processing their own milk into dairy products is not tracked in every New England state, but between 1995 and 2012, the number in Maine and Vermont jumped from fewer than 20 to more

than 130.⁶⁶ Farms are processing a wide variety of milk and dairy products, from butter and yogurt to farmstead cheeses, ice cream and flavored milks. The start-up costs for many of these processing facilities are significant, as are the regulatory hurdles, which include both food safety regulations and, typically, state environmental regulations around wastewater. In order to transition into processing, many of these farms rely on state-funded business planning assistance, as well as state and/or federal infrastructure grants, primarily through the federal Value-Added Producer Grant Program and state farm viability programs.

According to a 2005 survey conducted by the Vermont Dairy Task Force of on-farm dairy processors, farms processing their own milk are processing almost all of it. On average, less than 16 percent of the milk from these farms is sold to a dairy cooperative or milk handler. Under the federal Milk Marketing Order System, dairy producers who process their own milk are exempt from the pricing provisions of the order. Producer-handlers are capped at what they may process under this exemption: 150,000 pounds per month of Class 1 milk. Significant disincentives apply for producer-handlers who exceed this cap, effectively limiting the volume of milk that a farmer can process outside of the federal milk market order system. While the cap is not problematic for most of New England's producer-handlers, for some, the cap limits their ability to expand, which in turn influences their profitability.

Another trend in dairy processing is an increase in local and regional branded fluid beverage milk products. In Rhode Island, the dairy farm members of Rhody Fresh use Guida's Dairy in New Britain, Conn., to process their milk, which is segregated from the rest of the plant's milk and bottled using Rhody Fresh cartons. In western Massachusetts, Our Family Farms dairy cooperative is exploring the feasibility of building its own processing plant to expand the line of fluid beverage milk products they can offer, including bags and half-pints for schools and other institutional customers. In both of these cases, federal funding has helped the cooperatives pursue local processing options.

In its 2006 study, the Vermont Dairy Task Force identified the need for dairy processing workforce development. Vermont dairy producers doing their own processing stated that finding labor is their primary barrier to expansion.⁶⁷ Forty-three percent of producers reported a shortage of part-time labor.

AGGREGATION AND DISTRIBUTION

As mentioned above, dairy cooperatives play a significant role in managing milk between the producer and the processor. About 70 companies pick up milk from dairy farms around the region, and the haulers are responsible for physically managing the raw product. As milk is frequently shipped to processing plants outside the state of origin, milk haulers must comply with multiple federal and state trucking regulations. Inconsistent regulation of truck weight limits between states in southern New England continues to cause problems for regional milk haulers.

Action

Support for Existing Programs

- Continue to provide business planning and grants for dairy farms to develop additional on- and off-farm processing capacity.

Research and Analysis

- Analyze private and philanthropic resources and the economic impact of federal and state investments in dairy processing infrastructure.

Policy Options

- Build support for the federal and state programs that are investing in dairy processing infrastructure and technical assistance.
- Raise the cap on the dairy producer-handler exemption under the federal milk marketing order to allow dairy producers to process more of their milk outside the federal milk market pool.
- Establish workforce-development programs for dairy processing, or expand current state workforce-development efforts to include dairy processing.
- Improve access to information regarding HACCP requirements so that farmers and food entrepreneurs have the tools they need to make informed decisions regarding expanded marketing opportunities and value-added processing while promoting food safety.⁶⁸

3.3 MEAT AND POULTRY

Introduction

In recent years, New Englanders have demanded more locally raised and produced meat and poultry. In fact, in some states, like Vermont, demand for local meat outstrips supply.⁶⁹ This is in part because New England's ability to process and distribute meat and poultry is controlled by a complex set of federal regulations overseen by multiple federal agencies. Until recently, federal law mandated that only federally inspected meat could be placed in interstate commerce under the FMIA⁷⁰ and PPIA⁷¹. The 2008 Farm Bill relaxed that mandate. In mid-2011, the FSIS issued a final rule establishing a Cooperative Interstate Shipment (CIS) program.⁷² It allows meat and poultry to be shipped and sold across state lines if it is:

- Inspected through approved state inspection programs, which must at least meet federal inspection standards; and
- From a plant with 25 or fewer employees.⁷³

Ohio has been approved to participate in the CIS program,⁷⁴ but, at the time of this writing, it is unknown when or if any New England states will choose to participate. All New England states currently have at least one federally approved slaughterhouse. Some states have inspection programs that allow sales of meat and poultry within state borders. Many farmers throughout the region claim that slaughter and processing costs and quality, as well as a lack of capacity at key times of year, limit their ability to capitalize on the growing demand for local, sustainable and certified humane meat.

Discussion

FOOD SAFETY LAWS AND REGULATIONS

The two main federal laws that seek to assure a safe meat supply are the FMIA and the PPIA. The FMIA establishes inspection requirements for cattle, sheep, swine and goats.⁷⁵ These requirements are designed to prevent adulterated or misbranded meat and meat products from being sold as food in interstate commerce.⁷⁶ Meat that is intended for personal consumption by the livestock owner, his or her household, or his or her guests and employees, and is processed by the farmer or by a custom slaughterer is exempt from inspection requirements.⁷⁷ A custom slaughterer is a person who provides slaughter or

processing services to the person who owns the animal and agrees not to sell or barter the meat. Custom slaughter operations appear to be growing around New England.

The PPIA mandates inspection of poultry and poultry products, and regulates the processing and distribution of "domesticated bird[s]" for sale in interstate or foreign commerce.⁷⁸ Any poultry slaughter and processing facility that sells products within a state must comply with the PPIA whenever the state does not enforce requirements at least as strict as the federal law. The PPIA exempts poultry intended for personal consumption from federal inspection and instead imposes criteria intended to facilitate the slaughter of healthy birds under hygienic conditions.⁷⁹ The PPIA also contains exemptions for:

- Custom slaughter;
- A producer-grower of 1,000 or fewer birds;
- A producer-grower of 20,000 or fewer birds;
- A producer-grower or other person;
- A small enterprise; and
- A retail operation.

These exemptions excuse the covered business from some, but not all, requirements of the PPIA and limit the sale of the exempted product to intrastate commerce.⁸⁰

In addition to facilities that meet federal inspection guidelines, states may implement coordinated meat and poultry inspection programs under an agreement with the USDA's Food Safety and Inspection Service. Under the agreement, a state's program must enforce requirements equal to or greater than those imposed under the FMIA and PPIA, and the products can be sold only in state.⁸¹ Maine⁸² and Vermont⁸³ have implemented meat and poultry inspection programs, and New Hampshire has established,⁸⁴ but not yet implemented, one.⁸⁵

The USDA rules also allow for state-inspected plants with fewer than 25 employees to apply to be part of the CIS program, making it possible for some farmers with state-inspected meat to sell their products across state lines.⁸⁶ Participating establishments receive inspection services from state personnel trained in the enforcement of the FMIA and PPIA.⁸⁷ The complexity and cost of establishing and implementing the program may deter states from taking part.

Under the PPIA, Maine and Vermont both offer inspection exemptions for small-scale poultry producers who slaughter fewer than 1,000 birds per year for certain intrastate sales.⁸⁸ Both states also license custom slaughter and processing facilities.⁸⁹ Massachusetts issues licenses to slaughter and/or process poultry using either a Mobile Poultry Processing Unit or small on-farm processing operations.⁹⁰ Connecticut has a program that allows poultry growers who process on-farm and have passed state inspection to sell directly to restaurants and consumers. In 2013, legislation expanded this program to allow the sale of Connecticut-grown and -inspected poultry to in-state retail and wholesale markets.⁹¹

SLAUGHTER AND PROCESSING CAPACITY

In 2010, the six New England state's chief agricultural officers identified the lack of slaughter and processing capacity as a serious impediment to increased consumption of regionally produced meat.⁹² Although a 2010 nationwide study of large-animal slaughter and processing capacity found almost enough *slaughter* capacity (82 to 97 percent) around the region to meet the current large-animal market volume, there is significantly less *processing* capacity (44 to 54 percent).⁹³ Though some of the region's slaughter facilities are running at less than full capacity, bottlenecks are common in many areas in the high-demand fall months.⁹⁴ Additionally, livestock producers are concerned that the distance to facilities and the cost and quality of services are impeding increased slaughter and processing throughout New England.⁹⁵

The region currently has 28 commercial slaughter facilities and 30 commercial meat and poultry processors.⁹⁶ All New England states have at least one federally inspected slaughterhouse.⁹⁷ Because Maine and Vermont comparatively raise a lot of livestock, those states have the most slaughter facilities in New England. Between 1997 and 2010, however, Vermont lost more than half its federal or state-inspected commercial red meat slaughter and processing facilities.⁹⁸ Both Maine and Vermont have state meat inspection programs, which allow intrastate sale of meat. New Hampshire has authorized a state meat inspection program but has not funded it. Legislation to create a program is pending in Massachusetts, and neither Connecticut nor Rhode Island has such a program.⁹⁹

In addition to fixed slaughter facilities, mobile poultry processing units have been built in and licensed by several New England states, including Vermont, Massachusetts

and Rhode Island.¹⁰⁰ These units are intended to travel to farms, enabling those that produce fewer than 20,000 birds each year to slaughter onsite.¹⁰¹ A USDA-inspected red meat Modular Harvest System based in New York's Hudson River Valley was built to serve not only New York, but also Massachusetts and Connecticut. The Modular Harvest System is a custom-built harvest unit that can be moved to any suitable docking site in the region. The first and so far only docking unit is in Stamford, N.Y.¹⁰² Both the mobile poultry processing units and Modular Harvest System are subject to the same federal regulatory requirements and small-processor exemptions as brick-and-mortar facilities, but may also be subject to additional state requirements.¹⁰³ The USDA recently issued a guidance document to assist states in developing regulations for mobile processing facilities.¹⁰⁴

For many livestock operations, the high cost of slaughter and processing limits their ability to sell to local and regional markets. Another issue is the inconsistent quality of processing, which can affect the ability to capture a high price in the marketplace. A third issue is slaughter and processing availability. In parts of the region, farmers must reserve slaughter dates for animals that have not yet been born.¹⁰⁵ Public programs and policies can and in some cases already are helping to address these issues. The Vermont Farm to Plate Strategic Plan has identified several ways the federal and state governments can help slaughter and processing facilities reduce operating costs. Vermont has invested in educational programs aimed at growing the pool of skilled meat cutters.¹⁰⁶ Expanding the use of mobile slaughter and processing units to provide additional capacity will require increased technical assistance and better collaboration with state and local health officials.

Increasing demand for slaughter and processing facilities in the region in the lightly used winter and spring months would help to improve the profitability of many facilities. At the time of this writing, Vermont was already experiencing less seasonal decline in the spring months because more producers are finishing animals year round.¹⁰⁷ One possibility for expanding the regional supply of meat is dairy beef. These cows — culled from dairy herds — can provide several cuts of meat, including ground beef. A collaborative project between Farm to Institution New England (FINE) and the six state departments of agriculture is focused on expanding institutional markets for New England-sourced beef, including dairy beef. The project is fostering relationships between institutional buyers

and the region's processors, and is exploring creating a New England-branded meat program to promote locally produced, source-verified meat for wholesale and institutional buyers. Such buyers often have additional food safety standards for meat, requiring processors to have additional, expensive equipment, such as pasteurization machines. Public funding has been important to offset these costs and enable processors to meet institutional price points.

AGGREGATION AND DISTRIBUTION

Around the region, several meat distributors are working with livestock farmers to meet demand for regionally sourced meat and poultry, amassing products from participating farms. Associations and cooperatives of livestock growers seeking to aggregate, slaughter, process and market their own meat are also emerging. For example, the Rhode Island Raised Livestock Association, a non-profit membership organization, worked with two local family-owned meat processing businesses to "re-knit a piece of the fabric of local agriculture infrastructure" and provide livestock growers with access to USDA-inspected processing facilities. This Rhode Island association now runs a processing scheduling service for its members, giving them a local and cost-effective way to have their animals processed at a USDA-inspected facility. In addition to private funding, the association was supported in its early stages by a USDA grant.¹⁰⁸ Replicating this type of cooperative development in other areas of the region could help livestock producers meet both processing and marketing needs.

Action

Support for Existing Programs

Federal

- Rural Business Enterprise Grant Program.
- Rural Energy for America Program.

State

- Farm viability programs in Connecticut, Maine, Massachusetts and Vermont.
- Vermont Working Lands Enterprise Fund.

Research and Analysis

- Analyze the success of state farm viability programs in leveraging state and federal investments and improving the profit margins of slaughter and processing facilities.
- Explore the feasibility of on-farm slaughter facilities to process livestock from other farms.

Policy Options

- Develop a more workable plan than the Cooperative Interstate Shipment program to allow shipment of meat across state lines.
- Develop state-funded, low-interest loan programs for capital improvements to new and existing slaughterhouses. Such improvements could include the development of satellite processing sites and additional on-site storage to maximize the facility's kill-floor capacity.¹⁰⁹
- Provide business assistance to slaughter and processing plants, allowing them to improve their services and overall profitability.¹¹⁰
- Decrease the costs of slaughterhouse and processing operations; provide access to technical assistance and funding to address energy-efficiency opportunities; develop risk-management training to reduce insurance premiums; and explore the potential for pooled liability insurance.¹¹¹
- Continue to provide regulatory support and training on standard operating procedures and HACCP plans for small-scale slaughter and processing facility operators.
- Encourage the development of livestock cooperatives that are able to address holistically the slaughter, processing and marketing needs for a given commodity or region.
- Streamline the regulatory structure for mobile poultry processing units and the Modular Harvest System.
- Provide educational opportunities and incentives for training skilled workers to meet increased processing demands.

3.4 SEAFOOD

Introduction

Seafood has been a valued — and sometimes vital — source of food for New Englanders. Its place in the regional food system, however, has been complicated in recent years by the decline in traditional finfish stocks in the Gulf of Maine and Georges Bank. This has led to the loss of much of the commercial fishing fleet, higher prices for consumers and declining availability of cherished species, such as cod and flounder. Changes in the ocean ecosystem caused by global warming and other human-induced activity have also affected shellfish species. For example, lobster stocks have significantly declined in southern New England waters but have increased dramatically off the coast of Maine, while invasive European green crabs are expanding their range and consuming copious quantities of mollusks and bivalves.

In the wake of declining traditional fish stocks from overfishing and an ocean ecosystem stressed by rising temperatures, acidification and pollution, producers increasingly are looking for means to adapt to these changes. They have turned to aquaculture to generate fish and shellfish for human consumption. Aquaculture presents opportunities for regional growers. For example, oyster farming has already proved an economic boon to southern New England.¹¹² Aquaculture also comes with challenges, however, including managing pollution from discharging wastewater and farming species that consumers demand.

Discussion

FOOD SAFETY LAWS AND REGULATIONS

The safe handling and processing of fish and shellfish fall under several laws administered by different agencies. The Food, Drug, and Cosmetic Act, administered by the FDA, mandates that all national and international seafood retailers and processors¹¹³ implement a HACCP program at critical points in the supply chain for each species processed.¹¹⁴ To help meet this requirement, the Seafood Inspection Program in the National Oceanic and Atmospheric Administration (NOAA) offers professional, fee-for-service food safety inspections for fish, shellfish and fishery products industries.¹¹⁵ This service is often referred to as the U.S. Department of Commerce Seafood Inspection Program and uses marks and documents bearing the Commerce Department's seal.

Shellfish is also inspected under the National Shellfish Sanitation Program, a federal-state cooperative project recognized by the FDA and the Interstate Shellfish Sanitation Conference. The National Shellfish Sanitation Program promotes and improves the sanitary control of shellfish produced for human consumption and sold across state lines. Participants in the program include many state agencies, as well as the FDA, the Environmental Protection Agency, NOAA and the shellfish industry. Under international agreements with the FDA, foreign governments also participate in the National Shellfish Sanitation Program, which includes a model ordinance, state growing-area classification and dealer certification programs, as well as FDA evaluation of state program elements.¹¹⁶

All New England states have implemented the National Shellfish Sanitation Program.¹¹⁷ Dealers must be certified under this program to ship shellfish within or across state lines. As of October 2012, there were 69 certified interstate shellfish shippers in Connecticut; 121 in Maine; 157 in Massachusetts; 24 in New Hampshire; 48 in Rhode Island; and five in Vermont.¹¹⁸

PRODUCTION, AVAILABILITY AND HARVESTING

Finfish

Fishermen and policymakers have increasingly wrestled with limiting finfish harvest while simultaneously replenishing stocks and finding responsible ways to keep fishermen in business. The federal government is largely responsible for setting catch limits. The Magnuson-Stevens Fishery Conservation and Management Act establishes a United States exclusive economic zone between the outer limits of state waters and 200 miles offshore. Eight regional fishery councils manage living marine resources within the exclusive economic zones. The act principally addresses heavy foreign fishing. It develops a domestic fleet and allows the fishing community more voice in the management process.

The New England Fisheries Management Council is the body that oversees management of the region's fisheries. It is composed of state and federal government officials and 12 members nominated by the governors of the five New England coastal states. The council prepares and submits to the U.S. Secretary of Commerce a fishery management plan and amendments as needed for each commercial fishery within its geographic area that requires conservation and management.¹¹⁹ As a result of decreasing fish stocks, many fishermen have left the industry. Those

that remain are, in part, trying to create markets for fish species that remain abundant but are less known by consumers. Whether consumers will accept these less popular species instead of traditional finfish remains to be seen.

As the dearth of wild fish worsens, New England also has turned to aquaculture, which helps meet consumer demand. But it also creates challenges, including water pollution from excess food, feces and antibiotics, and genetic mutation from escaped fish interbreeding with wild species.¹²⁰ Aquaculture businesses are often unique operations that require a balanced regulatory structure.

Aquaculture has been limited to a few species. Recent attempts to farm other popular finfish species are in progress. Great Bay Aquaculture, based in New Hampshire and Maine, is researching and farming Atlantic cod, summer flounder, sea bass and sea bream.¹²¹ Great Bay Aquaculture is currently the only aquaculture company in the United States that raises Atlantic cod.¹²² Australis, one of the largest aquaculture businesses in New England, is the first in the nation to produce barramundi — a high-value Pacific fish.¹²³ At present, however, only salmon is available to the consumer market, and raising other finfish faces several technical challenges. In addition to marine aquaculture, a few inland fish farms in Vermont,¹²⁴ New Hampshire¹²⁵ and Massachusetts¹²⁶ farm trout and other freshwater species for the consumer market.

Despite the success of New England aquaculture operations, the lack of a simple, comprehensive regulatory structure for the industry remains a major barrier to growth.¹²⁷ Currently, several government agencies manage policies and regulations for these commercial operations. Each agency's authority in the realm of aquaculture is often not clearly defined.¹²⁸ Generally, anyone interested in starting an aquaculture business¹²⁹ must consult with, and obtain permits or permission from, the Food and Drug Administration; the Department of Agriculture; the Environmental Protection Agency; the National Oceanic and Atmospheric Administration; the Army Corps of Engineers; and the U.S Fish and Wildlife Service.¹³⁰

Shellfish

The two primary taxonomic orders of shellfish — mollusks and crustaceans — are experiencing very different trajectories within the food system. Coastal harvesting of bivalve mollusks, like clams, has declined significantly from a complicated mix of threats, including: the arrival of invasive species; changes in seawater chemistry that

affect the capacity of these species to make shells; water pollution, such as sewage discharge and nonpoint source runoff into estuaries and bays; and red tide, which refers to paralytic shellfish poisoning and an algae-caused threat to human health. As a result, for many mollusk species, there has been a shift from wild harvesting to aquaculture. However, aquaculture faces many of the same challenges. Additionally, it poses several environmental risks, as noted above.

Conversely, lobster harvests off the Maine coast have increased dramatically due to rising ocean temperature, which has also caused a proliferation of non-native crab species. The invasive crab species appears to be decimating mollusk populations, as the crabs feed on young clams, scallops and other species. The abundance of lobster, particularly in the Gulf of Maine, runs the risk of creating a monoculture very susceptible to outbreaks of shellfish-related diseases. In 2012, this abundance drove down market prices and exceeded the capacity of New England processors. Industry leaders, nonprofit organizations, and policy makers in Maine are meeting to discuss possible actions to countermand the negative impacts of rising ocean temperature and the green crab invasion. At the time of writing, the Maine legislature was considering a bill to study the impacts of ocean acidification on Maine's wild and aquaculture shellfish industries and to recommend actions to protect these important fisheries.

PROCESSING

New England likely has enough capacity to process the numbers of finfish harvested under federally mandated fishing limits.¹³¹ Thus, the number of processors appears to have declined in step with the decline in commercial finfish stock. Some remaining processors have started importing fish from outside the region to stay in business. To adapt to the changing seascape, New England needs to increase its lobster-processing capacity and its capacity to process previously undervalued finfish species.

There are currently fewer than 20 lobster-processing plants operating in Maine, not nearly enough to process the state's lobster harvest.¹³² Annually, Maine ships millions of pounds of lobsters — 35 to 50 percent of the state's annual catch¹³³ — to processing plants in Canada, where it is transformed into frozen products and sold back to retail and foodservice markets in the United States and elsewhere.¹³⁴ Maine's state government is actively promoting increased marketing and in-state processing of Maine

lobsters because the state is losing money to Canada.¹³⁵ More complicated still, the record lobster harvest of the past several years has driven down the prices paid to lobstermen on both sides of the border.¹³⁶ There was such an abundance of Maine lobster during the summer of 2012 that Canadian lobstermen blockaded their own processing plants to prevent deliveries of U.S. lobsters.

Processing previously undervalued finfish species presents a different problem. For example, a facility may have a HACCP plan and staff trained to process cod, which currently are in short supply, but no staff or HACCP plan to process species — like dogfish — that are more abundant but less familiar to consumers. Groups throughout New England are promoting these lesser known fish to institutional markets; restaurants are adding new species to their menus to meet customer demand for fish and to try to increase consumer interest in less-known fish. If these less popular species, such as skate and dogfish, become popular with consumers, processors will need to develop new HACCP plans and train staff to process these thicker-skinned species.¹³⁷

A related issue, identified by participants in the 2013 Food Solutions New England Summit, is that traditional single-species processing has concentrated on high volumes in a few locations that are significant distances from the region's smaller fishing communities. The lack of processing capacity near small landing ports adds transportation costs and diminishes the freshness of fish in many market locations.

AGGREGATION, DISTRIBUTION AND MARKETING

Given the fish-stock crisis in New England, many markets and consumers demand seafood that is certified “sustainable.”¹³⁸ The international nonprofit Marine Stewardship Council offers an eco-label and sustainable fishery certification program.¹³⁹ The Global Aquaculture Alliance, through its Best Aquaculture Practices certification, sets standards for sustainable aquaculture.¹⁴⁰ Developments on the local level include:

- The **Gulf of Maine Research Institute** has developed a Sustainable Seafood Initiative,¹⁴¹ which includes a Responsibly Harvested branding program that identifies Gulf of Maine seafood products that meet traceability and responsible harvest criteria.¹⁴² The institute also collaborates with retailers and Portland-area

restaurants.¹⁴³ As a result of this collaboration, Hannaford Supermarkets has established a sustainability policy that traces each of more than 2,500 products back to their source, down to the precise fishery.¹⁴⁴

- The **New England Aquarium** encourages responsible management of fishery resources and provides support to regional and international fishing communities, industries and organizations.¹⁴⁵ The aquarium also works with supermarket chains and seafood companies to implement sourcing policies and practices to ensure greater environmental accountability throughout their supply chains.¹⁴⁶ Aquarium partners include Stop & Shop, Giant Food stores and Darden Restaurants, which owns and operates Red Lobster, Olive Garden, Longhorn Steakhouse, The Capital Grille, Bahama Breeze and Seasons 52.¹⁴⁷
- The **University of Rhode Island** has a Sustainable Seafood Initiative intended to “provide an independent third-party, objective source of information and research on the sustainable seafood movement, its functioning, and its effectiveness.”¹⁴⁸
- **Roche Brothers Supermarket** announced a new seafood traceability program in October 2012 through which customers can scan a QR, or Quick Response, code for selected species, see a photo of the fishing boat that captured the fish, and get information about the location fished and a description of the gear used.¹⁴⁹ Roche Brothers developed the program in conjunction with their longtime partner, Foley Fish, a seafood processor based in Boston and New Bedford, Mass.¹⁵⁰ Fish destined for Roche Brothers stores are cleaned and filleted exclusively at Foley Fish, and delivered directly to Roche Brothers stores, allowing for an unprecedented level of traceability.¹⁵¹

While farm-to-school programs have been relatively successful in the region, as of this writing there are no parallel “boat-to-school” programs in state or local purchasing systems. But some institutional purchasers, such as hospitals, purchase regionally caught fish. Fostering a more robust market for a variety of local fish species presents distinct, but not insurmountable, challenges.

THE ROLE OF FISHING COMMUNITIES AND WORKING WATERFRONTS

A number of the issues noted above are making it increasingly difficult for smaller, more remote fishing communities

to survive. Throughout New England, efforts are underway to mitigate this, including community-supported fisheries and initiatives by Coastal Enterprises, Inc.

- **Community-supported fisheries** exist throughout New England and are modeled after community supported agriculture programs. For example, one community-supported fishery in Seabrook, N.H., has consumers pay in advance for a guaranteed stream of fish throughout the summer.¹⁵² It is part of a collaborative effort to increase fishermen's ability to market their products locally and increase consumer awareness of the benefits of seafood in their diet.¹⁵³ Partners include New Hampshire Sea Grant, the University of New Hampshire's Cooperative Extension, and the local fishing community
- **Coastal Enterprises, Inc.**, is based in Wiscasset, Maine, and has a Fisheries and Working Waterfront Program that fosters the sustainable development of Maine's fisheries and fishing communities.¹⁵⁴ The organization recently announced the launch of a two-year study with Wholesome Wave to identify the best ways to integrate Maine seafood into the Northeast regional food hub system and make it more widely available to consumers.¹⁵⁵

- Foster innovative approaches to processing, distributing and marketing under-utilized fish species.
- Create a campaign that parallels the success of farm-to-table and farmers' markets programs.
- Advocate for a simplified, streamlined and comprehensive regulatory structure for the aquaculture industry that capitalizes on opportunities, adequately addresses environmental challenges and provides aquaculture businesses sufficient flexibility to grow.

Action

Research and Analysis

- As identified by the breakout session on seafood supply chain at the 2013 New England Food Solutions Summit, determine the viability of smaller-scale and regionally distributed multi-species processing of harvested finfish.
- Examine different types of processing facilities from technical, regulatory and economic perspectives.
- Support efforts to research and find actions to countermand the impacts of ocean acidification, the green crab invasion, stormwater runoff and other human-induced changes to the ocean environment.

Policy Options

- Expand efforts to educate consumers about other species of locally sourced fish available for consumption, and continue policy efforts to market sustainably harvested fish or environmentally sensitive aquaculture seafood.

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Markets

Increased demand for locally sourced food over the past decade among the region's 14 million consumers has generated new market opportunities for farmers and food entrepreneurs, and had a positive impact on farm profitability. A 2010 action plan put together by the region's six state commissioners and secretaries of agriculture, known as the chief agricultural officers, found that direct-to-consumer sales in New England increased 62 percent from 2002 to 2007. These sales, in turn, helped to increase the total market value of agricultural products sold in the region by 30 percent.¹ New England has some of the highest direct sales in the country; Vermont is the national leader in per-capita direct market sales; New Hampshire ranks first in the percentage of farms reporting direct-to-consumer sales; and Connecticut, Massachusetts and Rhode Island rank first, second and third nationally in average direct sales per farm.²

Capturing these new opportunities has required more business planning, new marketing approaches and, in many cases, new infrastructure, both on- and off-farm. The chief agricultural officers noted that each of the six New England states has developed programs to encourage direct marketing and expand sales to schools and other institutions, making the region a national leader in delivering local food and farm products at the retail and institutional levels. The agricultural officers recognized the need for regional-scale approaches to complement these state actions, including strategies around branding and procurement.³ While the demand curve for locally sourced food continues to rise, price sensitivity remains a significant obstacle in increasing market share for local and regional products. Additional challenges include the seasonality of much of the region's food

Highlights

- Research current levels of local and regional food consumption, and the potential for increased consumption, focusing especially on price points for large retail and institutional markets.
- Strengthen state procurement policies in order to drive additional demand for New England-sourced foods at state universities and community colleges, prisons and government buildings. Creating two-tiered state procurement policies, preferring food sourced from within the state and across New England, would recognize the imbalance in supply and demand in many New England states and the economic value to the region in increasing regional demand.
- Help producers comply with the Food Safety Modernization Act and other food safety standards required by retail and institutional buyers in order to maintain and increase production to meet demand.

supply, the relatively small scale of many of the region's producers, and private and public sector food safety and product liability requirements, which affect how and to whom products can be marketed.

Around the region, consumers also do not have equal access to locally and regionally sourced food. Millions of New Englanders suffer from food insecurity and lack access to healthy food. More than 1.9 million people in the region receive Supplemental Nutrition Assistance Program (SNAP) benefits.⁴ Hundreds of communities in the region, from the largest metropolitan areas to the smallest rural towns, are considered food deserts — areas without ready access to fresh and healthy food. Improving access to healthy food for all of the region's consumers is not only an important public health endeavor; it also can help expand markets for local and regional food. New public programs and public-private partnerships have been important in this regard. Still, work is needed to integrate state and federal policy to reduce food insecurity, improve nutritional health and create economic opportunity for the region's farmers and fishermen.

This section examines policies and programs geared toward market development and promotion. It explores public investments in market promotion, including some aimed at expanding food access. This section looks at what is being done and what more is needed to drive demand and better integrate the array of existing programs in order to achieve multiple public policy objectives.

4.1 BRANDING AND MARKET PROMOTION AND DEVELOPMENT PROGRAMS

Introduction

Data shows that consumers' knowledge about the source of their food will often affect their purchasing decisions. In New Hampshire, for instance, a 2009 survey found that 90 percent of adults were more likely to buy farm products from the state over those produced elsewhere.⁵ A 2007 survey of Connecticut consumers found that 72 percent of respondents said it was very or somewhat important that their food be grown in Connecticut, and 45 percent of

respondents said they would pay more for locally grown or produced foods.⁶

All of the states in the region engage in some type of market promotion of state-grown or -produced products. Some have branding programs that differentiate farm and food products grown within their borders, capitalizing on consumer interest in buying locally grown food. Some states invest in and partner with statewide or sub-state "buy local" organizations and campaigns. States may also have marketing standards for specific products, such as Maine's grading standards for potatoes, or farming practices, such as organic. New Hampshire's partnership with the USDA on the National Organic Program is one example of such a standard. Several federal programs provide valuable funding to support state and local market promotion initiatives.

Discussion

STATE AND LOCAL BRANDING PROGRAMS

Five of the six New England states have statewide product branding programs requiring that farm and food businesses meet certain minimum requirements to use the logo; these requirements differ significantly between the programs.

Connecticut

The Connecticut Grown program includes a state-branding program. Foods and farm products using the "CT Grown" logo must be grown in Connecticut, or, for processed foods, 50 percent of the ingredients must come from Connecticut. The brand is enforced by the Department of Agriculture's Bureau of Regulation and Inspection, which conducts random inspections. The logo is available for public download. Despite having existed since 1986, a 2007 study found that 58 percent of respondents had not seen the logo.⁷

Maine

The "Get Real. Get Maine!" branding program promotes food and agricultural products or products made with ingredients that are primarily grown, raised, harvested or processed in Maine. The "Get Real. Get Maine!" logo may be used on a product package, in a farm stand or in marketing materials. Logos are available for download after

filling out an application describing the use of the logo and, for processors, providing a food license number.¹

Massachusetts

The Commonwealth Quality Program, launched in 2010 by the Massachusetts Department of Agricultural Resources, is different from other state branding programs because it combines identification of state-grown agricultural, seafood and forest products with food safety and environmental standards. Only certified businesses can use the Commonwealth Quality logo. Raw products must be 100 percent Massachusetts-grown; processed products must have at least 75 percent of their weight or volume from Massachusetts. To receive the Commonwealth Quality Program approval, producers must either be certified under the GAP standard, adhere to a third-party audit system, or receive GAP training and comply with state food safety best management practices. Producers must also comply with sector-specific, state-set environmental best management practices.⁸ Offering the option to receive Commonwealth Quality certification by receiving GAP training and adhering to the state's best management practices may help reduce costs for smaller producers, given the expense of GAP certification. While the program is still too new to gauge impact, it appears to be a unique state-level branding program that seeks to capitalize on interest in both local and sustainable agriculture.

New Hampshire

Unlike the other state branding programs, New Hampshire Made is a cooperative public-private partnership, organized as a 501(c)(3) organization. The program includes, but is not limited to, local food. It also includes crafts, retailers, services and local attractions. To use the logo, producers must qualify and pay annual dues, which are levied on a sliding scale.⁹

The New Hampshire Department of Agriculture, Markets & Food offers the voluntary New Hampshire Seal of Quality program, which provides superior quality standards for farm products. Producers who subscribe to the program agree to maintain high quality standards verified by periodic visits by Division of Regulatory Services inspectors. Participating producers are permitted to use the New Hampshire Seal of Quality logo design in advertising and on product packaging. The Division of Regulatory Services has developed standards for producers of maple products, apples, cider, eggs, honey and raspberries. Promotional materials including farm signs and stickers

displaying the Seal of Quality logo design are made available to participants at cost.¹⁰

Rhode Island

Rhode Island's "Get Fresh Buy Local" initiative, administered by Farm Fresh RI, includes a logo that can be used by farmers, retailers and distributors. (The initiative is described more fully below.) Preceding this initiative, Rhode Island had a longstanding program, "Rhode Island Grown Take Some Home." Both programs strive to develop a loyal following to purchase locally grown products.¹¹

Vermont

The Vermont Agency of Agriculture operated a Seal of Quality program from 1982 until 2010. A new Made in Vermont branding program is being developed by the Agency of Agriculture, the Agency of Commerce and Community Development, the Department of Tourism and Marketing, and the chief marketing officer, to promote food products, wood products and crafts. If and when it is launched, the Made in Vermont brand will be a self-certification program that requires facilities to be located in Vermont and meet the Vermont Origin rule and other applicable state requirements.¹² The Farm to Plate Network, made up of several state agencies and 300 organizations working to implement the statewide strategic food system plan, is also launching a consumer campaign in 2014 that aims to have 10 percent of the food consumed by Vermonters by 2020 be locally grown or produced.

While state branding programs may help consumers identify locally grown products, studies and anecdotal evidence suggest that these programs may be less valuable in growing demand for local products and increasing farm profitability than national programs or farm-based or sub-state branding programs. A 2006 comparison of state-grown promotion programs found that, in the absence of strong differentiation possibilities, cooperative, regional or national promotion efforts may prove more effective than state-focused product promotion.¹³ Sustained and substantial funding for state branding programs appears necessary for them to be effective: Research from Arizona State University indicates that an investment of \$1 million or more per year is needed to gain consumer awareness and potential advantage of the brand.¹⁴ Research conducted in both Maine and Connecticut confirms this. In those states, consumer awareness of the state logo was relatively low even after several years of promotion.¹⁵

STATE MARKET DEVELOPMENT AND PROMOTION INITIATIVES AND PARTNERSHIPS

In addition to branding programs, states are devoting resources to a number of strategies promoting state-grown and -processed farm products. Chief among these appear to be partnerships with non-profit organizations focused on specific aspects of marketing, such as online product guides. Examples of state initiatives and partnerships include:

Maine

The Department of Agriculture, Conservation and Forestry manages the “Get Real. Get Maine!” website, which features a searchable database of farm products. The department also produces brochures and wholesale buyers’ guides to promote sales of Maine food and farm products.¹⁶ These efforts reflect findings from a 2008 state analysis of Maine’s agricultural creative economy. That study recommended targeted market development programs for Maine food products that build upon word of mouth, one of the most successful promotion methods in the direct-to-retail agricultural sector. Other recommendations included using newer modes of local advertising, such as Web-based farm locator maps, community “buy-local” coupon programs, and community signage to attract more consumers to farm product outlets.¹⁷ The state’s Agricultural Development Grant Program funds activities that will expand existing markets or develop new markets for Maine agricultural products. Grants can also be used to test and demonstrate new technologies related to the production, storage or processing of state agricultural products. Grants may not exceed \$30,000, and, for market promotion, require a one-to-one match.¹⁸

Massachusetts

The Department of Agricultural Resources supports eight regional “buy-local” organizations across the state. For more information about these programs, see the “Buy-local” Organizations section, below.

New Hampshire

The Department of Agriculture, Markets & Food is a founding partner of the New Hampshire Farm to Restaurant Connection, which certifies restaurants that source from local producers. The department is also a founding partner with the New Hampshire Farmers’ Market Association. For many years, the Department of Agriculture, Markets & Food has partnered with the state’s Division of Travel and Tourism Development to promote local agricultural businesses and products through a Buy Local Agriculture

campaign, which uses a central theme and logo: “New Hampshire’s Own, a Product of Yankee Pride.” The campaign relies on a broad mix of advertising media and activities.

Rhode Island

The Division of Agriculture has an annual competitive grant program funded through the USDA Specialty Crops Block Grant Program that aims, in part, at market promotion. Awards during fiscal year 2013 included a grant to the nonprofit organization Farm Fresh Rhode Island to support expansion of Rhode Island Grown’s Get Fresh, Buy Local initiative. In order for vendors to use Get Fresh, Buy Local, 80 percent of what they sell must be grown on their own farm; 100 percent must be sourced from farms in Rhode Island, Massachusetts or Connecticut; and labels must display the farm and state of origin of all products. Another grant went toward the creation of a pilot television series promoting the state’s specialty products.¹⁹ In 2012, the Rhode Island General Assembly passed a bill to encourage the promotion of farm products grown in the state. The bill directs the Department of Environmental Management to promote connections between producers and grocery stores and institutions, as well as to organize events promoting Rhode Island-grown products.²⁰

Vermont

The Agency of Agriculture participates in many promotional councils, including the Vermont Agriculture and Culinary Tourism Council. The council’s “DigInVT” campaign includes a searchable database of the state’s agriculture and culinary experiences that are open to the public.²¹ In addition, Vermont Fresh Network educates consumers about local foods and encourages farmers, food producers and chefs to work directly with each other to build partnerships.

Several states have also created, through state statute, industry-funded promotion programs for specific sectors. Maine, for instance, has the Maine Lobster Advisory Council — which spends \$200,000 yearly on marketing Maine’s sustainably caught lobster in New England²² — as well as the Potato Board and the Blueberry Council. Most New England states have created industry-funded dairy promotion boards. And the Rhode Island Seafood Marketing Collaborative was established in 2011 to address a perceived lack of resources and information needed to support Rhode Island’s local fishermen and small businesses.²³

Each of the New England states also participates in Food Export USA Northeast, a nonprofit created in 1973 as a cooperative effort between 10 Northeastern state agricultural promotion agencies and the USDA's Foreign Agricultural Service. Food Export Northeast promotes the exportation of Northeast food and agricultural products.²⁴

Driven by an interest to expand opportunities for in-state producers, Massachusetts and Connecticut are investing state resources in developing regional markets in their respective state capitals. In 2011, Massachusetts Gov. Deval Patrick signed an executive order establishing a Public Market Commission to define the mission of a public market in downtown Boston, select an operator of the market and monitor the financial health of the market regularly.²⁵ The market is intended to provide Massachusetts' farmers, fish and seafood producers, as well as producers of agricultural and specialty products, with a year-round venue for direct sales, helping to create jobs both at the public market and for producers. It will also give consumers an opportunity to learn about and purchase healthy, sustainably grown and harvested food.²⁶ While the operator is partially responsible for market design and construction, the state is financing some associated infrastructure.²⁷

Connecticut's Hartford Regional Market is a state-owned, statutorily authorized distribution terminal for agricultural products. It covers 32 acres, houses more than 230,000 square feet of warehouse space, contains 144 farmers' market stalls, and is centrally located near the intersection of interstates 84 and 91, along a busy freight railroad line.²⁸ According to the Governor's Council on Agricultural Development, with some thoughtful investments in facility upgrades and renovations, the market presents tremendous opportunity for the development of a vibrant food and green-goods hub to serve institutions state-wide. The state Department of Agriculture is currently working with the state's Department of Construction Services to develop a master plan for the market.²⁹

"BUY-LOCAL" ORGANIZATIONS

Across the region, a number of nonprofit organizations are helping to educate consumers about the benefits of buying locally grown food and locally produced products. Most of these organizations receive some state and/or federal funding, and so are public-private partnerships. Massachusetts has the most robust network of buy-local organizations in the region. Of the eight sub-regional

buy-local groups, one of the most prominent, Community Involved in Sustaining Agriculture (CISA), operates the Be a Local Hero, Buy Locally Grown™ campaign in three western Massachusetts counties. This successful private branding initiative has increased public awareness about local food sourcing at the county level. CISA has honed its marketing approach through the use of market research and studies. Recent market research shows that more than 82 percent of the region's residents recognize the Be a Local Hero logo, and those who recognize the logo are twice as likely to buy products branded as locally grown.³⁰ Member farms report that the brand gives their products immediate recognition and respect as part of a larger, cohesive local campaign.³¹ The CISA branding initiative has caught on due in large part to intensive and effective advertising, made possible through an investment of more than \$1 million since the brand's inception. CISA is funded by both government grants and foundation support.³²

HARVEST NEW ENGLAND

Harvest New England is a cooperative marketing program created in 1992 by the New England state departments of agriculture to support the sale of New England-grown produce through supermarket channels. The Harvest New England logo can be downloaded and used by New England specialty crop growers. The multistate organization sponsors a regionwide biennial direct-marketing conference.³³

Action

Support for Existing Programs

Federal

- USDA's Rural Business Enterprise Grant program has helped start several important state and local marketing initiatives, including two regional dairy cooperatives marketing directly to consumers: Rhode Island's Rhody Fresh and The Farmers Cow in Connecticut. Funding for this program, and other USDA agricultural business programs helping with market development, should be maintained or increased.
- USDA's Specialty Crop Block Grant Program has been a vital source of funding for buy-local and other market development efforts. Both the Senate and House versions of the 2013 farm bills increase mandatory funding for specialty crop block grants to \$70 million per year. Both bills also set aside new funds for multi-state projects.³⁴ USDA's Federal-State Market Improvement

Program is especially important for market development and promotion of crops that are not considered specialty crops, such as livestock and dairy. The program provides matching funds to state departments of agriculture, state agricultural experiment stations and other appropriate state agencies to help explore new market opportunities for food and agricultural products.³⁵ Program funds must be matched one to one.

State

- Continue state investments in targeted market development programs — as identified in the report on Maine’s agricultural creative economy — that build upon word of mouth, which is proven to be one of the most successful promotion methods in the direct-to-retail agricultural sector. Also invest in other modes of local advertising, such as web-based farm locator maps, community “buy-local” coupon programs and community signage to attract more consumers to farm product outlets.³⁶

Research and Analysis

- Several interviewees saw a need for additional market research to better gauge consumer interest in buying local. Price sensitivity is a significant constraint in institutional and large retail markets. Some interviewees felt that scaling up food production in the region will require better evidence of consumer willingness to pay for local and regional foods.
- Branding and promotion programs often lack information about program efficacy. Baseline market research surveys coupled with periodic updates could help state agencies and nonprofit organizations measure the effectiveness of local and regional branding programs.³⁷
- The Massachusetts Commonwealth Quality Program offers an interesting example of combining state brand identification with environmental and food safety standards. An analysis of how this branding program has affected consumer demand could benefit branding programs in Massachusetts and other areas.
- Market research could help determine the potential benefits of an expanded Harvest New England, or other regional branding programs. The work of the New England Dairy Promotion Board may be instructive in this regard.

Policy Options

State Branding Programs

Standards

State branding programs face a number of challenges that may dilute the strength of their brands and diminish consumer recognition. A brand’s strength, for instance, depends in large part on clearly articulated standards and enforcement. Consider the use of public-private partnerships to create, promote and police brand standards. Model legislation articulating these standards may be helpful.

Scope

Programs that include a broader scope of products get the word out more effectively.³⁸ Existing programs are often narrow in scope and do not cover enough agricultural products to help consumers buy local. For instance, the scope of some existing programs could be expanded to include locally crafted products.³⁹ Scope should be carefully assessed, however, so that a program’s resources are not spread too thinly.⁴⁰

Efficacy

State branding programs should track the effectiveness of their campaigns through market research.

Funding

Two interviewees expressed the need for sustained state and/or federal support for branding programs at multiple levels (e.g., state and local). Grants that only fund branding programs for short periods of time are not ideal, since brand recognition depends on consistent, long-term campaigns. Resources are needed to both reinforce and expand the pool of buy-local consumers.⁴¹ Other interviewees suggested requiring more robust marketing and brand promotion strategies for recipients of federal or state micro-financing programs or business planning assistance.

Outreach

Producers may underutilize existing programs. To help remedy this, states may want to consider increasing consumer exposure and recognition of brands through targeted advertising that capitalizes on messaging that is persuasive at the local or regional level and clarifies the brand’s purpose.

Based on a recommendation in Maine’s agricultural creative economy study, states may want to consider

providing targeted word-of-mouth promotion assistance and training for farmers in the local communities where direct farm markets exist.⁴²

Regional Branding and Promotion

Harvest New England offers a potential vehicle for greater promotion of New England-sourced foods to the region's institutions. Collaboration between Harvest New England and Farm to Institution New England may help identify ways that regional foods can be better identified through existing food distribution channels.

Milk and dairy products represent the segment of the food supply that is closest to regional or state-level self-sufficiency. Therefore, New England as a whole and all six states individually would benefit from a greater recognition of the regional nature of the milk supply. Despite the efforts of producer-funded entities such as the New England Dairy & Food Council and the New England Milk Promotion Board, as well as several state dairy promotion organizations, dairy is under-appreciated as a locally and regionally produced food sector.

4.2 PURCHASING AND PROCUREMENT PREFERENCES

Introduction

Federal, state and local purchasing and procurement policies affect the food-buying decisions of federal- and state-owned facilities, including thousands of public schools, colleges and universities in the region. Given the number of meals served by these institutions — the region's public schools alone have over 2 million students — these policies are a potentially significant driver of demand for New England farm and food products. Procurement preferences of all types can be found at various levels of government, from municipal to federal. For example, a unit of government can “prefer” locally sourced food over other food. Procurement preferences are sometimes mandatory, and sometimes enabling — allowing local communities or school districts to prefer locally grown food in their own local contracts and bid systems. This section discusses current federal and state public procurement policies, and how they might be improved to continue driving demand for New England-sourced foods.

Discussion

STATE PURCHASING POLICIES AND PROCUREMENT PREFERENCES

The purchasing authority for each state government in New England is assigned to a single administrative agency that acts on behalf of, or oversees purchases by, all other agencies according to a single set of rules for procurement and contracts. Since each state's requirements are substantively distinct, an agricultural or food purchasing preferred-policy must be tailored to meet the general standard in each state.

Connecticut

Connecticut General Statutes section 4a-51(b) requires the commissioner of administrative services to favor in-state food products: “The Commissioner of Administrative Services, when purchasing or contracting for the purchase of dairy products, poultry, eggs, beef, pork, lamb, farm-raised fish, fruits or vegetables pursuant to subsection (a) of this section, shall give preference to [such products] grown or produced in this state, when such products are comparable in cost to [similar products] being considered for purchase by the commissioner that have not been grown or produced in this state.” The Department of Agriculture internally debated a legislative proposal to allow for a 5 percent larger expenditure for Connecticut-grown products in state procurement language (following the Massachusetts model described below), but chose not to move forward with the proposal because of budget constraints.⁴³

Connecticut recently adopted two important changes to its procurement standards for state agencies and public higher education institutions. Public Act 13-72 requires the commissioner of the Department of Administrative Services to give preference to beef, pork, lamb and farm-raised fish produced or grown in Connecticut if they are comparable in cost to those produced or grown out of state. A previous version of the law required the commissioner to give preference only to Connecticut-grown or -produced dairy products, poultry, eggs, fruits and vegetables.

By law, most public higher education institutions' purchases of goods and services worth more than \$10,000 must be made through competitive bidding. Connecticut's Public Act 13-177 exempts from this requirement purchases of certain agricultural products worth \$50,000 or less. The exemption applies to dairy products, poultry,

farm-raised seafood, beef, pork, lamb, eggs, fruits, vegetables or other farm products. The act additionally requires public higher education institutions to give preference to dairy products, poultry, farm-raised seafood, beef, pork, lamb, eggs, fruits, vegetables or other farm products grown or produced in Connecticut when they are comparable in cost to those grown or produced outside the state. The law, Public Act 13-72, already requires the Department of Administrative Services to give a similar preference.⁴⁴

Maine

Statutory authority regarding agricultural purchasing is found in the 1984 Purchase of Foodstuffs from Maine Concerns Act: “State institutions and school districts in the State shall purchase food produced by Maine farmers or fishermen, provided that food is available in adequate quantity and meets acceptable quality standards, and is priced competitively.”⁴⁵ However, a number of implementation steps in the statute — including establishing a coordinator position in the Bureau of Purchases, an advisory committee representing a number of state agencies, and quality standards — were never taken, and the Maine Department of Agriculture is considering asking the Maine legislature to repeal the statute.⁴⁶

Massachusetts

Massachusetts General Laws, chapter 7, section 23B, directs food procurement for state agencies, colleges and universities. The statute instructs agencies, colleges and universities to prefer products grown in the Commonwealth. The statute also directs these entities to make reasonable efforts to facilitate the purchase of such products. State agencies in particular are permitted to purchase food products grown in Massachusetts over those from other states as long as the price is not more than 10 percent higher than that of the out-of-state product.

Additionally, Executive Order 515 requires state agencies to purchase environmentally preferable products and services, which include “products and services that: contain recycled materials; conserve energy or water; minimize waste; are less toxic and hazardous; reduce the generation, release, or disposal of toxic substances; protect open space; and/or otherwise lessen the impact of such products or services on public health and the environment.”⁴⁷ While untested, it could be argued that this executive order provides a further preference for state-sourced foods, because of the beneficial impacts of local agriculture, among other things, on protecting open space.

New Hampshire

During consideration of a state Farm to Plate initiative in 2013 (Senate Bill 141), the New Hampshire legislature debated inclusion of a local purchasing preference. The legislation is still pending.⁴⁸

Rhode Island

Rhode Island General Laws section 37-2-8 provides: “When foodstuffs of good quality grown or produced in Rhode Island by Rhode Island farmers are available, the purchasing agent is directed to purchase those foodstuffs at the prevailing market prices when any of those foodstuffs are required by the state institutions.”⁴⁹ Because the statute was not widely implemented, in 2012, the Rhode Island General Assembly enacted legislation creating an Interagency Food and Nutrition Policy Advisory Council, made up of leaders of the departments of Health, Environmental Management, and Administration.⁵⁰ The council is responsible for identifying and addressing regulatory and policy barriers to developing a strong sustainable food economy and healthful nutrition practices. One of the council’s first projects was to determine how much the state spends on food procurement. This figure — \$10 million — served as a good springboard for the council to take action to facilitate directing that money toward local food procurement. A subcommittee has been crafting potential changes to the state procurement policy before the next cycle for state food purchasing.⁵¹

Vermont

In 2007, Vermont directed state agencies to “develop a system of local food and dairy purchasing within state government and government-sponsored entities.”⁵² The Vermont Farm to Plate Strategic Plan, released in January 2011, included a recommendation to enforce the existing statute, since there is as yet no infrastructure or policy mechanism in place to do so.⁵³ Additionally, 29 Vermont Statutes Annotated section 903 requires the state commissioner of buildings and general services to consider life cycle, transportation costs and the minimization of solid waste and pollutants in any purchasing decision. This policy may provide an additional mechanism for preferring foods sourced from within the state or the region, similar to the Massachusetts executive order discussed above. Further analysis of this approach is needed.

ENABLING LOCAL PROCUREMENT PREFERENCES

Across the region, food-buying decisions for K-12 public schools are made by the individual school, the local school district or a combination of the two. K-12 public schools may receive both financial assistance and food products from the federal government through several programs, including the National School Lunch Program, the National School Breakfast Program and the USDA Foods Program. The level of assistance depends on the number of children participating in school nutrition programs, and those eligible under federal guidelines for free or reduced-price meals. Most school food service programs must be self-supporting, meaning they must balance their budgets with the financial assistance and food they receive from the USDA and with any additional revenue they generate from school food sales.

The 2008 Farm Bill included a provision directing the U.S. Secretary of Agriculture to encourage institutions operating federal Child Nutrition Programs, including schools participating in the school lunch and breakfast programs, to purchase “unprocessed locally grown and locally raised agricultural products.”⁵⁴ This provision allows institutions to apply an optional geographic preference in the procurement of fresh or lightly processed (frozen, cut, ground, etc.) agricultural products. This preference option applies to all of the federal Child Nutrition Programs that provide meals and snacks, including the National School Lunch and School Breakfast programs, which alone account for nearly \$400 million annually in the region.⁵⁵ According to some interviewees and reviewers, this farm bill provision is important in giving the region’s schools the formal authority to buy locally.⁵⁶

The federal geographic preference may be expressed as a percentage — such as a 10 percent price preference — or points (such as an additional 10 points in the overall scoring criteria used to evaluate bids). There is no maximum preference percentage or points, but the preference must leave an appropriate number of qualified firms to compete for the contract.⁵⁷ The USDA does not define the geographic area of “local”; this decision is left to the school purchasing agent.⁵⁸ For purchases of less than \$150,000, schools are not required by the federal government to go through the formal bid process.⁵⁹ Even for bids below this threshold, however, schools must solicit more than one bid. Additionally, a state or school district may set a lower threshold than the \$150,000 imposed by the USDA

for formal bids. School purchases under the USDA Foods Program, the Fresh Fruit and Vegetable Program, and the Department of Defense Fresh Program are treated differently. For more information about these three programs, see the Institutional Markets section, below.

Massachusetts is the only state in the region with statutory language that enables municipalities to prefer local food. Massachusetts General Laws, chapter 30B, section 20, allows any governmental body in Massachusetts to elect to use a percent price preference for in-state products, as long as the preference is advertised and is no more than 10 percent above the price of comparable out-of-state products. The preference must be adopted by majority vote of a governmental body.⁶⁰ For individual purchases less than \$25,000, the language also enables a procurement officer for any local government, including school districts, to purchase local agricultural products directly from Massachusetts farm businesses without seeking quotes required under the normal bidding process. This preference has been adopted by a number of towns around the state.⁶¹ This statutory language may be in conflict with the USDA Food and Nutrition Service bid requirements outlined above.

Recently, a number of organizations have voiced concern about whether an international trade agreement currently being negotiated by the U.S. Trade Representative could impact continued use of state and local food procurement preferences. According to the Institute for Agriculture and Trade Policy, American and European Union negotiators to the Transatlantic Trade and Investment Partnership (TTIP) are considering language that may limit or prohibit federal, state and even local government procurement preferences, considering these preferences as “localization” barriers to trade.⁶²

Action

Research and Analysis,

- An analysis of each state’s procurement and purchasing policies could help policymakers and advocates evaluate and strengthen their policies as related to food and agricultural products from the state. In its analysis of the Massachusetts statute, the Harvard Food Law and Policy Clinic suggested considering whether:
 - » The policies are mandatory or optional;
 - » The statute sets out rules to enforce the preference or leaves this task to state agencies;

- » There is an enforcement mechanism;
- » The policies include state colleges and universities or only state agencies; and
- » The language makes it explicit that food service management companies operating at state institutions are subject to the statute.⁶³
- In 2013, the USDA published its first Farm to School Census, aimed at establishing a national baseline of farm to school activities at K-12 public schools.⁶⁴ One of the questions in the census asked respondents to indicate the percentage of food expenditures that went toward locally produced food, including fluid milk. Available census data provides some insights about the extent of local procurement by school districts. State policymakers and advocates around the region have an opportunity to work with the USDA's Food and Nutrition Service to increase the response rate and quality of information gathered through the next census, in 2015.⁶⁵
- Evaluate whether state procurement preferences for environmentally preferable products can and/or should be used to support procurement of in-state or New England-sourced food.
- Develop a tiered regional procurement preference that could be adopted by each of the six New England states, where in-state food products receive the highest preference, regional food products receive a lesser preference, and out-of-region food products receive no preference.⁶⁶ Further research is needed on the constitutionality of such preferences to avoid running afoul of the dormant part of the U.S. Constitution's Commerce Clause.⁶⁷
- Explore the use of rebates or so-called volume-discount practices, which are widespread in the food management industry and appear to be a barrier to institutions sourcing more local and regional food. Under these arrangements, food management companies receive rebates from vendors and distributors in exchange for purchasing a certain amount from a particular company. This practice incentivizes the use of large, typically national, vendors and distributors, as purchasing a high percentage of food from the prime vendor leads to more rebates.⁶⁸

Policy Options

- The Harvard Food Law and Policy Clinic describes tiers of procurement policy types:⁶⁹
 - » Those that give in-state products a “tie goes to local” preference: If all other factors— including quality, quantity and cost — are equal, the state entity will purchase the local product.
 - » Those that go one step further than the “tie goes to local” laws, requiring a comparison of the bid price when in-state bidders are competing against out-of-state vendors. These policies either provide a differential cost preference to in-state bidders by a set percentage and/or increase the bid price of out-of-state bidders by a set percentage.
 - » An alternative procurement mechanism could be a statutory target requiring state agencies, colleges and universities to purchase a certain percentage of their food from local sources, without specifying the means by which they need to reach those targets. This type of preference has been adopted by a number of states, including Illinois. According to the Harvard clinic, this alternative has the advantage of explicitly including food management companies, which may otherwise assert that the preference is not applicable to a private company.
- Consider strengthening state procurement statutes and policies to:
 - » Go beyond the “tie goes to local” preference to include a differential cost preference for in-state foods, or to create a statutory local food target;
 - » Expressly include state colleges and universities, as well as state prisons, where they are not already included;
 - » Clarify where not included now that any preference applies to any entity procuring food for a state institution, including distributors and food management companies;
 - » Have an agency, organization or university create a method to track purchases of local food where those purchases are not already tracked, in order to measure the impact of and compliance with state regulations; and
 - » Allow the purchase of local agricultural products directly from farm businesses without seeking quotes through the normal bidding process, as long as the purchases are worth less than \$25,000 each, for example. States could establish this kind of small purchase threshold for state money spent on school breakfast, lunch and snack programs.
- Encourage state agencies, prisons, colleges and universities to split contracts between local, regional and

nonlocal foods to accommodate local growers. Most state entities use one contract to procure all of their food, a practice that precludes local producers from successfully bidding on the contracts because certain food products cannot be sourced locally.

- Consider adopting a regional procurement preference by all six New England states. For more information about regional procurement preferences, see the above Research and Analysis section.
- Consider what role state government can play in educating students about diet and nutrition. Such education could include a focus on the climate implications of current diets and on what crops and foods can lead us into the next century, based on resource limitations and human health needs.⁷⁰
- Urge the U.S. Trade Representative and Members of Congress to reject procurement commitments in international trade agreements that would limit the ability of state and local governments to institute local and regional food procurement preferences.

4.3 RETAIL MARKETS

Introduction

New England consumers shop at farm stands, farmers' markets and participate in CSA programs because of taste and to support their local farms and farmers. A recent market analysis study commissioned by the Rhode Island Agricultural Partnership found that 99 percent of respondents believed that the food purchased at farm stands and farmers' markets is "fresher and tastes better than food purchased at grocery stores" (76 percent felt that this was strongly the case). The same study showed that 97 percent of respondents come to farm stands and farmers' markets to support local farmers.⁷¹

The growth of direct-to-consumer marketing through farmers' markets, farm stands and CSA farms has led to new and revised state and municipal policies, largely around food safety. These policies are often difficult for farmers to navigate; state and local authority may overlap and be inconsistent, and municipal regulations may differ from town to town. Several interviewees discussed the need for regulatory reform in this area, reducing the number of inconsistent state and local regulations

affecting the sale of local farm and food products directly to consumers.

Direct retail marketing is also expanding consumer access to healthy food.⁷² Farmers' markets have been established in many of the region's food deserts, and nutrition incentives are helping to stretch low-income consumers' buying power at these markets. Electronic benefit transfer (EBT) machines are making it possible for recipients of federal and state nutrition programs to use their benefits at farmers' markets, farm stands and mobile produce trucks. Federal, state and, in some cases, municipal funding has been critical to these efforts; additional federal policy changes could have an even greater impact in this regard.

The vast majority of food that consumers buy to prepare at home continues to come from the region's grocery stores.⁷³ The Vermont Farm to Plate Strategic Plan notes that "the business model of supermarkets, warehouse clubs, and supercenters requires low pricing, scale, standardization, and fees to gain access to shelf space. All of these criteria work against the capabilities and interests of small farmers and processors."⁷⁴ The Rhode Island Agricultural Partnership market survey, however, found that consumers have a lower level of satisfaction with the quality of food purchased at chain supermarkets than at farm stands and farmers' markets: 71 percent of respondents ranked their satisfaction with supermarket food in the range of 8 to 10, whereas 93 percent ranked their satisfaction with food from farm stands and farmers' markets in that range.⁷⁵ Traditional supermarkets have also been losing market share to stores that focus on local, fresh, natural and organic foods. A recent annual survey of Vermont grocers found that 38 percent of respondents indicated they had increased the amount of shelf space devoted to local food over the last five years.

Continuing to encourage direct-to-consumer sales is important for farm profitability. According to the USDA's Economic Research Service, farmers received only 14.1 cents of every dollar spent on food in 2010, while everything else — including processing, distribution and retailing—accounted for 85.9 cents. The farmer's share decreased 50 percent from 1993 to 2010.⁷⁶ Exploring how farmers in the region can offer more prepared foods will also be important, as Americans now spend nearly half of their food dollars on food prepared away from home.⁷⁷

Discussion

STATE DEFINITIONS OF “LOCAL”

Many states in the region define the terms “local” and “native” for use in farm product marketing:

- In Connecticut, farm products produced in the state or within a 10-mile radius of the point of sale may be advertised as native, native-grown, local or locally grown.⁷⁸
- In Maine, farm produce labeled as native, native-grown or locally grown must be grown in Maine.⁷⁹
- New Hampshire statutes require that any product labeled as native, local, locally grown or “our own” must be grown or produced within the state.⁸⁰
- According to Vermont statutes, local and locally grown can refer to any product originating in Vermont or within 30 miles of the place where it is sold.⁸¹ The Farm to Plate Strategic Plan defines local as a product originating in Vermont plus 30 miles from the state border.

FARMERS’ MARKETS AND FARM STANDS

Around the region, farmers’ markets continue to grow in popularity. According to the USDA’s Agricultural Marketing Service, the number of markets in the Northeast increased by nearly 15 percent in 2012.⁸² In Vermont, the number of farmers’ markets more than doubled in a ten-year period, from 2,756 in 1998 to 7,175 in 2011.⁸³

Convenience and product selection are important factors for consumers when purchasing from farmers’ markets. The Rhode Island Agricultural Partnership survey found that consumers perceive farm stands’ and farmers’ markets’ locations, hours of operation, and diversity of products as constraints.⁸⁴ Respondents said these convenience issues, rather than higher prices, are what keep them from shopping more frequently at farmers’ markets and farm stands.⁸⁵

States across the region have recognized the importance of farmers’ markets and retail farm stands and have created programs to support both, through marketing campaigns, guides for farm market managers and financial support. While advocates have worked with state officials to revise local and state regulations to better support these direct-to-consumer outlets, there are still some barriers that hinder growth in these retail markets.

DEFINITIONS AND CRITERIA: FARMERS’ MARKETS

Individual farmers’ markets vary widely in their rules, including restrictions on the origin of products and the sale of products not grown by the farmer vendor. Markets that require a high percentage — in some cases 100 percent — of products sold there to be raised or processed on the vendor’s farm are seen by many farmers as overly restrictive. Many farms rely on other farms to augment their product offerings. Especially in lower-volume markets, allowing a farm vendor to bring a wider variety of products enhances product availability for consumers and the viability of that market or the vendor. Additionally, farms increasingly look to farms in nearby towns, counties or states to supplement their own crops when they do not have sufficient product, either because of a late or poor harvest or increased customer demand. Allowing this flexibility is extremely important to farmers and appears to be important to consumers.

States in the region have generally not preempted local market rules, but some have statutorily defined farmers’ markets and established some criteria:

- Connecticut statutes define a “certified farmers’ market” as one that has two or more farmers selling Connecticut-grown fresh, non-processed fruits and vegetables. Certified farmers’ markets may be either “producer only” or “exempt.” Producer only markets are markets where farmers bring only what they produce. In exempt markets, farmers may purchase products from another Connecticut farmer and resell them to meet demand, or provide a product they do not grow. At exempt markets, the farmers must be in agreement about these conditions, fill out an application and return it to the Connecticut Department of Agriculture prior to the start of the market.⁸⁶ Although markets are not required to be certified, only those that are certified are able to participate in Department of Agriculture programs, including the state farmers’ market brochure and Farmers’ Market Nutrition Program. Certified markets provide participating farmers the use of the farmers’ kiosk designation. This designation allows exempt items, such as jams, jellies and acidified foods, to be sold at certified farmers’ markets. Without this designation, off-farm sales of these products are prohibited.⁸⁷

- Maine statutes define a farmers' market as two or more farmers directly selling farm and food products to consumers. At least 75 percent of the products offered by a farmer must be "grown or processed by that person or under that person's direction." Any product not grown or processed by the farmer must be directly purchased from another farmer, and the name and location of the farm must be identified on the product or on a sign in close proximity to the displayed product.⁸⁸
- Massachusetts policy states that a market must have farmers primarily selling products grown, produced or raised by the farmers; there is no required percentage of product that must be grown by the farm seller.⁸⁹
- New Hampshire defines a farmers' market as two or more vendors selling commodities that must include, but are not limited to, agricultural products.⁹⁰
- Rhode Island defines a farmers' market as a place where two or more farmers are "selling produce exclusively grown on their own farms on a retail basis to consumers."⁹¹ Farmers who want to participate in the markets administered by the Rhode Island Division of Agriculture must follow rules stating that all products must be grown in the state, and vendors must identify any produce they are selling that they did not grow themselves.⁹²
- For the purposes of the Vermont Farmers' Market Association, a farmers' market is defined in statutes as an event at which two or more vendors of agricultural products sell their agricultural products to the public.⁹³

DEFINITION AND CRITERIA: FARM STANDS AND STORES

How a farm stand or store is defined in state law or through municipal regulations affects the type of food and farm products that a farm business can offer in these venues. In turn, this affects farm profitability. Some states define retail farm stands and farm stores in their state zoning statutes. Where state law has not preempted local zoning in this area, municipalities can and often do impose both physical and marketing limits on farm stands and stores in ways that distinguish them from purely commercial retail establishments. As farm businesses have developed farm stands and farm stores into venues with more offerings, such as prepared foods, the line between agricultural and commercial has become increasingly blurred.

New Hampshire law declares, "A farm roadside stand shall remain an agricultural operation and not be considered

commercial, provided that at least 35 percent of the product sales in dollar volume is attributable to products produced on the farm or farms of the stand owner."⁹⁴ Some municipal ordinances require a higher percentage of products sold be produced from the farm to qualify as a farm stand.

In Massachusetts, the state's zoning statute includes an agricultural exemption, ensuring that towns do not unreasonably regulate commercial agriculture. Under that exemption, a retail stand located on a farm is exempt from local zoning requirements if at least 25 percent of the products offered are produced from the farm and at least 50 percent are from Massachusetts.⁹⁵ In both Connecticut and Rhode Island, where no similar state standard exists, agriculture advocates have developed and encouraged towns to adopt specific standards around farm stands and stores, with mixed results.⁹⁶

NUTRITION PROGRAMS AND INCENTIVES AT FARMERS' MARKETS, FARM STANDS AND COMMUNITY SUPPORTED AGRICULTURE FARMS

Two important federal nutrition programs enable and encourage participants to use their benefits to purchase local food, primarily fruits and vegetables, at retail venues such as farmers' markets, farm stands and CSA farms. Both of these programs are run in conjunction with state agencies. In Connecticut and Massachusetts, they are connected to the departments of agriculture; in Maine and Rhode Island, with the departments of health and human services; and in Vermont, with the Department for Children and Families.⁹⁷ These programs are:

Women, Infants and Children Farmers' Market Nutrition Program

The Women, Infants and Children (WIC) Farmers' Market Nutrition Program (FMNP) enables WIC recipients to spend their benefits on fresh, locally grown fruits, vegetables and herbs. State agencies can limit sales to specific foods grown within their state to encourage FMNP recipients to support local farmers. The FMNP benefit level must be at least \$10 and cannot be more than \$30 per year, per recipient. However, state agencies may supplement the federal benefit level with state, local or private funds. Federal funds support 100 percent of the food costs and up to 70 percent of the costs of administering the program. States must contribute at least 30 percent of the administrative costs. WIC recipients get coupons that

may be redeemed at farmers' markets or farm stands, but not at CSA farms. New Hampshire is the only state in the region that has discontinued participation in this program. In fiscal year 2012, \$16.5 million was appropriated nationally for the Farmers' Market Nutrition Program.⁹⁸

Senior Farmers' Market Nutrition Program

The Senior Farmers' Market Nutrition Program (SFMNP) awards grants to states to provide low-income seniors with coupons that can be exchanged for eligible foods, including fruits, vegetables, honey and fresh-cut herbs, at farmers' markets, roadside stands and CSAs. Generally, the federal benefit level must be at least \$20 per year, but not more than \$50 per year, regardless of whether it is for an individual or household. Certain state agencies, however, were grandfathered into the program using a different benefit level. State agencies may also supplement the federal benefit level with state, local or private funds. All New England states participate in this program. The 2008 Farm Bill provided \$20.6 million annually for the program.⁹⁹

Redemption rates are typically higher for the SFMNP than for the WIC Farmers' Market Nutrition Program.¹⁰⁰ According to state Division of Agriculture Chief Ken Ayars, this is certainly true in Rhode Island, where the 2013 SFMNP redemption rate was 81 percent. Chief Ayars credits, in part, a state-funded traveling farmers' market that visited 14 senior meal sites, making it convenient for seniors to redeem their coupons.¹⁰¹

While the USDA's Community Food Projects Competitive Grants Program is not a nutrition incentive program, it has provided funding to private nonprofit entities in need of a one-time infusion of federal assistance for multipurpose community food projects aimed, in part, at expanding food access.¹⁰² About \$5 million per year was authorized for the program in the 2008 Farm Bill. One example of the type of projects funded by this program is the Franklin County Community Development Corporation in Massachusetts. In 2012, it received a three-year, \$294,000 grant to partner with Greenfield Community College, Just Roots community farm and the regional employment board to provide more farm-based internship opportunities for students and more fresh and processed food for both local schools and food pantries.¹⁰³

ELECTRONIC BENEFIT TRANSFER TECHNOLOGY

In the past few years, significant state and federal resources have been devoted to increase the use of EBT machines at farmers' markets and farm stands. EBT machines allow SNAP beneficiaries to use their benefits toward purchases at farmers' markets and farm stands. Both House and Senate versions of the next farm bill would also allow the use of EBT to prepay shares in CSA farms, allowing SNAP beneficiaries to participate in CSA programs for the first time.

In each of the New England states, a Double Value Coupon Program is leveraging additional state, local and private dollars to stretch the purchasing power of consumers eligible for FMNP, SFMNP and SNAP. These programs, pioneered by the nonprofit organization Wholesome Wave, are run in conjunction with local partners in 26 states and at more than 300 venues. The Double Value Coupon Program gives participants an incentive to spend their federal nutrition benefits on fresh, locally grown, healthy food.¹⁰⁴ These nutrition incentive programs have had a positive impact both on nutritional health and farm viability. In 2012, more than 40,000 Double Value Coupon Program participants generated \$2.4 million in revenue, with 90 percent of participants indicating that they had increased or greatly increased their consumption of fresh fruits and vegetables.¹⁰⁵ Federal benefits and Double Value Coupon Program sales accounted for 27 percent of the total market sales of the 3,200 participating farmers. Importantly, 12 percent of participating farmers increased production or acreage to meet this demand.¹⁰⁶

LARGE RETAIL

Outside of food safety requirements, public policy has traditionally played little role in how local and regional food flows through the region's grocery chains and stores. Public investments have helped some farmer cooperatives develop branded products and marketing campaigns that have led to expanded supermarket sales. Other public investments have helped cooperatives build or improve aggregation and distribution infrastructure needed to meet supermarket volume and delivery requirements. Federal funding for this purpose has come through Rural Business Enterprise Grants, Rural Business Opportunity Grants, Value-Added Producer Grants, Business and Industry Guaranteed Loans, and the Specialty Crop Block Grant Program.¹⁰⁷ Maine's Agricultural Marketing Loan Fund and Vermont's Working Lands Enterprise Fund are state-level examples of programs helping farmers meet

the challenges of scaling up to meet large retail and wholesale markets.¹⁰⁸

In 2010, the Obama administration created a federal Healthy Food Financing Initiative to promote a range of interventions to expand access to nutritious foods. One such intervention was to develop and equip grocery stores and other small businesses and retailers to sell healthy food in food deserts. The initiative has funded many projects in the region, including a grant to the Madison Park Development Corporation, which will develop a full-sized supermarket in the Roxbury neighborhood in Boston, Mass.¹⁰⁹

Similar funding is being proposed at the state level in Massachusetts to leverage Healthy Food Financing Initiative dollars. Legislation based on the recommendations of a statewide Grocery Access Task Force would authorize community development financial institutions to develop and implement flexible financing programs, including loans, grants and technical assistance to support the development, renovation and expansion of food stores, farmers' markets and other retailers selling healthy food in underserved communities.¹¹⁰ According to the Massachusetts Public Health Association, the program authorized by the bill would be flexible enough to address community-specific needs, such as building a supermarket in a community where none currently exists; renovating a corner store to allow for storage and display of fruits and vegetables; promoting a farmers' market serving seniors; and developing mobile markets.¹¹¹ This legislation would appear to enable, though not prioritize, projects aimed at expanding access to foods sourced from the region.

FOOD SAFETY AND RETAIL SALES

States and municipalities around the region take different approaches in the regulation of farm and food products sold at farmers' markets, farm stands and other retail venues. There has been little regulation to date around the sale of fresh produce, but this will change under the federal Food Safety Modernization Act. (For more information about the Food Safety Modernization Act, see Produce, section 3.1, chapter 3.) The retail sale of milk and dairy products, meat, seafood, poultry, eggs and processed foods are typically regulated already. Below are some of the state statutes and regulations that govern the sale of foods at farmers' markets, farm stands and farm stores.

Processed Farm and Food Products

- In Connecticut and Massachusetts, local health departments or boards of health are responsible for licensing and inspecting any establishment that prepares food — including goods prepared in farm home kitchens — for sale to the public. As a result, regulations and enforcement are not consistent and vary across both states. Farmers have voiced concern that some local regulations are too restrictive. In 2011, legislators in Connecticut took a first step to address the perceived burden on farmers working with various and sometimes inconsistent local boards of health. Legislation (Public Act 11-191) eased the permit process for farmers who sell at multiple markets in various municipalities. The revision makes a farmer's permit or license to operate a food service establishment portable from one health district to any other in the state¹¹²
- The sale of processed foods is regulated at the state level in Maine, Rhode Island and Vermont. In Maine, the Department of Agriculture issues permits that may be needed for baked goods as well as for pickles, jams, salsa and other acidified food. The agency determines if these items may be processed in a home kitchen or whether the producer needs a commercial processing license. The agency also issues the mobile vendor license to sell from farmers' markets.¹¹³ Departments of health have this authority in Rhode Island and Vermont.
- In New Hampshire, there is mixed regulation. Sixteen cities and towns are self-regulating municipalities with local health officers who set regulations governing the sale of processed foods and license any retail food establishments, including farmers' markets.¹¹⁴ The processing and sale of these foods in all other municipalities in the state is regulated by the New Hampshire Department of Health and Human Services. Under these state regulations, the processing and sale of products from a home kitchen does not require a license for certain baked goods, pies, jams and jellies if that producer's annual gross sales are less than \$10,000.

Dairy products, meat, poultry and eggs

- Dairy products, meat, poultry and eggs are typically allowed to be sold at farmers' markets. Each state defines what it permits differently:
 - » Statutes in Connecticut allow for the sale of a range of farm products — including meat, milk and cheese — at “certified farmers' markets.”¹¹⁵

- » Under Maine statutes, any “farm and food products,” which include any agricultural product such as “fruits, vegetables, eggs, dairy products, meat and meat products, poultry and poultry products,”¹¹⁶ are allowed to be sold at farmers’ markets.
- » Massachusetts allows the sale of farm products, including eggs, dairy products, meat and poultry.¹¹⁷
- » In New Hampshire, statutes allow the sale of agricultural products including eggs, dairy products, meat and poultry.¹¹⁸
- » Rhode Island also allows the sale of eggs, dairy products, meat and poultry.¹¹⁹
- » Under Vermont statutes, sales of agricultural products, including dairy, livestock, and poultry, are allowed at farmers’ markets.¹²⁰

LOCAL FOOD SOVEREIGNTY

Several municipalities in Maine have enacted food sovereignty bylaws. For example, the town of Blue Hill passed the Local Food and Community Self-Governance Ordinance of 2011.¹²¹ The goal of such bylaws is to enhance a community’s production of, and access to, locally grown food. Among other things, these bylaws often exempt local food producers and processors from licensure and inspection requirements. The efficacy of such laws, however, is uncertain. A farmer in Blue Hill tried to use that town’s ordinance to sell raw milk without a Maine state license. A Superior Court ruled that, even if the local ordinance applies to raw milk sales, state law requiring licensure of raw milk dairies preempts it.¹²² More test cases will likely come before the courts.

Action

Support for Existing Programs

Federal

- The USDA’s Farmers Market Promotion Program helps communities support local food systems through direct marketing. This includes farmers’ markets, roadside stands, community supported agriculture, agritourism and other direct-to-consumer marketing opportunities. The program funded nine different projects in New England in 2012, many of which expanded EBT use at farmers’ markets. With the expiration of the 2008 Farm Bill, the Farmers Market Promotion Program is without authorization or funding as of this writing, in early 2014. Under the pending Senate and House farm bills, the Farmers Market Promotion Program would be renamed the Farmers Market

and Local Food Promotion Program and would be expanded to include local food sales to retailers and institutions.

State

- The Rhode Island Agricultural Partnership market survey found that convenience is more of a factor than price for consumers with regards to farmers’ markets. Accordingly, states should continue to support the promotion and development of farmers’ markets, with a special eye toward enhancing location, hours of operation and diversity of products. Mobile markets appear to be important to improving consumer access.
- Continue support for state programs that are helping farmers with the business plans and infrastructure needed to develop retail opportunities.
- Where they are not doing so now, states should consider providing additional funding for Double Value Coupon Programs, since these initiatives have a positive impact on both nutritional health and the economic viability of local farms.

Research and Analysis

- Explore using forward contracting and supply agreements — which offer growers greater price certainty — with retail and institutional buyers to see if these instruments spur additional production, especially of fruits and vegetables.

Policy Options

- While uniform food safety and health regulations around farm retail opportunities would be valuable for farmers, such a goal may be difficult to achieve in states with a history of local control of these issues. A bill in Massachusetts offers a compromise to help ensure that municipal health regulations governing agriculture are written with an understanding of agriculture. House Bill 754 creates a system by which municipal board of health regulations affecting agriculture are submitted for review and approval by a municipal agricultural commission. In communities without a local agricultural commission, the state Department of Agricultural Resources, under the guidance of an advisory committee of public health and agriculture experts from the private and public sectors, would serve this role. A hearing on the bill was scheduled for June 2013, but no further action has been taken.

- Uniform state zoning standards for farm stands and farm stores, or model regulations for towns, could help municipalities that do not have the capacity to pay for professional planners.
- The federal Healthy Food Financing Initiative and similar state financing programs, such as proposed in Senate Bill 380 in Massachusetts, should give priority to projects that offer a double bottom line of expanding access to healthy food for underserved communities and expanding market opportunities to farmers in the state or the region. Consider the relevance of benefit corporation legislation as well.
- The Senate version of the 2013 federal Farm Bill provides a significant expansion of federal nutrition incentives, creating Hunger-Free Communities incentive grants through the existing Hunger-Free Communities Program. This incentive program would provide an average of \$20 million annually over the next five years to increase SNAP participants' purchase of fruits and vegetables at direct-to-consumer markets. Organizations carrying out the program must secure matching funds, as the federal share cannot exceed 50 percent of the cost of carrying out the activity. Priority will be given to projects that:
 - » Maximize the share of funds used for direct incentives to participants;
 - » Use direct-to-consumer sales marketing;
 - » Demonstrate a track record of designing and implementing successful nutrition incentive programs that connect low-income consumers and agricultural producers;
 - » Provide locally or regionally produced fruits and vegetables; and
 - » Are located in underserved communities.
- The House version of the current farm bill provides far less funding for nutrition incentives — \$5 million — within the Community Food Projects program.¹²³
- The Senate version of the federal farm bill reauthorizes the Senior Farmers' Market Nutrition Program and continues mandatory funding of \$20.6 million annually. (The Farmers' Market Nutrition Program is authorized under separate legislation.) The House version essentially melds the two programs, which is likely to result in reduced funding overall. States that currently are not participating in the Farmers' Market Nutrition Program should be encouraged to participate.
- States not already doing so should consider allowing the use of WIC cash value vouchers at farmers'

markets. Doing so would allow WIC participants to spend any of their fruit and vegetable allotment each month at farmers' markets instead of only at retail stores. The WIC cash value voucher is a monthly benefit and is available to all WIC participants in all states.

4.4 INSTITUTIONAL MARKETS

Introduction

New England's institutions — including colleges, universities, public and private schools, day care and health centers, assisted living facilities, hospitals, prisons and government and corporate dining facilities — purchase more than \$2 billion in food annually.¹²⁴ Increasing the percent of locally and regionally grown food purchased by these institutions could have a significant economic impact on New England. Data produced by food system analyst Ken Meter shows that a 20 percent increase in the local food served in New England's public schools could return an additional \$30 million to the region's farm economy.¹²⁵ The Northeast Organic Farming Association of Vermont's recent institutional purchasing study identified more than \$11 million in spending that could be replaced with local fruits, vegetables and eggs.¹²⁶

Across the region, many institutions have made significant strides in sourcing food locally. The University of Massachusetts Amherst, for example, sources more than 28 percent of its produce locally and has been increasing its percentage every year.¹²⁷ According to the dining service staff, sourcing food locally and making its menu more innovative and seasonal has helped the university improve the profitability of its dining service by increasing the number of meal plans sold. The university currently sells 16,075 meal plans even though only 12,000 students live on campus, meaning that 4,075 off-campus and commuter students now purchase meal plans.¹²⁸ USDA's recent Farm to School Census shows a growing number of public schools sourcing food locally. One of them, Vermont's Burlington Supervisory School District, spends 35 percent of its budget on local food.¹²⁹

Still, significant barriers to expanding institutional markets in the region remain. Among those identified by interviewees, the Vermont Farm to Plate Plan and the Harvard Food

Law and Policy Clinic study of Massachusetts' public colleges and universities, include:

- Quantity and seasonality of local and regional food production;
- Buyer requirements for producer food safety certification and product liability insurance;
- Lack of transparency in the food distribution system;
- Actual and perceived cost of locally and regionally grown food; and
- Rebate practices of large, typically national food vendors and distributors, incentivizing food management companies to source a high percentage of food from these vendors and distributors.

While some barriers, such as seasonality, may always exist, state and federal policy shifts are beginning to have an impact on others. More will be needed, though, to scale up local and regional food consumption in institutional settings around the region.

Discussion

FARM TO SCHOOL PROGRAMS

State Programs

Around the region, state farm to school efforts differ in type, programming and degree of state support:

Connecticut

Connecticut has the only farm to school program in the region administered by a state agency. The program was authorized by statute in 2006 and is administered by the Department of Agriculture in collaboration with the Department of Education. It is focused both on developing new markets for local farms and offering fresher, local produce for school lunch programs.¹³⁰

Maine

Maine has a network of organizations that provide farm to school assistance and resources. The state departments of Agriculture and Education provide support to these groups and also helped launch a statewide farm to school e-mail Listserv¹³¹ A compilation of Maine farm to school resources, including information on sourcing, preparing and teaching about local foods is available on the Maine Organic Farmers and Gardeners Association website.

Massachusetts

The Massachusetts Farm to School Project is a non-profit organization that receives some support from the state Department of Agricultural Resources. The project has been matching up schools and farmers since 2004, helping to create sustainable local foods purchasing relationships.¹³²

New Hampshire

The NH Farm to School Program is a collaboration of the University of New Hampshire Sustainability Institute and the New Hampshire Coalition for Sustaining Agriculture. Among other things, the privately funded program helps K-12 schools or distributors serving those schools negotiate simple, affordable systems for purchasing New Hampshire-grown and -produced foods.

Rhode Island

The Rhode Island Farm to School program is now administered by Farm Fresh RI, but originated through and largely gained maturity through the non-profit organization Kids First Rhode Island. The program is supported by the state and funded, in part, through the Specialty Crop Block Grant program.¹³³ Every public school district in the state participates in the program.¹³⁴ The program helps develop successful and sustainable relationships between the state's school food purchasers and farmers, and offers technical assistance to school food service workers to help integrate whole, fresh produce into school meals.¹³⁵

- Good Agricultural Practices and Farm to School: In response to food safety issues, the Rhode Island Department of Environmental Management and the University of Rhode Island developed a state level GAP program ten years ago. It remains one of the few state level GAP programs in the country. The program proved instrumental in fostering the growth of the RI Farm to School Program.¹³⁶ The state's school food service is largely provided through management companies, which, for food safety reasons, often require that foods purchased from farms be only from those that are GAP certified.¹³⁷ This state GAP program has helped enable every school district in the state to source foods from Rhode Island.

Vermont

In Vermont, multiple state agencies and programs work on farm to school efforts, including Vermont Food Education Every Day; the agencies of Agriculture, Health and

Education; Green Mountain Farm to School; Upper Valley Farm to School; and Food Connects. All of these partners focus on developing farm to school programming for the classroom, cafeteria and community.¹³⁸ A recent grant from the Centers for Disease Control and Prevention will enable the Agency of Agriculture to support more programming in this area, including an expanded grant program for schools and regional farm to school projects.¹³⁹ Vermont also has a statewide Farm to School Network that links practitioners through learning experiences and resource dissemination. In addition, strong regional farm to school organizations such as Green Mountain Farm to School, Upper Valley Farm to School and Food Connects provide support to dozens of schools, through educational efforts and distribution of local food.

Federal Programs

- The USDA's Farm to School program, established in 2010 through the Healthy, Hunger-Free Kids Act, is operated by the Food and Nutrition Service, which has a Northeast regional office in Boston. A Farm to School regional lead in that office is available to provide support to state agencies and other entities in the region. The Farm to School program provides \$5 million in annual grants to help school districts across the country further develop relevant programming. New England programs and projects received seven grants during fiscal year 2013, the first year grants were awarded.¹⁴⁰ Recipients included the Vermont Agency of Agriculture — to help focus the efforts of regional food hubs on school food procurement — and the Portland Public School District, which plans to update central kitchen equipment and develop trainings and certifications in order to become a large-volume processor of local foods.
- The Farm to School program recently completed the first-ever National Farm to School Census, surveying local school districts about their farm to school activities, including local food purchases and school gardens.¹⁴¹ The census shows the strength of state and local farm to school programming in New England. In five of the six New England states, more than 75 percent of school districts participate in farm to school activities. The census has detailed information about percentage and types of local food purchases that should be useful to state policymakers in considering additional policy needs and emphases in this area.

USDA FOODS, DEPARTMENT OF DEFENSE FRESH, AND FRESH FRUIT AND VEGETABLE PROGRAMS

As discussed above, public schools that participate in the National School Lunch Program receive both financial assistance and assistance in the form of food products purchased by the USDA. The lunch program provides schools per-meal cash reimbursements, the level of which depends on the number of free, reduced-price or fully paid meals the school serves. The amount of food that a school receives through the USDA Foods Program — its “entitlement value” — is similarly dictated by the number of income-eligible lunches the school serves. Foods received from USDA make up 15 to 20 percent of the food on school lunch plates.¹⁴² Each year the program spends about \$2 billion on food purchases, which, in addition to public schools, are donated to food banks and other feeding organizations.¹⁴³

The USDA Foods Program provides products to schools in two different ways. Through a state coordinator — typically a designee from a state Department of Education — states order from a master list of available foods. Products that do not require additional processing are then shipped to state warehouses. School districts are then notified of the products available and choose what to order, drawing down from their federal entitlement dollars. Because many USDA foods are purchased raw and in bulk, schools often need them processed in some way. Processor selection varies by state: In some states, school districts select which processors they want to use for which products, and the state then contracts with the processors; in others, the state coordinator decides which processors may be used. Districts often purchase additional quantities of the same product from processors, and, in most states, can combine their USDA Foods order with their commercial product processing orders. The processor then invoices districts for the full commercial bid price of each processed case, minus the value of the USDA foods. Most participating processors operate in more than one state and have national agreements with USDA.¹⁴⁴ While some of these processors are located in New England, few are handling food grown in New England.

Many school districts in the region find it challenging to make full use of their USDA Foods entitlement dollars because of what kinds of foods are available and when. Districts must also pay storage and transportation fees associated with USDA foods. As a result, millions of USDA

Foods entitlement dollars have gone unused in the region. In Massachusetts alone, school districts used only a combined 77 percent of the dollars they were entitled to in the 2011-2012 school year, leaving almost \$5.6 million on the table.¹⁴⁵

To address this utilization issue, in 2012 a number of organizations around the region proposed that the USDA Foods Program be modified to give the region's smaller school districts, at their option, cash in lieu of commodities.¹⁴⁶ The proposal, which would have limited the option to school districts with annual commodity entitlement value of \$50,000 or less, envisioned that this approach would both reduce escalating state and federal administrative costs and allow districts more flexibility to purchase fresh nutritious foods from local farmers and food processors.¹⁴⁷ The proposal concerned some who feared that it might jeopardize funding for the program. It also spurred discussions with the USDA about ways to improve program efficiency. A recent study of the USDA Foods Program, conducted by the Harvard Food Law and Policy Clinic and commissioned by Project Bread, made recommendations for improving its use in Massachusetts.¹⁴⁸ The study also suggests areas of further research, including cash-in-lieu options, as well as an example of how state-level processing agreements might be used to support local processors and products sourced in New England.

Because fresh fruits and vegetables are perishable, they make up just 10.5 percent of foods distributed through the USDA Foods Program. The Department of Defense (DoD) Fresh Program was created in the 1990s to address this problem by making use of the department's existing supply chain infrastructure to supply fresh fruits and vegetables to public schools. The DoD Fresh Program offers more than 60 varieties of fruits and vegetables, and schools across the country can use their USDA Foods entitlement dollars to purchase fresh fruits and vegetables through the program.¹⁴⁹ Some New England states, however, place limits on the number of schools and the percentage of entitlement dollars that can be spent through the DoD Fresh Program.¹⁵⁰ In 2011, participation in the program ranged from \$90,000 in entitlement value used in Vermont, to \$2.7 million used in Connecticut. The program uses two contract vendors in New England, and participating schools or state administrators place weekly or monthly orders through an online ordering system.¹⁵¹

A 2012 study of the program done by Farm to Institution New England found that DoD Fresh's ordering system,

FFAVORS, does not effectively communicate the availability of local produce by farm name and state to school food service buyers.¹⁵² The study recommended several ways to improve the ordering system, and the USDA is considering those now. Farm to Institution New England partners and the USDA also are collaborating to improve communication among program administrators and participants across the region and to facilitate involvement by local and regional farmers through educational efforts and introductions to the vendors.

A third federal program, the Fresh Fruit and Vegetable Program, provides funding for a subset of public schools to purchase fresh fruits and vegetables to be served outside of normal school meals. Funding is targeted to elementary schools with high numbers of students eligible for free and reduced-price eligible meals. Participating schools receive between \$50 to \$75 per student per school year. Schools must apply for funding and submit a plan for how the program will be integrated with other efforts to promote sound nutrition and health. The Fresh Fruit and Vegetable Program augments DoD Fresh, and schools can order produce either through the Defense Department's program or directly from local farmers or distributors.¹⁵³

FARM TO INSTITUTION NEW ENGLAND

FINE is a six-state collaboration to strengthen the regional food system by increasing the demand for and use of New England food by New England institutions. FINE sprang from regionwide discussions in 2010 between the state leads for the National Farm to School Network; the six state commissioners and secretaries of agriculture; the New England Commission on Land Conservation and the New England Governors' Conference; the USDA; and private philanthropies. USDA Rural Development provided seed funding for Farm to Institution New England, and that was matched with philanthropic dollars. FINE partners include federal and state agencies, land grant universities and nonprofit organizations.

A number of FINE projects have identified and are addressing key institutional barriers. As mentioned above, a FINE report on DoD Fresh spurred changes in that program's ordering system to help buyers identify local and regional produce. A FINE farm-to-college project is focused in part on procurement changes. (For more information about procurement policies, see the Purchasing and Procurement Preferences section above.) A current

regional supply chain project is designed to influence the purchasing decisions of corporate food service management companies that operate a majority of institutional cafeterias in New England.¹⁵⁴

Another project of FINE is the New England Beef to Institution initiative, which started with a marketing study funded with federal, state and private dollars to assess institutional demand for regionally grown beef. The project also aims to analyze the logistics and infrastructure required to support such demand, and will propose a model that could be replicated in each state to source, process, market and distribute regionally grown beef to institutions. Stakeholders from across New England and from various sectors of the meat industry — including production, processing, distribution and government regulation — are coming together through this project to carry out a work plan of research, education and market development.¹⁵⁵

Action

Support Existing Programs

- State investments in farm to school programming are helping to leverage private resources, expand economic opportunities for farmers and educate children about local food and farming.
- The USDA's Farm to School Program is fostering innovative new approaches and collaborations in the region.
- The USDA Foods Program is providing needed foods, especially proteins, at low costs to budget-sensitive school districts.
- The DoD Fresh Program and the Fresh Fruit and Vegetable Program are improving nutritional health while providing expanded market opportunities for the region's produce growers.
- Continue to support food safety training for producers, such as programs like Rhode Island's GAP, to help farmers meet federal and state food safety standards as well as requirements imposed by some large retail and institutional buyers.

Research and Analysis

- Analyze the USDA Foods Program, including:
 - » State administrative costs associated with the program;
 - » State utilization rates of entitlement dollars, and specific barriers in states or districts with low utilization rates;
 - » Opportunities for state-level agreements with processors in the region;
 - » Opportunities for additional collaboration among school districts to attract regional processors; and
 - » The potential regional economic impact of a voluntary cash-in-lieu-of-commodities option for school districts with an annual commodity entitlement value of less than \$50,000.
- Analyze whether changes to DoD Fresh over the past 18 months have resulted in additional procurement of local and regional fruits and vegetables by New England schools.
- Research the use of forward contracting between farmers and institutions, to encourage farmers to plant specifically for an institutional customer.

Policy Options

- Consider limiting the rebate practices of large food vendors and distributors. Legislation introduced in Massachusetts in 2011 would have required that newly formed contracts between food management companies and colleges and universities disclose any rebates provided by vendors and submit the funds to the respective educational institution. The legislation is under formal review.¹⁵⁶
- Consider repealing limits on the number of schools and the percentage of USDA Foods Program dollars that can be spent on DoD Fresh in states that currently have limits in place.
- Consider tasking a state food policy council or state agency with monitoring implementation and impact of a state procurement policy.

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Waste Streams

While organic material is extremely useful for agricultural soil amendments, current waste stream systems lead to excessive discarding of organic material as waste. Organic material can be composted, producing a valuable agricultural commodity: Researchers have found that on average, organic soil amendments like compost significantly improve soil quality and agricultural output. Studies show that organic soil amendments decrease soil bulk density while increasing soil nitrogen content, soil water retention, and even resulting crop yields compared to conventional fertilizers.¹ Organic material can also be “fed” to anaerobic digesters, producing heat, electricity, and biosolids that are also useful as soil amendments. Finally, beneficial reuse of organics keeps huge volumes of organic material out of rapidly filling New England landfills.

Moreover, when food scrap and other organic material are sent to landfills, they decompose and give off methane, a greenhouse gas more than 20 times as potent as carbon dioxide. In fact, landfills are the third-largest source of methane emissions in the United States, responsible for the equivalent of over 100 million metric tons of carbon dioxide per year.² One study has estimated that diverting 75% of organics from the waste stream to composting “would cause a dramatic decrease in methane, to as much as one-quarter the business-as-usual rate.”³ And using compost as an agricultural soil amendment does not just avoid methane emissions from landfills – it actually increases the soil’s capacity to store more carbon, helping to keep it out of the atmosphere.⁴

In sum, the beneficial reuse of organic materials – in particular, composting – allows for healthy soil, less landfilling, and reduced greenhouse gas emissions. This chapter explores policies already in place throughout New England that support beneficial reuse of organics, and actions states can take to ensure that organics are diverted from the waste stream.

Highlights

- As states prepare to enact policies supporting the beneficial reuse of organics, they can identify existing organics infrastructure, including on-farm and commercial composting operations and anaerobic digesters.
- States can also create statewide incentives for local action: Increase tipping fees while providing funds for food scrap pickup.
- Most importantly, to ensure organics are beneficially reused rather than wasted, each state can phase in a statewide ban on landfilling food scrap and other organics.

5.1 BENEFICIAL REUSE OF ORGANICS

Introduction

New England farms can play an important role in, and benefit from, the reuse of organics in the region's waste stream. Reuse of organic material through composting and anaerobic digestion conserves landfill space, reduces emissions of methane (a greenhouse gas more than 20 times as potent a climate-change driver as carbon dioxide) and can result in both healthy soil amendments and clean energy. Compost can help to remediate formerly industrial land reclaimed for agricultural use; quality compost and other soil amendments are particularly necessary in New England, where demand for rich soil is increasing while suitable land is in short supply.

Throughout New England, large-scale composting operations are subject to regulations that increasingly balance promoting beneficial reuse of organics with ensuring that organics reuse is well-managed. Regulations also help ensure that the end product is not contaminated. Most states' approaches to regulating composting operations are in flux, as governmental regulatory agencies try to get this delicate balance right.

Discussion

As landfills fill up and soils become depleted, it is becoming increasingly clear that "throwing away" organic material does not make sense. Throughout New England, states are becoming more aware of the need for increasing the diversion and reuse of organics through composting and anaerobic digestion. Despite this growing awareness, change in New England has varied widely by state. Some states are leading the nation in organics diversion, while others are just beginning a conversation on the topic.

There are two main ways states can support reuse of organic materials to benefit agriculture and the environment. First, by creating a legal and tangible infrastructure for composting, states can make it easier for farmers to buy or produce compost and other soil amendments. Second, by streamlining the regulations that control anaerobic digesters, states can help farms turn organics into heat, energy and soil amendments.

COMPOSTING

Recognizing the need to divert organic matter from landfills, New England states have begun not only to implement organics-diversion programs but also to take action that supports off- and on-farm composting.

In 2011, Connecticut mandated that large generators of food waste separate organic materials from other solid waste and ensure that such source-separated organic materials are recycled at a permitted composting facility not more than 20 miles away.⁵ The law was designed to spur construction of in-state infrastructure to manage food waste.

Vermont enacted a ban on landfill disposal of organic material in 2012.⁶ The Vermont law has initially mandated diversion by the largest producers of organics, including hospitals and grocery stores.⁷ By 2020 the ban will go into full effect, reaching all individuals and municipalities.⁸ This phase-in is important: In anticipation of the 2020 full ban, municipalities and solid waste districts are trying to find the best ways to manage organic diversion and build necessary infrastructure.

In January 2014, Massachusetts joined Connecticut and Vermont by banning landfill disposal of organics from commercial sources, effective October 1.⁹ This ban was the result of careful planning: In May 2012, Massachusetts created an Organics Study and Action Plan, designed to pave the way for the ban.¹⁰ An entire section of this plan was dedicated to regulatory reform, and in accordance with this section, Massachusetts revised its composting regulations in 2013. The new rules aimed to ensure safe composting inputs and outputs while allowing composting operations greater flexibility to take on more food scrap and other organic material.¹¹

Connecticut, Vermont and Massachusetts are national leaders on organics diversion. Similar actions on the municipal level in San Francisco, Calif., have led to robust programs where municipal and commercial food scrap is collected and composted, and the resulting compost is sold to farms and vineyards to widespread benefit.¹² The result has been 80 percent diversion of organics from landfilling and significantly reduced municipal waste.¹³ Connecticut, Vermont and Massachusetts are not only adopting a proven model — they are setting precedent for their neighbors as other states, such as Rhode Island, are in the midst of revising their own organics-diversion laws.¹⁴

Massachusetts's recent and thorough regulatory changes deserve especially close attention. In addition to planning carefully, the state has fashioned well-balanced composting regulations that differentiate among composting sites and among operations of different sizes. Massachusetts has also set policies to ensure that composting inputs and outputs are free of harmful toxins.

Site

Stand-alone composting facilities in Massachusetts are generally subject to robust solid waste regulations requiring a site assessment and a permit.¹⁵ Massachusetts on-farm composting is subject to regulation by the state Department of Agriculture but exempt from solid-waste regulations provided the farm meets certain conditions: It must comply with best management practices and avoid creating nuisance conditions or threatening public health.¹⁶ Farms are therefore free to produce compost without major regulatory oversight, as long as they do so safely.

Size

Small stand-alone composting facilities in Massachusetts are also exempt from solid-waste regulations provided they comply with best management practices and avoid discharging pollutants, creating nuisance conditions or otherwise threatening public health.¹⁷ These facilities can receive no more than 20 cubic yards or 10 tons of organic materials produced on-site per week. They may, however, add off-site "bulking materials," like cardboard, paper and leaves. They must also notify the Department of Environmental Protection and local board of health. Again, this exemption for small operations allows for flexibility in producing compost that can benefit farms.

Input and Output

Composting operations subject to Massachusetts's permitting requirements — but not exempt farms or small operations — must ensure that both composting inputs and composting products are not contaminated with dangerous levels of toxic substances.¹⁸ This screening requirement is important for farms to be confident that compost from these operations is safe and suitable for use in growing food for human consumption.

These new regulatory provisions should help a market develop for food scrap that soon will be banned from landfills. The result should be increasingly available safe and inexpensive compost for local farms.

As states draft or revise their own organics-diversion laws, they should be aware of the potential impact of federal regulations. The Food Safety Modernization Act regulations, in particular, are likely to set requirements for compost materials used on crops and to affect how farms may apply compost to those crops.

ANAEROBIC DIGESTION

On-farm anaerobic digestion is not only helping to reduce the amount of organic matter being landfilled, but also helping to generate energy for on-farm use. These digesters are dealt with in more detail in Energy Efficiency and Renewable Energy, section 2.2, chapter 2.

Action

Policy Options

- Early success in Massachusetts and Vermont has followed careful planning, regulatory changes and the enactment of phased-in organics bans. These states' models suggest that in order to create a robust state-wide infrastructure for the beneficial reuse of organics, states should take several steps:
 - » Analyze their existing legal and physical infrastructure and plan for organics diversion.
 - ~ Identify regulatory barriers to a robust composting infrastructure.
 - ~ Take stock of capacity for on-farm and commercial composting and capacity for feeding organic material to anaerobic digesters to produce heat and energy.
 - » Amend regulations as necessary to prepare for a phased-in organics ban.
 - ~ Reform regulations as necessary to eliminate barriers to composting infrastructure and to ensure quality and protect human health.
 - This may include measures such as easing or eliminating siting requirements for on-farm composting while maintaining or enhancing requirements for screening toxins.
 - ~ Take active steps to implement organics diversion and phase out landfilling, including phasing in bans and incentivizing municipal participation in organics phase-outs.
- Increasing landfill tipping fees and supporting food-scrap pickup programs at the state level can spur municipalities to take creative action.

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Frameworks for Regional Food System Coordination

A thriving regional food system depends in part on the capacity of governments and stakeholders to work together around planning, policies and programs. Coordinating certain policies, programs, tools and incentives across New England is critical to increasing production and market opportunities, reducing market barriers and enhancing regional food security and self-reliance.¹ Growing enthusiasm for regional food solutions has generated considerable interest in identifying appropriate institutions and mechanisms for promoting regional (i.e., multistate) coordination.

This section considers New England states' existing efforts to build a regional food system and additional work they can undertake to achieve food systems goals. This section also examines several examples of regionwide approaches and structures. Regional frameworks for multistate cooperation and coordination range from informal to quite formal. Several frameworks build on the legal authority and democratic accountability of government entities. Others, such as associations and networks, stand outside government, although governments may participate. The section concludes by illustrating several areas that are ripe for new or renewed regional collaboration, coordination or policy efforts.

It is important to recognize that while there are many models for regional frameworks, relatively few efforts have achieved lasting policy successes for the New England food system. Indeed, reaching regional consensus among the New England states is often challenging. According to Brian Dabson of the Rural Policy Research Institute, “[t]he regional landscape is cluttered with [these] attempts. . . . It is a big challenge for states to work together. Some initiatives work for idiosyncratic reasons; many fail.”²

Moreover, this exploration does not seek to prioritize or recommend any particular multistate mechanism for working together on food system issues. No one approach is suitable to address the many challenges of creating a more sustainable, resilient and self-reliant food system. A particular model may be appropriate to address one problem, but not necessarily others. While entirely new approaches deserve

Highlights

- Build on existing intergovernmental efforts, regional food system networks and initiatives, and state and local food charters and policy councils.
- Explore a regional food system planning entity to chart a course for greater regional coordination and collaboration.
- Harmonize, reciprocate and cross-pollinate state programs and policies, such as meat processing regulations, labor and workforce development, and institutional procurement.

serious consideration and may be vital to achieving meaningful solutions, the region would also benefit from leveraging existing regional food system networks and initiatives to address emerging and shared challenges for which multistate coordination may be helpful or necessary.

6.1 MODELS FOR REGIONAL COORDINATION

The following pages explore a few potentially applicable models for regional governance, policymaking and cooperation in agricultural markets and other contexts.

INTERSTATE COMPACTS, COMMISSIONS AND AUTHORITIES

The preeminent binding form of interstate governance is the interstate compact. Referenced in the U.S. Constitution, interstate compacts are contracts between states and must be authorized by Congress in many cases.³ Compacts address a range of policy and administrative issues, from boundary disputes and mutual natural resources to criminal extradition and taxation. The National Center for Interstate Compacts (NCIC) counts 200 active interstate compacts, with more than 30 compacts involving contiguous states.⁴ According to the NCIC:

- Interstate compacts are powerful, durable, flexible tools to promote and ensure cooperation among the states, while avoiding federal intervention and preemption of state powers. Compacts offer the following benefits:
 - » They settle interstate disputes.
 - » They provide state-developed solutions to complex public policy problems,
 - » unlike federally imposed mandates.
 - » They respond to national priorities in consultation or in partnership with the
 - » federal government.
 - » They retain state sovereignty in matters traditionally reserved for the states.
 - » They create economies of scale to reduce administrative costs.
- In other words, the interstate compact is a constitutionally authorized means of implementing and protecting federalism and the states' role in the federal system.⁵

As creatures of federal and state law, interstate compacts can be regulatory in nature. An example of a regulatory interstate compact is the Atlantic States Marine Fisheries Compact, which governs commercial fishing in the waters off 15 states on the Atlantic seaboard.⁶ Compacts also may serve an advisory function, as in the case of the Bay State-Ocean State Compact, which established an interstate commission with representatives from Massachusetts, Rhode Island and the U.S. Environmental Protection Agency to study, develop and make recommendations about the environmental and economic aspects of Narragansett Bay and Mount Hope Bay.⁷

The chief impediment to developing interstate compacts is the substantial effort needed to enact identical compact legislation in each party state and to reach complete regional consensus on the compact's mission, authority and goals. If the compact establishes regulatory or other legal powers implicating federal authority — such as those associated with traditional farm bill programs — and/or seeks a federal funding mechanism, it requires Congressional approval, which can prove a potentially significant challenge. If an interstate compact is merely advisory in its mission, it may suffer from a lack of financial resources or a lack of state commitment.

Example: Northeast Dairy Compact

The most prominent recent example of an interstate compact addressing an agricultural issue is the Northeast Dairy Compact, which was developed to fix minimum prices for liquid milk at higher levels than the federal minimum price and to promote the region's dairy industry. The Northeast Dairy Compact was approved by Congress in 1996. It pertained to the six New England states and allowed membership in the compact to expand to New York, New Jersey, Pennsylvania, Delaware, Maryland and Virginia, if the prospective state was contiguous to a member state, and if the compact was approved by the state legislature of the prospective state and Congress. No additional states joined. An interstate commission authorized by the compact regulated milk prices in New England until 2001, when Congressional authorization expired.⁸

While opinions are varied among stakeholders, many believe the Northeast Dairy Compact was a successful approach to improving the viability of dairy farms. There is little discussion of reviving the compact or enacting similar compacts for other products, however, because of significant political resistance to the approach.⁹

Typically authorized by Congress, interstate commissions are governmental bodies comprised of state and sometimes federal representatives, often with regulatory or policy development responsibilities. Prominent examples include the Chesapeake Bay Commission, the Appalachian Regional Commission and the Delaware River Basin Commission. A commission can be a formal agency or body with decision-making authority, or an appointed group with a mandate to research or investigate a topic, make recommendations to policymakers, or oversee an area of endeavor. Some commissions receive federal dollars, often matched by state and private sector resources.

Congress also creates interstate entities called authorities that administer infrastructure, ports and transportation functions affecting more than one state. The Tennessee Valley Authority and the Port Authority of New York and New Jersey fall within this category. In many cases, interstate commissions and authorities are created by or charged with implementing an interstate compact.¹⁰

MEMORANDA OF UNDERSTANDING

As an alternative to more formal compacts, states have executed cooperative initiatives through more informal agreements such as memoranda of understanding (MOU). MOUs are typically executed by governors or executive branch agencies, often without the direct involvement of state legislatures. Although MOUs are styled as voluntary, nonbinding commitments, participating states often agree to evaluate and pursue specific policies, to pool financial and technical resources, and to follow defined procedures for decision-making, dispute resolution and stakeholder involvement. Because MOUs are less formal and easier to adopt than interstate compacts, for example, states commonly use MOUs or similarly informal documents to coordinate regional decision-making and even to implement joint regulatory programs.

Example: Regional Greenhouse Gas Initiative

Among the most robust examples of an interstate MOU, the Regional Greenhouse Gas Initiative (RGGI) is a market-based cap-and-trade program to combat climate change by limiting the carbon dioxide emissions of large power generators in 10 Northeastern states.¹¹ The RGGI agreement was developed between 2003 and 2005 in coordination with participating states and a broad coalition of energy sector and environmental stakeholders.

Under the MOU, participating states worked together to develop a complete model rule that each participating state is directed to propose under state law, either as new legislation or through administrative rulemaking, which includes a provision for a state-specific emissions cap and requires generators to acquire permits from any participating state to emit carbon dioxide in amounts no greater than the cap through periodic region-wide auctions. Each participating state implemented its own version of the model rule, and RGGI started its first trading period in 2009.

All auctions and other regional aspects of the program are administered and facilitated by a third-party nonprofit organization called RGGI, Inc. The proceeds of auctions, which total more than \$1 billion to date, are allocated to participating states for consumer benefits, energy efficiency, renewable energy development, or other fiscal priorities as the states see fit.¹² Independent analysis of RGGI shows that the program has yielded substantial net economic and environmental benefits for consumers and the regional economy as a whole and is succeeding in reducing demand for fossil fuels.¹³ Although RGGI's development required substantial support from the states and private foundations, the auction process now generates fees that support the technical needs of RGGI, Inc., as well as dedicated state agency participation in the ongoing regional dialogue on program effectiveness and design. The economic benefits associated with RGGI, especially the new revenue stream for energy efficiency, were integral to the program's development and to building energy and business sector constituencies for state-by-state adoption of legislation or rules.

RGGI offers several potential lessons for regional food policy coordination. Despite some opposition from utilities, the development of RGGI required genuine collaboration between governmental, industry and public-interest stakeholders. Likewise, a robust MOU approach necessitates decisions made by full consensus of the participating states, which imparts significant legitimacy and momentum to program implementation. Even so, RGGI, an inherently narrow program intended to address a single environmental problem, likely represents the outer limit of the MOU approach to interstate policymaking, given the economic significance of the program and its direct regulatory mandates.¹⁴

Example: Transportation and Climate Initiative

MOUs also can serve to study shared policy problems and catalyze regional collaboration and dialogue.

In June 2010, the heads of environmental, energy and transportation agencies from 11 Mid-Atlantic and Northeast states and the District of Columbia issued a joint declaration of intent, establishing the so-called Transportation and Climate Initiative (TCI).¹⁵ The goal of this initiative is to foster regional collaboration around transportation policy and clean energy technology solutions that would reduce the carbon emissions of the transportation sector. Housed at Georgetown University's Climate Center, TCI receives most of its operating funds from the U.S. Department of Energy and private foundations.

The Transportation and Climate Initiative focuses on several core work areas, including the launch of the Northeast Electric Vehicle Network to expedite deployment of electric vehicles and charging infrastructure; promoting transportation policies that advance sustainable communities; adopting information and communication technologies that increase transit use and decrease traffic congestion; and improving the efficiency of freight movement.¹⁶ TCI's sustainable communities work is documented in a separate agreement.¹⁷

While the Regional Greenhouse Gas Initiative is a regulatory MOU, the Transportation and Climate Initiative approach to interstate collaboration might be categorized as an advisory MOU. Its function is to facilitate research, information sharing, dialogue and policy analysis on key transportation and climate issues with the imprimatur and support of the sponsoring agencies. With TCI's external funding, it is undertaking work on issues that many resource-strapped state agencies are interested in addressing but cannot pursue given personnel and budget constraints. As a result, TCI's work may result in stronger regional policies in the long run, although its projects have not yet translated into meaningful state-level policy changes.

REGULATORY HARMONIZATION AND RECIPROCITY

States may also pursue regionally focused solutions without a single regional governance structure or body such as those described above. There are many examples of market-based and regulatory programs that begin within a couple of states and are ultimately adopted, in similar

but not necessarily identical ways, in more states, possibly encompassing a discrete region. In some cases, national or regional organizations publish model regulations or programs that are then disseminated for adoption by multiple states.

For instance, in response to slow federal promulgation of regulatory measures to reduce mercury pollution, state laws and regulations in the Northeast now regulate mercury and toxic air pollution more stringently than the federal law does, essentially creating a regional regulatory policy.¹⁸ This policy emerged through both a regional task force, initiated by the New England Governors' Conference in the 1990s, but also through distinctive state law changes and rulemaking.

The restructuring of the New England electric industry is a prominent example of complementary and independent state law changes that coalesced into a transformed regional market. These legal changes forced most New England utilities to leave the electric generation business and opened the market to competition from nonincumbent power plant operators and other suppliers. Restructuring laws resulted in the development of a regional wholesale market for electricity administered by a private, nonprofit corporation, ISO New England, Inc., which is empowered by federal law and tariffs to act as the operator of the region's electric transmission system and the wholesale power market.

In another form of regulatory cooperation, states often engage in reciprocal licensing or regulatory programs, where actions in one state are recognized in other states. This is common in education, professional and other services, and criminal law contexts. In the agri-food sector, several New England states have in the past operated pesticide-applicator licensing programs under reciprocity agreements, which are no longer in effect.

Example: Renewable Portfolio Standards

A set of complementary state policies in the energy sector has drawn interest from food system stakeholders as a potential model for increasing food production in the region. Renewable portfolio standard (RPS) laws require electric utilities to purchase an increasing percentage of their energy supply from renewable sources of power, such as wind, solar, biomass and small-scale hydropower. Although each New England state has its own RPS program,¹⁹ the programs establish set percentages of different types of renewable supply, differentiating between

newly developed and preexisting facilities and between fuel sources. Certified renewable energy facilities, which can be located anywhere in New England or adjacent power grids, earn renewable energy credits for each unit of power they generate.

Generally, utilities satisfy their renewable portfolio standard obligations by purchasing credits from certified renewable energy sources or by making payments to a state renewable energy fund. By creating new markets and revenue streams for the emerging renewable energy industry, renewable portfolio standard laws have been moderately successful at encouraging investment in and strengthening the economics of renewable energy in New England. With renewable energy facilities able to sell credits to utilities throughout New England and beyond, renewable energy credit markets are both state-based and regional.

INTERGOVERNMENTAL COUNCILS

State governments frequently form collaborative, formal relationships, often without direct legal or regulatory mandates. These relationships are intended to be permanent and ongoing, with varying structures and processes for accomplishing goals and tasks.

Example: Coalition of Northeastern Governors

The Coalition of Northeastern Governors (CONEG) brings together the governors of the six New England states and New York for periodic meetings, information-sharing and joint statements of policy.²⁰ In recent years, this coalition — as well as the former New England Governors' Conference, which had a similar structure and goals, and was folded into CONEG in 2012 — has promoted policies addressing shared economic, environmental and social issues that reflect CONEG's agenda. Through the Coalition of Northeastern Governors, the state executive branches establish joint visions, priorities and goals. They also create joint agreements to tackle common problems and coordinate policy efforts.

A nonprofit organization serves as the staff arm of the coalition. Where the governors identify national or regional issues warranting joint focus, CONEG facilitates information exchange, tracks related developments within the region and nationally and conducts policy assessments and studies to help inform and coordinate state actions.

Example: Northeastern Association of State Departments of Agriculture

The Northeastern Association of State Departments of Agriculture (NEASDA) is the regional chapter of the National Association of State Departments of Agriculture (NASDA), an organization that represents state departments of agriculture “in the development, implementation, and communication of sound public policy and programs which support and promote the American agricultural industry, while protecting consumers and the environment.”²¹ Like the national association, NEASDA adopts joint policy statements on a range of agricultural issues and provides a platform for lobbying Congress and federal agencies on matters of concern to the agricultural sector. The northeastern association, which includes the New England states, New York, New Jersey, Pennsylvania and Delaware, meets at least twice a year and has no formal staff; its work is conducted by the respective agency heads from each state department of agriculture and its staff, with support from the national staff in Washington, D.C. In addition to identifying common policy issues of regional importance, NEASDA allows for informal coordination and information sharing among the region's state agriculture agency heads and staff.

Example: New England States Animal Agriculture Security Alliance

Another of the New England governors' achievements to date was forming the New England States Animal Agriculture Security Alliance (NESAASA). Precedents in other parts of the country include the Multi-State Partnership for Security in Agriculture and the Southern Agriculture and Animal Disaster Response Alliance. All six New England governors signed the NESAASA charter in July 2010.

The chartered goal of NESAASA is the following:

- To support and develop regional NIMS-compliant standards, processes, and capacity through collaborative planning, preparedness, mitigation, response, and recovery efforts that help to ensure the safety, health and security of the regional food and animal and animal agriculture sector infrastructure and economy. NESAASA seeks to enhance New England regional animal and animal agriculture emergency preparedness and response to all hazards including chemical, biological, radiological and nuclear incidents and natural disasters.²²

With the support of the Area Office of the USDA Animal and Plant Health Inspection Service-Veterinary Services, the six state veterinarians who comprise NESAASA developed the Cooperative Agreement and Work Plan for this project.

- Strengthening the profitability and sustainability of the region's dairy farming industry;
- Fostering long-term farm profitability and sustainability; and
- Expanding farm production capacity.

6.2 EXISTING REGIONAL FOOD SYSTEM NETWORKS AND INITIATIVES

Several regional networks and initiatives share a commitment to convening food system stakeholders, fostering greater collaboration on food policy issues across New England, and promoting a strong New England food system. These networks and initiatives have different structures, priorities and funding sources.

A common intent of regional networks is to provide ongoing network functions such as communications, joint endeavors, information exchange and, in some cases, policy advocacy. Other initiatives include collaborative, time-limited, or ad hoc task forces, committees, projects and events that help achieve regional outcomes and also build relationships, networks and joint capacity.

Example: New England Governors' Conference and the New England Farm and Food Security Initiative

The New England Farm and Food Security Initiative (NEFFSI) was an effort of the New England Governors' Conference and the chief agricultural officers from New England's six states. NEFFSI emerged as one of five key initiatives recommended by the New England Governors' Conference's Blue Ribbon Commission on Land Conservation.²³ In 2010, the New England Governors' Conference endorsed a three-year action plan focused on regional-scale research, projects, investments and policies. Its goals included:

- Enhancing and strengthening New England's food system infrastructure;
- Spurring job creation and economic growth in the region's farm and food sectors;
- Retaining and protecting the region's working farmland resources;
- Improving access to nutritional foods in the region's urban and rural communities;

A change in executive leadership in four of the six New England states in 2010 led to a phaseout in 2012 of the Commission on Land Conservation and its five formal initiatives. However, several recommendations made through NEFFSI have been acted on, and the six current chief agricultural officers continue to collaborate on regional-scale solutions to identified barriers. A NEFFSI convening of public, private and philanthropic partners led to seed funding for and the launch of Farm to Institution New England, a regional network now addressing institutional procurement barriers and opportunities. NEFFSI recommendations on meat processing led to a formal project exploring opportunities for processors to sell beef to institutional customers in the region. And the six New England agricultural officers have organized several listening sessions between officials from the U.S. Food and Drug Administration and regional producers over two proposed rules related to the Food Safety Modernization Act.²⁴

Example: Northeast Sustainable Agriculture Working Group

NESAWG, a partner in this report, is a 12-state network of organizations and individuals that seeks to build a more sustainable, healthy and equitable food system for the Northeastern United States.²⁵ NESAWG started in 1992 and is an unincorporated association; the network operates under a fiscal sponsorship arrangement with Just Food, Inc., a New York-based nonprofit organization. More than 400 organizations actively participate in the network, which works at local, state, regional and national levels to coordinate public policy advocacy, foster market-based innovation and educate the public about farm and food issues. NESAWG sponsors an annual conference that brings together food system professionals and advocates, local community food leaders, policymakers, planners, researchers, extension and other educators, farm groups and support organizations, food supply chain businesses, consumer groups, students and youth. It emphasizes and promotes regional approaches and solutions to food system problems. NESAWG also sponsors research, educational publications and special projects. It hosts a Listserv and interactive website.

Example: Food Solutions New England

Established in 2006, Food Solutions New England (FSNE) is a “regional food systems learning-action network” dedicated to “transforming the New England food system into a resilient driver of healthy food, sustainable farming and fishing, food system equity and thriving communities.” FSNE is supported by the University of New Hampshire’s Sustainability Institute with assistance from private foundations. FSNE is organized around four activities: the New England Food Vision; New England state food system planning; annual regional Food Summits; and network development and communications. The New England Food Vision calls for building the capacity for the region to produce at least 50 percent of its food needs by 2060. The Vision is the work of a writing team of academic researchers and practitioners. It reflects three years of review and input from diverse stakeholders and will continue as a living document. FSNE-hosted annual regional summits and network development events contribute to shared learning, mutual awareness and dialogue across the diverse approaches to state food planning underway in the six New England states. FSNE is committed to promoting the design and facilitation of a regional network to advance the aspirations of the New England Food Vision and food system transformation through collaboration at the local, state and regional levels.

Example: Harvest New England

Harvest New England (HNE) is a marketing program jointly created in 1992 by New England’s state departments of agriculture. Its theme and message are: “Support New England’s farm economy. Buy local, buy New England!” The initial purpose of the program was to support the sale of New England-grown produce through supermarket channels. The program was subsequently opened to all New England food and agricultural products. Harvest New England fosters collaborative problem-solving at the regional level and sponsors a biennial regional conference and trade show. The program also coordinates workshops and meetings focused on regional issues of concern to farmers, such as regulations, food safety and agritourism.²⁶

Example: New England Extension Consortium

The New England Extension Consortium is a regional network of the six New England states’ cooperative extension systems. Its goals are to foster multistate collaboration and to strive for more effective and efficient use of the extension systems’ limited resources.²⁷ One of its recent projects is the New England Extension Food

Safety Consortium, a network of food safety and nutrition specialists and educators, as well as food science faculty representing the six New England land-grant universities. The food safety consortium creates educational programs and online resources related to food safety. The six New England extension programs also sponsor the annual New England Vegetable and Fruit Conference, a three-day winter meeting to promote collaboration and resource-sharing among the extension programs and the region’s vegetable and fruit growers.²⁸

OTHER INITIATIVES

Numerous other examples of multistate food system initiatives demonstrate the potential for impact. Recent examples include Farm to Institution New England (funded by the John Merck Fund and others); Northeast Ag Works! (funded by the W.K. Kellogg Foundation); Enhancing Food Security in the Northeast with Regional Food Systems (funded by the USDA’s Agriculture and Food Research Initiative); the Land Access Project (funded by the USDA’s Beginning Farmer and Rancher Development Program); and the New England Food System Policy Project of which this report is a part (supported by the Henry P. Kendall Foundation).

6.3 STATE FOOD CHARTERS, PLANS AND POLICY COUNCILS

As discussed above, regional frameworks inherently involve multiple states. Food system planning and policy efforts within states are potential contributing platforms for regional food system coordination or collaboration. These state-based efforts take diverse forms, including state food charters, plans and policy councils. In some cases, state food policy councils are charged with developing or implementing state plans, among other responsibilities or functions. In other cases, food system planning is being conducted outside of state government. Each of the six New England states has embarked on food planning efforts.²⁹

In general, charters, plans and councils have not been undertaken on a multistate or regional scale. A notable exception is the plan prepared by the Delaware Valley Regional Planning Commission. Greater Philadelphia’s Food System Plan covers parts of Pennsylvania and New Jersey. Yet those working to develop state-based food

policy and planning structures are increasingly recognizing that success depends in part on the larger food system. From this perspective, strong state food charters and plans are potentially significant influences on regional food system planning coordination, and vice versa. Similarly, state food policy councils or similar planning entities can be powerful participants in any regional efforts or institutions. As an example, the New England Food Vision 2060, referenced above, assumes regional collaboration among the six states. It recognizes New England has diverse population and production capacity as well as sea-based resources. Ideally, regional planning will inform state plans, and state food planning will influence regional efforts.

STATE FOOD CHARTERS AND PLANS

The food charters and food plans described here share a common purpose. A food plan is largely synonymous with a food charter but may be more detailed and may imply or include more specific actions. In most cases, one or more organizations or entities are responsible for the charter or plan and may also sponsor events, research, a website or publications.

Typically developed through the joint effort of diverse food system stakeholders concerned with a specific state, geographic area or community, a food charter consists of a declaration of common visions, values and principles that should guide the jurisdiction's food policy. It does not have regulatory weight or the force of law. In recent years, food charters have been adopted in Michigan, Iowa, Oregon, West Virginia, the city of Los Angeles, the region around Durham, N.C., and in Canada.³⁰ In an unusual example of a food charter applicable to more than one state, organizations and institutions in Wisconsin and Minnesota together adopted a food charter for the food system of 15 counties along the western shore of Lake Superior.³¹ Stakeholders in Rhode Island recently developed a farmer-driven statewide strategic plan to strengthen and diversify the state's agriculture sector.³²

Example: Vermont Farm to Plate

Vermont's 2010 Farm to Plate plan is a particularly robust 10-year statewide strategic food system plan. It was developed by the Vermont Sustainable Jobs Fund and the Vermont Sustainable Agriculture Council, a food policy advisory entity created in 1995.³³ In part, Farm to Plate is intended to guide and support Vermont's Farm to Plate Investment Program, which the Vermont legislature enacted in 2009.³⁴ A self-governing network of more than

200 organizations — including work groups, task forces and cross-cutting teams — that is coordinated by a steering committee and facilitated by the Vermont Sustainable Jobs Fund, Farm to Plate is focused on achieving the plan's 25 goals, which touch on all sectors of Vermont's food system.³⁵ A central product is the newly launched online Vermont Food Atlas, a comprehensive repository of food and agriculture resources in the state and an online destination to monitor the state's progress in achieving the plan's goals.³⁶

FOOD POLICY COUNCILS

A food policy council brings together stakeholders from across the food system to engage in food system planning efforts, research, education and, most significantly, food system policy development. Many food policy councils operate at the municipal level. They work to develop legislative, regulatory and nongovernmental solutions to strengthen state or local food systems, promote economic development in the food system and advance environmental stewardship and social justice. Often initiated by government through legislation or executive orders, statewide food policy councils may have an official mandate and obligations, as well as government members and formal relationships with administrative agencies and legislative bodies. Other food policy councils, especially at the county or local level, are independent of government but may include representatives from governmental entities.³⁷ Several are coordinated by a city employee.

According to the Harvard Food Law and Policy Clinic:

A food policy council provides a unique forum for diverse stakeholders to address the common concerns about food policies that arise in their city, county, or state, including topics such as food security, farm policy, food regulations, environmental impacts, health, and nutrition. Stakeholders include a range of people invested in the food system, such as farmers, city and state officials, non-profit organizations, chefs, food distributors, food justice advocates, educators, health professionals, and concerned citizens. With the lack of government agencies (at any level) devoted to the sole task of regulating and improving food policy, food policy councils have emerged as innovative and much-needed mechanisms to identify and advocate for food system change.³⁸

As of 2012, there were 193 state and local food policy councils around the country, nearly twice as many as there were in 2010.³⁹ There are no multi-state food policy councils.

Example: Connecticut Food Policy Council

Created by the Connecticut legislature in 1997, the Connecticut Food Policy Council consists of six stakeholders from various sectors of the food system that are nominated by elected officials.⁴⁰ By statute, the council is charged with the development, coordination and implementation of a food system policy, as well as active participation in legislative and regulatory policy activities affecting the food system.⁴¹ Since its enactment the council has been at the center of several important food system projects across the state.⁴²

Other entities and programs with regional focus deserve mention, for example the Northeast-Midwest Institute, and various regional rural and urban policy institutes. Federal agencies have regional divisions, USDA's Sustainable Agriculture Research and Education Program in the Northeast and EPA Region I, for example. There are also regional chapters of NGO associations and professional organizations such as the Northeast Regional Anti-Hunger Network, which holds regular conferences.

Action

As the above catalogue reveals, there are several mechanisms for states to work together toward common goals. There is no one best model for interstate cooperation. The most appropriate model depends entirely on the problem or goal that stakeholders wish to address. The challenge — and opportunity — is to match the model to the problem. This requires a solid analysis of the problem and the regional strategies, if any, that best address it. It also requires strong network connections and relationships that promote trust and collaborative action.

Indeed, regional cooperation is fraught with challenges. These include existing state-focused mandates, cultural parochialism, bureaucratic constraints, real and perceived competition, and inadequate resources. The takeaway is that there is a choice of devices to bring states together to solve problems and achieve shared goals. This is far more likely to happen in networks with shared values and visions.

More prescriptive approaches are only possible with deep political will among diverse stakeholders to bring the chosen model to fruition and committed resources to sustain it for whatever time is needed. With other approaches, it may be sufficient to rely on voluntary coordination and collaboration or to build on the momentum

and consensus reflected in existing initiatives to achieve new goals. For instance, an interstate compact may not be needed to develop a multistate farm and food marketing campaign. A task force may not be sufficient to address issues such as regional milk pricing or interstate harmonizing of state meat inspection programs, though it may be an appropriate first step. Some, but not all, models require a substantial investment of time, energy and resources.

In the spirit of furthering dialogue to address regional food system issues, the following discussion describes one idea for an overarching regional approach. In addition, we present several specific policy and institutional areas for additional regional collaboration that were suggested by stakeholders engaged as part of this research.

REGIONAL FOOD SYSTEM PLANNING ENTITY

A regional entity comprising representation from New England states could set an agenda for states to work together on food system issues. It could build regional consensus around a sustainable food system vision such as, for example, the New England Food Vision 2060. The initial mandate of the entity would be to develop a process for multistate cooperation. It could be organized using one of the models discussed above, such as a regional food policy council or an ad hoc task force. The body could lead the development and implementation of a strategic regional plan to achieve jointly identified goals. Such an entity could be initiated by formal government action or as an evolution or outgrowth of the Vision and efforts of the New England Farm and Food Security Initiative or Food Solutions New England.

The group could be charged with producing a strategy similar to the charter or food plan models described above, or developing an MOU to facilitate shared and cooperative actions. With a clearly defined mission or mandate, the entity would provide a forum for identification of market-based and regulatory solutions and for regional coordination of public policies to seize those opportunities. If the initiative aimed at identifiable and immediate economic benefits for farmers, supply chain actors and citizens, while promoting food equity, a regional initiative to strengthen food systems could generate a high level of participating state commitment and stakeholder enthusiasm.

As an advisory institution, a regional body would need strong, broad-based support from governmental, industry and public stakeholders as well as adequate financial

resources and staff support to facilitate its work. Achieving meaningful policy changes likely will require an entity with some institutional underpinning and longevity. The daunting task of translating visions and plans into state legislation and rulemakings that garner political support would be the principal challenge for this group. In a more modest approach, the entity could be charged with establishing an inclusive process to derive a shared set of food system principles and guidelines for the multistate region.

As part of any regional planning process, a regional food planning body might focus on evaluating the appropriate regional tools and methods, such as those discussed in this report, for addressing specific food policy or institutional challenges where stakeholders identify a need for greater regional coordination. It is possible that the functions of a regional food-system-planning group could be split among several networks or institutions, although disaggregation could diminish the effort's overall impact.

AREAS FOR GREATER REGIONAL COORDINATION AND COLLABORATION

Interviews with food system stakeholders during the first half of 2013, various breakout discussions at the Food Solutions New England 2013 Food Summit, and the research informing this report identified a number of policy and institutional areas as potentially promising for greater regional coordination.⁴³ These areas merit additional exploration as future focuses of regional initiatives, potentially including one or more of the regional frameworks identified in this section.

Farm Bill: A frequent refrain of stakeholders is the need to strengthen New England's voice in establishing and implementing the provisions of the federal farm bill through regionally based coordination and advocacy.⁴⁴

Federal Food Safety Modernization Act: Implementation of the new requirements of the federal Food Safety Modernization Act is a clear potential focus for regional coordination, information-sharing and advocacy at the federal level for needed regulatory changes, as well as evaluation of the impacts of FSMA implementation across states.⁴⁵

Cooperative Extension Programs: Stakeholders identified a need for further efforts to promote regional resource-sharing, coordination and communication

among the states' cooperative extension programs, above and beyond the New England Extension Consortium.⁴⁶

Food System Workforce Coordination: Stakeholders addressing fair labor and workforce development in the food system suggested a regional repository of model state policies and legislation, coordination of university and other training programs, and educational and licensing reciprocity agreements among the New England states.⁴⁷

Institutional Procurement: Stakeholders pointed to regional branding of food products as a strategy that could expand opportunities for institutional procurement of New England-grown foods.⁴⁸

Meat Processing: Stakeholders discussed meat processing and related federal and state regulatory requirements as a potential area for regional agreements, regulatory harmonization and better coordination to improve market opportunities and slaughterhouse capacity.⁴⁹

Federal Programs and Funding: A potential focus of regional coordination is the use of federal programs and funds, including those for ecosystem services, so that underused resources could be shifted to other states in the region where demand and program use are higher.⁵⁰ Likewise, in those cases where a large number of New England farms fail to qualify for certain federal programs or funding, the states could explore regionally oriented approaches and consider pooling financial resources to provide similar grants and incentives to a broader group of New England farms.

Assessment of Regional Branding: Stakeholders noted that the proper role of regional branding efforts is an important and evolving issue, suggesting that such efforts may require additional focus, clearer standards and ongoing monitoring and assessment to ensure that these efforts provide value and contribute to successful marketing.⁵¹

Soil Contamination Issues: Given divergent state regulatory approaches, urban agriculture efforts throughout New England could benefit from a common set of regional best practices for due diligence, environmental liability protection and soil remediation where urban land or brownfields are being converted to agricultural uses.

Regulatory Harmonization, Reciprocity and Cross-Pollination: There appear to be a number of promising areas where state laws and regulations could be better harmonized to facilitate regional markets, such as food safety and processing, and where best practices should be shared among states, including current-use taxation, access to state lands for farming, and water resources management.

Coordinated Research: It could prove beneficial to coordinate research topics of shared interest, including land access mechanisms, food transportation options, supply network options and the protection and restoration of water and marine ecosystems.

Greater Food Access, Justice and Equity: Rates of food insecurity have escalated throughout New England during the past 10 years. Many people of color and people living in poverty continue to have unequal access to healthy foods. Federal food programs are not keeping pace with demand. Purposefully addressing race and economic disparity among the structural causes of food system inequities should be a cornerstone of a regional food system vision.

ENDNOTES

- ¹ See, e.g., Kate Clancy & Kathryn Ruhf, *Is Local Enough? Some Arguments for Regional Food Systems*, Choices Mag, 1st quarter 2010, http://www.choicesmagazine.org/magazine/pdf/article_114.pdf; Margaret Sova McCabe & Joanne Burke, *The New England Food System in 2060: Envisioning Tomorrow's Policy Through Today's Assessments*, 65 Maine L. Rev. 549, 556-60 (2013). See also the discussion below of stakeholder suggestions of areas for improved regional collaboration.
- ² Interview with Brian Dabson (Mar. 14, 2013).
- ³ U.S. Const. art. I, § 10, cl. 3 (“No State shall, without the Consent of Congress . . . enter into any Agreement or Compact with another State.”). The Supreme Court has held that only compacts that affect the balance of state and federal power or otherwise intrude into areas of federal supremacy require Congressional consent. See, e.g., *U.S. Steel Corp. v. Multistate Tax Comm’n*, 434 U.S. 452, 471 (1978).
- ⁴ The Council of State Governments administers NCIC as a clearinghouse for information and technical assistance for states considering and developing interstate compacts. NCIC has published resource guides addressing the legal aspects of, and best practices for, compact development. See, e.g., *Best Practices for Compact Development*, Nat’l Ctr. for Interstate Compacts (May 2011), http://knowledgecenter.csg.org/kc/system/files/Compact_Development_0.pdf.
- ⁵ *Compacts Fact Sheet*, Nat’l Ctr. for Interstate Compacts, <http://www.csg.org/knowledgecenter/docs/ncic/FactSheet.pdf> (last visited Nov. 13, 2013).
- ⁶ Atlantic States Marine Fisheries Compact, Pub. L. No. 77-539, 56 Stat. 267 (1942). See 16 U.S.C. § 5102(3).
- ⁷ *Bay State-Ocean State Compact*, Council of State Gov’t’s, <http://apps.csg.org/ncic/PDF/Bay%20State-Ocean%20State%20Compact.pdf> (last visited Nov. 13, 2013).
- ⁸ Jasper Womach, *Agriculture: A Glossary of Terms, Programs, and Laws* CRS-186, Cong. Research Serv. No 97-905, (2005), available at <http://www.cnie.org/NLE/CRSreports/05jun/97-905.pdf>; see also *N.Y. State Dairy Foods, Inc. v. Northeast Dairy Compact Comm’n*, 198 F.3d 1 (1st Cir. 1999) (upholding compact against constitutional challenges); cf. *West Lynn Creamery v. Healy*, 512 U.S. 86 (1994) (striking down state milk pricing order).
- ⁹ E.g., Interview with Lorraine Merrill, Commissioner, N.H. Dep’t of Agric., Markets & Food (Feb. 18, 2013); Interview with Rob Johnson, N.H. Farm Bureau (Feb. 20, 2013); New England Food Summit, Processing, Slaughter, Aggregation & Distribution Breakout Session (Jun. 13, 2013); Womach, *supra* note 8, at CRS-240. A similar compact, the Southern Dairy Compact, failed to gain traction. Enacted by 13 Southern states between 1997 and 2001, the compact has not been approved by Congress.
- ¹⁰ This is especially common in the stewardship of common environmental and natural resources. See *An Overview of the Structure and Governance of Environment and Natural Resource Compacts* 4, U.S. Gov’t Accountability Office GAO-07-0519 (2007), available at <http://www.gao.gov/new.items/d07519.pdf>.
- ¹¹ See *Memorandum of Understanding*, Regional Greenhouse Gas Initiative, http://www.rggi.org/docs/mou_final_12_20_05.pdf, (last updated Dec. 12, 2005).
- ¹² *Auction Results*, Regional Greenhouse Gas Initiative, http://www.rggi.org/market/co2_auctions/results (last visited Nov. 13, 2013).
- ¹³ Paul J. Hibbard et al., *The Economic Impacts of the Regional Greenhouse Gas Initiative on Ten Northeast and Mid-Atlantic States*, (Nov. 15, 2011), http://www.analysisgroup.com/uploadedFiles/Publishing/Articles/Economic_Impact_RGGI_Report.pdf.
- ¹⁴ Some commentators have questioned RGGI’s constitutional validity under the Compact and Commerce Clauses. See, e.g., Steven Ferrey, *Goblets of Fire: Potential Constitutional Impediments to the Regulation of Global Warming*, 35 Ecology L.Q. 835, 883, 900-2 (2008).
- ¹⁵ *Transportation and Climate Initiative of the Northeast and Mid-Atlantic States Declaration of Intent*, Georgetown Climate Center, <http://www.georgetownclimate.org/sites/default/files/TCI-declaration.pdf> (last visited Nov. 13, 2013).
- ¹⁶ *Transportation and Climate Initiative of the Northeast and Mid-Atlantic States: Building the Clean Energy Economy and Reducing Greenhouse Gas and Emissions in the Northeast*, Georgetown Climate Ctr., <http://www.georgetownclimate.org/sites/default/files/TCI%20brochure.pdf>, (last visited Nov. 13, 2013).
- ¹⁷ *TCI Jurisdictions Move Forward With Sustainable Communities Activities*, Georgetown Climate Ctr., (June 8, 2011), <http://www.georgetownclimate.org/tci-jurisdictions-move-forward-with-sustainable-communities-activities>.
- ¹⁸ *Northeast States Succeed in Reducing Mercury in the Environment*, New England Interstate Water Pollution Control Comm’n, Northeast States for Coordinated Air Use Mgmt., and Northeast Waste Mgmt. Officials’ Ass’n, (Sept. 2007), <http://www.nescaum.org/documents/northeast-states-succeed-in-reducing-mercury-in-the-environment/final-mercury-success-story-summary.pdf/>.
- ¹⁹ Unlike the other New England states’ RPS laws, Vermont’s program establishes portfolio goals to incentivize new renewable development in the state but is not legally binding on utilities. See *Vermont’s Renewable Energy Programs: Speed Program*, VermontSPEED, <http://vermontspeed.com/> (last visited Nov. 13, 2013).
- ²⁰ *About CONEG*, Coal. of Northeastern Governors, <http://www.coneg.org/about/> (last updated Aug. 29, 2012).

- ²¹ Nat'l Ass'n of State Dep't of Agric., <http://www.nasda.org/About.aspx> (last visited Nov. 13, 2013).
- ²² New England States Animal Agricultural Security Alliance, Charter, 1 (July 21, 2010), http://newenglandmsproject.weebly.com/uploads/1/2/7/3/12737832/nesaasa_charter_agreement_signed_7-21-10.pdf.
- ²³ *Report of the Blue Ribbon Commission on Land Conservation*, New England Governors' Conference (Sept. 2009), http://action.farmland.org/site/DocServer/NEGC_CLC_Report_9.09.pdf?docID=2201.
- ²⁴ *Id.*
- ²⁵ Northeast Sustainable Agric. Working Grp., <http://www.nefood.org/page/nesawg> (last visited Nov. 13, 2013).
- ²⁶ Interview with Mary Jordan, Harvest New England (July 8, 2013).
- ²⁷ *About the New England Food Safety Extension Consortium*, New England Food Entrepreneurs, <http://extension.unh.edu/nefe/about.html> (last visited Nov. 13, 2013).
- ²⁸ *About the Conference*, New England Vegetable and Fruit Conference 2013, http://www.newenglandvfc.org/about_the_conference.html (last visited Nov. 13, 2013).
- ²⁹ McCabe & Burke, *supra* note 1, at 560-70.
- ³⁰ *E.g.*, *Michigan Good Food Charter*, Michigan Good Food (June 2010), <http://www.michiganfood.org/assets/goodfood/docs/MI%20Good%20Food%20Charter%20Final.pdf>; *Los Angeles Food Policy Council Objectives*, Los Angeles Good Food, <http://goodfoodia.org/objectives/good-food-for-all-goals/> (last visited Nov. 13, 2013).
- ³¹ *Lake Superior Good Food Charter*, Lake Superior Good Food Network, <http://www.goodfoodnetwork.org/goodfoodcharter.html> (last visited Nov. 13, 2013).
- ³² *A Vision for Rhode Island Agriculture - Five-Year Strategic Plan*, R. I. Agric. Partnership, (May 2011), http://students.cs.uri.edu/~rhodyag/docs/RI_agriculture_5yr_strategicplan.pdf.
- ³³ *Farm to Plate Strategic Plan*, Vt. Sustainable Jobs Fund [hereinafter Vt. Sustainable Jobs Fund], <http://www.vsjf.org/project-details/5/farm-to-plate-initiative> (last visited Nov. 13, 2013); *Farm to Plate Strategic Plan*, Vt. Food System Atlas, <http://www.vtfoodatlas.com/plan/> (last visited Nov. 13, 2013).
- ³⁴ *Farm to Plate Strategic Plan*, *supra* note 33.
- ³⁵ *Farm to Plate Investment Program*, Vt. Food System Atlas, http://www.vtfoodatlas.com/uploads/F2P%20Annual%20Report_January%202013.pdf (last visited Nov. 13, 2013).
- ³⁶ *Farm to Plate Strategic Plan*, *supra* note 33.
- ³⁷ Alethea Harper et al. *Food Policy Councils: Lessons Learned*, Inst. for Food & Dev. Policy, <http://www.foodfirst.org/en/foodpolicycouncils-lessons> (last updated Dec. 16, 2009).
- ³⁸ *Good Laws, Good Food: Putting State Food Policy to Work for our Communities* 1, Harvard Food Law and Policy Clinic, (Nov. 2012), <http://blogs.law.harvard.edu/foodpolicyinitiative/files/2012/12/FINAL-full-state-toolkit.pdf>.
- ³⁹ *Id.*
- ⁴⁰ Conn. Gen. Stat. § 22-456.
- ⁴¹ *Id.*
- ⁴² McCabe & Burke, *supra* note 1, at 563-64.
- ⁴³ *2013 Summit*, Food Solutions New England <http://www.foodsolutionsne.org/2013-summit> (last visited Nov. 13, 2013).
- ⁴⁴ *E.g.*, Interview with Emily Broad Lieb, Harvard Food Law and Policy Clinic (May 17, 2013).
- ⁴⁵ *Id.*; see also "What Else is Needed" in the Food Safety, Processing, Aggregation, and Distribution section of this report.
- ⁴⁶ New England Food Summit, Food Production Policy Breakout Session (Jun. 13, 2013).
- ⁴⁷ New England Food Summit, Labor and Workforce Development Breakout Session (Jun. 13, 2013).
- ⁴⁸ New England Food Summit, Growing Market Demand Breakout Session (Jun. 13, 2013).
- ⁴⁹ New England Food Summit, Processing, Slaughter, Aggregation & Distribution Breakout Session (Jun. 13, 2013).
- ⁵⁰ Interview with Emily Broad Lieb, Harvard Food Law and Policy Clinic (May 17, 2013).
- ⁵¹ *E.g.*, Interview with Phil Korman, Community Involved in Sustaining Agriculture (July 11, 2013); interview with Michael Botelho, Commonwealth Quality Program Coordinator, Mass. Dep't of Agric. Resources (July 9, 2013); interview with Mary Jordan, Harvest New England (July 8, 2013).

Conclusion

This report presents policy research, analysis and suggestions related to five key areas of New England's food system. It is the result of detailed investigation, thoughtful interviews and broad review by dozens of stakeholders. It provides a solid and ambitious platform for groups and agencies to pursue policy actions at the state and federal levels. In addition, the report calls for creative strategies for our six states to work together toward regional food system solutions.

Following are several highlights from each of the report sections. Considered together, these highlights suggest that the scope of our challenge is broad, as are the opportunities for positive change.

LAND: REDUCING CONVERSION, INCREASING PERMANENT PROTECTION AND EXPANDING ACCESS

- Access to affordable farmland is a significant barrier to expanded food production in New England. Improving land access will require new policy tools, including tax policy changes to promote the sale or lease of land to farmers.
- Stopping the loss of productive farmland will require additional investments in farmland protection, as well as new protection strategies, strengthened farmland mitigation policies and more aggressive state incentives for urban infill development.
- Less restrictive or ambiguous local zoning ordinances are needed to encourage urban agriculture.

FOOD PRODUCTION

- Interviewees were united in concern about farm labor availability, which is a key impediment to increasing regional food production. Federal immigration reform legislation passed in the Senate in 2013 would effectively address this concern, creating an agricultural guest-worker program administered by the U.S. Department of Agriculture for both seasonal and year-round employees.
- Growing production risks associated with climate change will require increased state and federal investments in agricultural research and extension, and better risk management strategies.
- Public investments in farm and food business development appear to be creating new jobs and economic opportunities in agriculture; improved impact analysis would help make the case for sustained state and federal funding for these programs.

FOOD SAFETY, PROCESSING, AGGREGATION AND DISTRIBUTION

- For produce, advocate for changes to the Food Safety Modernization Act rules so that the regulations address food safety concerns, while minimizing the negative effects on farmers, food producers and the environment.
- For dairy farms, promote business planning and provide grants to develop additional on- and off-farm processing capacity.
- For meat and poultry, study methods of aggregation and distribution that can meet the region's growing demand for local meat and poultry products.
- For seafood, expand efforts to educate consumers about other species of locally sourced fish available for consumption, and continue policy efforts to market sustainably harvested fish.

MARKETS

- While the demand curve for locally and regionally grown foods continues to trend up, several interviewees stressed the need for research to better understand current levels of local and regional food consumption, and the potential for increased consumption, focusing especially on price points for large retail and institutional markets.
- Strengthened state procurement policies could drive additional demand for New England-sourced foods at state universities and community colleges, prisons and government buildings. Two-tiered state procurement policies, preferring foods sourced within the state and from across New England, would recognize the imbalance in supply and demand in many New England states and the economic value to the region in increasing regional demand.
- Helping producers comply with the Food Safety Modernization Act and other food safety standards required by retail and institutional buyers will be essential in order to maintain and increase production to meet demand.

WASTE STREAMS

- Identify existing organics infrastructure such as on-farm and commercial composting operations, as well as anaerobic digesters.
- Interviewees encouraged statewide incentives for local action, such as increased tipping fees, while providing funds for food scrap pickup.
- Enact statewide phased bans on landfilling food scraps and other organics.

FRAMEWORKS FOR REGIONAL FOOD SYSTEM COORDINATION

- Multistate approaches to improve the New England food system are essential. Build on existing intergovernmental efforts, regional food system networks and initiatives, and state or local food charters and policy councils.
- It makes sense to explore creating a multistate food system planning entity to chart a course for greater regional coordination and collaboration.
- There could be substantial advantages to harmonizing state programs and seeking regulatory reciprocity where feasible, such as in meat processing, institutional purchasing, and labor and workforce development.

New England Food Policy: Building a Sustainable Food System constitutes an agenda for action. It is intended to guide the collaborating authors in partnership with food system leaders and stakeholders in each New England state to hone, support and implement public policies and programs that could have the most significant impact toward strengthening and regionalizing our food system. Through convenings, strategy sessions, webinar trainings and support from food policy and organizing consultants, advocates at all levels will be able to work with others on the policy issues that are strategic priorities for them.

In addition to the specific efforts supported by this project, groups and agencies throughout New England can use this report to inspire, inform and direct their own, as well as collective, action to promote more supportive public policies. The policy options, research and analysis recommendations, and best practices listed here will lead to many more that will move us toward a more sustainable, secure and just food system for New England.

Appendix

This Appendix includes additional information that was collected during research undertaken for *New England Food Policy: Building a Sustainable Food System*. The intention is for this to serve as an accompaniment to the main text; the information herein is not a complete inventory of federal and state policies relevant to New England food and agriculture. In some cases, the information in the Appendix is referenced in the report, but in many cases it is not. The Appendix does not include information for all sections of the report.

LAND: REDUCING CONVERSION, INCREASING PERMANENT PROTECTION AND EXPANDING ACCESS

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APPENDIX A: CURRENT USE PROPERTY TAX VALUATION

Relevant Statutory and Regulatory Sources

Connecticut	Conn. Gen. Stat. §§ 12-107 & 12-504(a)
Maine	7 M.R.S. §§ 152 & 1112
Massachusetts	M.G.L.c. 61A §§ 1-15
New Hampshire	N.H. Rev. Stat. Ann. §§ 79-A:1-14 & 79-A:25-a
Rhode Island	R.I.G.L. § 44-5-39 R.I. Code R. 25-3-21:5
Vermont	10 V.S.A. §§ 3751-63

ADDITIONAL INFORMATION

COMPARISON OF CURRENT USE POLICIES BY STATE				
	Connecticut	Maine	Massachusetts	
ELIGIBILITY	Size	<ul style="list-style-type: none"> • No minimum is necessary, but the applicant must show bona fide agribusiness or farming activity. 	<ul style="list-style-type: none"> • Five contiguous acres are necessary. 	<ul style="list-style-type: none"> • Five contiguous acres are necessary.
	Income	<ul style="list-style-type: none"> • No minimum is necessary, but the applicant must show bona fide agribusiness or farming activity. 	<ul style="list-style-type: none"> • The parcel must gross \$2,000 annually. 	<ul style="list-style-type: none"> • The purpose must be to gross \$500 annually, with an additional \$5 gross per extra acre of enrolled land.
	Continuity of Use	<ul style="list-style-type: none"> • No minimum is necessary, but the applicant must show bona fide agribusiness or farming activity. • Enrollment of fallow land is allowed if the reason for disuse is "soil nutrient replenishment, crop rotation, soil conservation purposes, labor and/or capital investment requirements, market conditions or various other reasons that might result in a less productive use of the land." 	<ul style="list-style-type: none"> • The parcel must have met the size and income requirements for one of two, or three of five years preceding the application. 	<ul style="list-style-type: none"> • The parcel must have met the size and income requirements for at least two years preceding the application.
APPLICATION		<ul style="list-style-type: none"> • i. Guidelines for Agricultural Valuation, put out by the Department of Agriculture and Revenue Services, suggest a per-acre valuation based on agricultural activity. • ii. Adjustment factors allow the assessor to deviate from the prescribed value, if he or she can substantiate the deviation. • iii. Conservation measures qualify as an adjustment factor. 		
RETENTION	<ul style="list-style-type: none"> • Recapture tax penalties decrease every year the land has been in current use assessment. 		<ul style="list-style-type: none"> • A recapture tax is levied on the original landowner. • A conveyance tax is levied on the purchasing developer. • Right of first refusal gives the municipality the option of purchasing land that has been a part of the state's current use valuation program. 	

New Hampshire	Rhode Island	Vermont
<ul style="list-style-type: none"> To be eligible, the applicant needs 10 acres, which may be aggregated with land used for forestry and “wild-land,” if the parcel meets the income requirements. 	<ul style="list-style-type: none"> Five acres are necessary if the land is owned by a farmer. No minimum is required if the primary purpose is horticulture and/or agriculture. No minimum is necessary for subsistence farming. No minimum is required if the combination of acreage, crop reduction and income qualifies the land as a farm. 	<ul style="list-style-type: none"> A minimum of 25 acres are necessary. No minimum is required if the land is owned by a farmer and is part of an overall farm unit OR is used by a farmer as part of his or her farming operations. No minimum is necessary if the parcel of up to 25 acres produces a gross income of at least \$2,000.
<ul style="list-style-type: none"> The parcel must gross \$2,500 annually. 	<ul style="list-style-type: none"> Land qualifying under the five-acres-by-farmer parcel size minimum must produce \$2,500 annually. There is no minimum for land that has a primarily agricultural and/or horticultural use OR is a subsistence farm. 	<ul style="list-style-type: none"> No minimum is required if the land parcel of up to 25 acres produces a gross income of \$2,000. Larger parcels must gross \$75 per acre above the 25 acre minimum, with the total income not to exceed \$5,000. Exceptions may be made in cases of orchard lands planted with fruit producing trees, bushes or vines that are not yet of bearing age.
<ul style="list-style-type: none"> The parcel must have met the size and income requirements the year prior to the application, and on a continuing basis. 	<ul style="list-style-type: none"> The parcel must have met the size and income requirements in one of two years preceding the application. 	<ul style="list-style-type: none"> The parcel must have met the size and income requirements in one of two, or three of five calendar years preceding the application. If the land is leased, the lease must have been underwritten for three years.
<ul style="list-style-type: none"> The state gives municipalities the option to direct Land Use Change Tax penalties into a conservation fund administered by the municipality. Funds can be used to purchase land or conservation easements; create town maps; evaluate wetlands, perform inventories of natural resources; invite guest speakers; and train and educate citizens. 		<ul style="list-style-type: none"> A flat tax penalty of 20 percent of fair market value is charged up to 10 years after the land is enrolled. After 10 years, the penalty is reduced to 10 percent.

APPENDIX B: STATE AND FEDERAL ESTATE TAXES

Federal Estate Tax

- The federal estate tax law is at 26 C.F.R. part 20.
- The 2013 federal estate tax applies to the amount of an estate that exceeds \$5.25 million, and the tax rate is capped at 35 percent.¹
- Normally, estate taxes must be paid within nine months of death. If at least 35 percent of the value of an estate is a farm, taxes may be paid over an additional 14 years, with interest due after the fifth year.²

State Estate Taxes

Connecticut

- The Connecticut estate tax law is at Conn. Gen. Stat. 12-391.
- The exemption was reduced from \$3.5 million in 2011: Public Act 11-6.
- The estate tax rate begins at 7.2 percent of the excess over \$2 million and increases. The highest bracket is for an estate worth at least \$10 million; the rate is \$748,200 plus 12 percent of the excess over \$10.1 million.

Maine

- The Maine estate tax law is at 36 M.R.S. part 6.
- The estate tax rate begins at 8 percent of the excess over \$2 million and increases. The highest bracket is for an estate worth more than \$8 million; the rate is \$540,000 plus 12 percent of the excess over \$8 million.

Massachusetts

- The Massachusetts estate tax law is at M.G.L.c. 65C.³
- Based on the Internal Revenue Code in effect on Dec. 31, 2000, if an estate consists solely of property subject to Massachusetts estate taxation, it pays to Massachusetts an amount equal to the federal credit. For an estate worth more than \$1 million, the rate starts at 6.4 percent and increases to 16 percent for an estate worth \$10 million or more.

Rhode Island

- The Rhode Island estate tax law is at R.I.G.L. §§ 44-22-1 to -2.
- The tax is a sum equal to the maximum credit for state death taxes allowed by 26 U.S.C. § 2011. For an estate worth more than \$1 million, the rate starts at 6.4 percent and increases to 16 percent for an estate worth \$10 million or more. This amount will be adjusted annually by the percentage of increase in the U.S. Department of Labor's Consumer Price Index for all Urban Consumers.

¹ See *generally Estate Tax*, Internal Revenue Serv., <http://www.irs.gov/Businesses/Small-Businesses-&Self-Employed/Estate-Tax> (last visited Dec. 24, 2013).

² *How Will the Phaseout of Federal Estate Taxes Affect Farmers?*, USDA Econ. Research Serv. 2 (Feb. 2002), http://www.ers.usda.gov/ersDownloadHandler.ashx?file=/media/479563/aib751-02_1_.pdf; see 26 U.S.C. § 6166 (2013).

³ Adjusted taxable gifts are any lifetime gifts in excess of the annual exclusion amounts. *A Guide to Estate Taxes*, Mass. Dep't of Revenue, <http://www.mass.gov/dor/individuals/taxpayer-help-and-resources/tax-guides/estate-tax-information/estate-tax-guide.html> (last visited Dec. 24, 2013).

Vermont

- The Vermont estate tax law is at 32 V.S.A. §§ 7401-97.
- The tax is a sum equal to the maximum credit for state death taxes allowed by 26 U.S.C. § 2011. For an estate worth more than \$1 million, the rate starts at 6.4 percent and increases to 16 percent for an estate worth \$10 million or more.
- The provision related to reduction is 32 V.S.A. § 7443.

APPENDIX C: PLANNING AND LAND USE

State Goals and Planning

Connecticut

- The State Land Use Plan is found in Conn. Gen. Stat. § 16a-24 to -35b.
 - » The plan sets out six growth management principles, ways to achieve each, and ways to measure progress and compliance.
 - » The plan uses geographic information systems (GIS) mapping to designate growth centers and conservations areas (see Mapping section, below).

Maine

- The Growth Management Act is found in 30-A M.R.S. §§ 4302-4457.
- The Maine Land Use Planning Commission directly regulates most development in unorganized territories.⁴
- The Site Location of Development Act is found in 38 M.R.S. §§ 481-90.
 - » The act establishes a statewide permitting program that regulates development projects larger than 20 acres, and some mining and energy development.
 - » Criteria for the program include impacts on infrastructure, groundwater, stormwater and other environmental factors.

Massachusetts

- Sustainable Development Principles have been established for the state as a whole.⁵
- Executive Order 385, Planning for Growth, directs state agencies to promote smart growth principles.

New Hampshire

- The state's Smart Growth Legislation is found in N.H. Rev. Stat. Ann. § 9-B:1 to B:6.
 - » The legislation enumerates smart growth principles and goals.
 - » The legislation also declares that state agencies must encourage smart growth.
- New Hampshire's State Land Use Enabling Act is found in N.H. Rev. Stat. Ann. ch. 674.
 - » The act explains that part of the purpose of master plans is to guide the local planning board in implementing smart growth principles (N.H. Rev. Stat. Ann. § 674:2).

Rhode Island

- The Rhode Island Comprehensive Planning and Land Use Act is found in R.I.G.L. § 45-22.2.
 - » The State Guide Plan (§ 42-11-10):
 - ~ Sets long-term planning goals and policies; and
 - ~ Includes *Land Use 2025: Rhode Island State Land Use Policies and Plan* (April 13, 2006).

⁴ See, e.g., 12 M.R.S. § 685-A(4-A).

⁵ *Sustainable Development Principles*, Mass.gov, http://www.mass.gov/envir/smart_growth_toolkit/pdf/patrick-principles.pdf (last visited Dec. 24, 2013).

Vermont

- Act 250 establishes a statewide permitting program, which regulates many subdivisions and new commercial land uses.⁶
- Act 183 sets forth smart growth guiding principles for municipalities.
- The goals section of Act 200, 24 V.S.A. § 4302(c)(1), make intensive residential development a goal of regional and municipal planning.

State Technical Assistance for Smart Growth Regional Plans

Connecticut

- Conn. Gen. Stat. § 32-7 allows municipal and regional economic development agencies to apply for technical and/or financial assistance to conduct land use studies.
- Conn. Gen. Stat. §§ 16a-35c to -35h prioritizes funding for development projects planned in designated growth centers.

Maine

- A subsection of the Growth Management Act, 30-A M.S.R. §§ 4345–49A, provides for state financial and technical assistance:
 - » The provision allows municipalities or regions to apply for grant money and/or technical assistance to develop and implement land use plans.

Massachusetts

- The Executive Office of Housing and Economic Development Growth Districts Initiative collaborates with municipalities to streamline permitting, re-use existing land, designate growth districts and promote efficient transportation systems.⁷
- The Smart Growth/Smart Energy Toolkit:⁸
 - » Provides model zoning laws;
 - » Explains state smart growth goals; and
 - » Guides municipalities in implementing smart growth principles.

New Hampshire

- Pursuant to N.H. Rev. Stat. Ann. ch. 9-B, state agencies fund downtown revitalization projects and infrastructure in municipalities, in keeping with smart growth principles.⁹

Rhode Island

- R.I.G.L. § 45-22.2-11 allows municipalities to apply for state technical assistance and/or grant money to develop comprehensive land use plans.

⁶ See Act 250, Vt. Natural Res. Bd. (May 25, 2011), <http://www.nrb.state.vt.us/lup/publications/nrb1.pdf>.

⁷ *Growth Districts Initiative Description*, Mass.gov, <http://www.mass.gov/hed/economic/eohed/pro/gdi/growth-districts.html> (last visited Dec. 24, 2013).

⁸ *Smart Growth/Smart Energy Toolkit*, Mass.gov [hereinafter *Smart Growth/Smart Energy Toolkit*], http://www.mass.gov/envir/smart_growth_toolkit/pages/how-to-SG.html (last visited Dec. 24, 2013).

⁹ See *Report on Growth Management*, N.H. Council on Res. and Dev. 6–7 (Nov. 2010), <http://www.nh.gov/oep/planning/programs/cord/documents/smart-growth.pdf>.

Vermont

- 24 V.S.A. ch. 76A allows for historic downtown development.¹⁰ The legislation allows municipalities to:
 - » Apply for growth center designation; and
 - » Receive state technical and financial assistance toward economic development and infrastructure in that growth center.

Regional Planning Commissions

Connecticut

- Connecticut has 14 planning regions.
- Municipalities have voluntarily created regional planning organizations, which are governed by Conn. Gen. Stat. §§ 8-31 to 8-37b.

Maine

- Maine has 12 planning regions.
- A subsection of the Growth Management Act, 30-A M.S.R. §§ 2301-42, establishes regional planning commissions, which:
 - » Are advisory, not binding; and
 - » Create regional plans.

Massachusetts

- Massachusetts has 14 regional planning agencies.
- M.G.L.c. 40B establishes regional planning commissions, which:
 - » Are advisory, not binding; and
 - » Create regional plans.

New Hampshire

- New Hampshire has nine regional planning commissions.
- N.H. Rev. Stat. Ann. §§ 36:45-36:48 establishes regional planning commissions.
 - » Rulings from the commissions are advisory, not binding.
 - » Membership is voluntary, but the number of representatives a participating town has is proportional to the town's population.
 - » The commissions develop regional plans.

Rhode Island

- The state has no formal regional planning commissions.
- R.I.G.L. § 45-22.1 allows towns to create joint municipal planning commissions.

Vermont

- The state has 12 regional planning districts, headed by regional planning commissions.
- 24 V.S.A. ch. 117 (Act 200) governs regional planning.

¹⁰ See *Designation Program Reform, Part II*, Working Group on Industrial Parks 1-5 (Sept. 13, 2013), http://accd.vermont.gov/strong_communities/opportunities/revitalization/growth_center (describing the program).

- » Each town is a member of its respective regional planning commission by statute (24 V.S.A. § 4342).
- » Despite membership, a municipality is not required to pay dues to its regional planning commission, nor adhere to any regional plan the commission creates (24 V.S.A. §§ 4349, 4362).
- » Regional planning commissions offer technical and legal planning assistance to towns (24 V.S.A. § 4345a).
- » These planning commissions also review local plans for regional consistency every five years.
- » Regional planning commissions are partially funded by the state (24 V.S.A. § 4362).

Optimizing Zoning Statutes

Connecticut

- The applicable statutes include:
 - » For zoning, Conn. Gen. Stat. §§ 8-1 to 8-13a;
 - » For local land use ordinances, Conn. Gen. Stat. § 8-17a; and
 - » For municipal planning commissions, Conn. Gen. Stat. §§ 8-18 to 8-30f, with specific language about subdivision regulations, Conn. Gen. Stat. § 8-23.

Maine

- The applicable statutes include:
 - » For planning and zoning, 30-A M.S.R. §§ 4501-54.
 - » The Site Location of Development Act creates a statewide permitting program that regulates development projects larger than 20 acres, and some mining and energy development. Criteria for that program include impacts on infrastructure, groundwater, stormwater and other environmental factors, 38 M.S.R. §§ 481-90.
- In 2012, Maine eliminated confusing provisions and revised its legislation governing land use in unorganized territories.¹¹

Massachusetts

- The applicable statutes include:
 - » For zoning, M.G.L.c. 40A; and
 - » For smart growth zoning districts, M.G.L.c. 40R & 40S.¹²
 - ~ These provisions create overlay zoning districts that permit high-density residential development as of right.
 - ~ Municipalities must apply to the Department of Housing and Community Development to place these zones.
 - ~ The legislation includes financial incentives to adopt these zones.
- Proposed bill H. 1859 is an act promoting the planning and development of sustainable communities. It would:
 - » Simplify the process for a town to amend its zoning ordinance;
 - » Clarify contradictory state law provisions; and
 - » Remove permitting obstacles for high-density zoning, multifamily housing, transferrable development rights, and other smart growth techniques.

¹¹ See generally *An Act To Reform Land Use Planning in the Unorganized Territory*, H.P. 1325, L.D. 1798 (codified as amended in scattered sections of 5 M.R.S., 12 M.R.S., 35-A M.R.S., 38 M.R.S. (2012)), available at <http://www.mainelegislature.org/legis/bills/getPDF.asp?paper=HP1325&item=8&snum=125>.

¹² See *Smart Growth/Smart Energy Toolkit*, *supra* note 8.

New Hampshire

- The applicable statutes include:
 - » The New Hampshire State Land Use Enabling Act, N.H. Rev. Stat. Ann. ch. 674. Under this legislation:
 - ~ Municipalities must create a master plan before enacting zoning;
 - ~ The master plan must adhere to smart growth principles (N.H. Rev. Stat. Ann. § 674:2); and
 - ~ Towns are empowered to use innovative land use controls, such as transferrable development rights and planned unit developments, which facilitate smart growth.

Rhode Island

- The applicable statutes include:
 - » For zoning ordinances, R.I.G.L. § 45-24, which must be consistent with the local comprehensive plan; and
 - » For subdivision regulation, R.I.G.L. § 45-23.
- Rhode Island encouraged integrating agriculture into mixed use and dense urban development by amending its state zoning legislation to make agriculture a permitted use in residential, industrial and commercial districts.¹³

Vermont

- The applicable statutes include:
 - » For zoning, 24 V.S.A. §§ 4411, 4414;
 - » For limits and required municipal provisions, 24 V.S.A. §§ 4412-4413;
 - » For Site Plan Review, 24 V.S.A. § 4416;
 - » For a planned unit development, 24 V.S.A. § 4417;
 - » For subdivision bylaws, 24 V.S.A. § 4418; and
 - » For transfer of development rights, 24 V.S.A. § 4423.

Mapping

Connecticut

- The Interactive Locational Guide Map on the state's website:¹⁴
 - » Designates growth corridors and color-label areas for different types of development or no development at all; and
 - » Is integrated with state land use plan
- The University of Connecticut's Center for Land Use Education and Research "provides information, education and assistance to Connecticut's land use decision makers, community organizations and citizens on how to better protect natural resources while accommodating economic growth."¹⁵

¹³ See R.I. Pub. Laws 2011, ch. 401, § 1(amending R.I.G.L. § 45-24-37); R.I. Pub. Laws 2012, ch. 342, § 1 (amending R.I.G.L. § 45-24-37).

¹⁴ *Conservation & Development Policies Plan for Connecticut: Location Guide Map*, CT.gov, http://www.ct.gov/opm/lib/opm/igp/org/cdupdate/lgm_adopted.pdf (last visited Dec. 24, 2013).

¹⁵ *Center for Land Use Education and Research*, Univ. Conn., <http://clear.uconn.edu/> (last visited Dec. 24, 2013).

Maine

- Maine's Office of GIS has mapping technology, but it is not primarily intended for land use planning.¹⁶

Massachusetts

- The mapping system of the Office of Geographic Information (MassGIS) is online and has data for watersheds, forests and agriculture, but does not necessarily have local zoning data.¹⁷
 - » The data is not primarily intended for land use planning.
 - » Municipalities can access and use the MassGIS. At additional cost, municipalities can buy software and hire GIS staff, who can then add new local data.

New Hampshire

- The Geographically Referenced Analysis and Information Transfer System mapping system was created by the University of New Hampshire, in collaboration with the Office of Energy and Planning.¹⁸
 - » The system maps land uses, but is not primarily used for planning.

Rhode Island

- The state created a land use map with GIS technology in 2006 and 2007.
- The map and data are available online as a resource for planners.¹⁹
- Rhode Island also has a future land use 2025 map, which was created as part of its State Guide Plan.
 - » This map identifies desired land uses and designates growth areas.
 - » It was included in the *Land Use 2025* state plan as a general guide for municipalities.

Vermont

- The Vermont Center for Geographical Information is a public nonprofit organization that has comprehensive GIS mapping of the state.²⁰
- The Vermont Agency of Natural Resources has a BioFinder map, which focuses on watersheds and natural resources.
- The mapping done by these entities is not primarily used for land use planning.

¹⁶ *Maine Office of GIS*, Maine.gov, <http://www.maine.gov/megis/> (last visited Dec. 24, 2013).

¹⁷ *Office of Geographic Information*, Mass.gov, <http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/> (last visited Dec. 24, 2013).

¹⁸ *NH Grant*, Univ. N.H., <http://www.granit.unh.edu/> (last visited Dec. 24, 2013).

¹⁹ *Rhode Island Geographic Information System*, RIGIS, <http://www.edc.uri.edu/rigis/>.

²⁰ *Vermont Center for Geographic Information*, Vermont.gov, <http://vcgi.vermont.gov/> (last visited Dec. 24, 2013).

APPENDIX D: FARMLAND MITIGATION

Federal

- The Natural Resources Conservation Service (NRCS) assessment measures the quality of farmland soils and other factors that affect farm viability, such as proximity to water and parcel size. Sites that score high, meaning they are more valuable for farming, require further analysis including the proposal of alternative sites. Federal agencies use this information to complete the overall site assessment.²¹
- In fiscal year 2011, an NRCS evaluation found that of a total of 202,513 acres that were proposed for conversion to nonagricultural uses, 49 percent were identified as important farmland. Approximately 3 percent of the reviews conducted by NRCS in fiscal year 2011 offered alternative sites. Two agencies — the Federal Highway Administration and the Department of Energy — accounted for 53 percent of all proposed conversions.²²
- In addition to project evaluation, the Farmland Protection Policy Act directs each federal government agency to review its rules and procedures, with assistance from the U.S. Department of Agriculture (USDA), to determine whether any policies prevent the agency from complying with the law. Agencies must develop proposals to bring their programs into compliance and submit reports to NRCS describing steps taken to comply with the law.²³

Connecticut

- Conn. Gen. Stat. § 22-6 gives the commissioner of agriculture the authority to review projects.
- The statute has been used in at least one instance, when the town of Cromwell received funding through the state's Small Town Economic Assistance Program to develop a business park.
 - » Because the project included the development of nearly 100 acres of prime farmland, the commissioner of agriculture was able to review the project.
 - » Through subsequent negotiations, state funding for the project included a condition that the town must create a farmland preservation committee that was charged with conducting an inventory of farms, developing a farmland preservation strategy and identifying farms for conservation.
 - » A 2012 report from the committee includes a recommendation that the town create a farmland preservation program with the goal of protecting 200 acres, twice the acreage developed by the business park.²⁴
- Connecticut's farmland mitigation policy is found in Conn. Gen. Stat. § 7-131o.

²¹ *Mitigation of Farmland Loss*, Am. Farmland Trust 3-26 (Sept. 2002) [hereinafter *Mitigation of Farmland Loss*], http://www.farmlandinfo.org/sites/default/files/FPPA_Mitigation_Report_1.pdf.

²² *Farmland Protection Policy Act Annual Report for FY 2011*, USDA Natural Res. Conservation Serv. 3 (Feb. 2011), http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1049239.pdf.

²³ *Mitigation of Farmland Loss*, *supra* note 21, at 5.

²⁴ *Final Report*, Town of Cromwell Farmland Preservation Comm. 1 (Feb. 9, 2012), <http://cromwellct.com/whatsnew%20files/2012/fpc%20final%20report%20text31612.pdf>.

Massachusetts

- Under Executive Order 193, state-owned land suitable for agriculture must be identified and state agencies controlling this land are required to coordinate agricultural land management policy with the Executive Office of Energy and Environmental Affairs and the Department of Agricultural Resources.
- The Massachusetts Environmental Policy Act is located in M.G.L.c. 30 § 61, and implementing regulations are found at 301 C.M.R. § 11.00.

Vermont

- Vermont's Act 250 is located in 10 V.S.A. ch. 151.

APPENDIX E: PURCHASE OF AGRICULTURAL CONSERVATION EASEMENTS

- The Connecticut Farmland Preservation Program was created in 1978 by Conn. Gen. Stat. §§ 22-26aa to 22-26kk and has protected a total of 38,025 acres. The program has spent \$126 million in state funds through bonding and the Community Investment Act, and has leveraged an additional \$38 million from federal, local and private sources.²⁵
- The Maine Farmland Protection Program was created in 1999 and has protected a total of 8,104 acres. The program has spent \$7.5 million in state funds through appropriations and bonding, and has leveraged an additional \$7.5 million from federal, local and private sources.²⁶
- Massachusetts' Agricultural Preservation Restriction Program was created in 1977 by M.G.L.c. 20 § 23, and has protected a total of 67,143 acres. The program has spent \$203.8 million in state funds through bonding, appropriations, mitigation fees and transportation funding, and has leveraged an additional \$76 million from federal, local and private sources.²⁷
- New Hampshire's three farmland protection programs — Agricultural Lands Preservation Program (created in 1979 by N.H. Rev. Stat. Ann. ch. 432:18-35); the Land Conservation Investment Program (created in 1987); and the Land and Community Heritage Investment Program (created in 2000 by N.H. Rev. Stat. Ann. ch. 227-M) — have protected a total of 13,590 acres. The programs have spent a combined total of \$16.2 million in state funds through appropriations, bonding and recording fees, and have leveraged an additional \$17.3 million from federal, local and private sources.²⁸
- Rhode Island's Purchase of Farmland Development Rights Program was created in 1981 by R.I.G.L. chs. 42-82 and has protected a total of 6,645 acres. The program has spent \$30.3 million in state funds through bonding, appropriations and transportation funding, and has leveraged an additional \$43.9 million from federal, local and private sources.²⁹
- Vermont's Farmland Preservation Program was created in 1987 by 6 V.C.A. ch. 2, and is run through the Vermont Housing and Conservation Board. The program has protected a total of 139,000 acres, has spent \$62.8 million in state funds through bonding, appropriations, mitigation fees, the real estate transfer tax and transportation funding, and has leveraged an additional \$79.6 million from federal, local and private sources.³⁰

Option to Purchase at Agricultural Value

- The Massachusetts' Agricultural Preservation Restriction Program includes an option to purchase the premises at farm market agricultural value for the state (or grantee) when the landowner enters into a purchase and sale agreement with a third party. Once a sale agreement has been reached, the landowner must notify the state, which will have 120 days to exercise the option to purchase. The state (or grantee) may also assign its right to purchase the land to another party, which "will facilitate the use of the premises for commercial agriculture." The option is not applicable when the transfer of ownership is to certain family members or to a co-owner.³¹

²⁵ See *Fact Sheet: Status of State PACE Programs*, Am. Farmland Trust *2 (Aug. 2005), http://www.farmland.org/about/mission/documents/AFT_Pace_state_8-05.pdf.

²⁶ *Id.*

²⁷ *Id.*

²⁸ *Id.*

²⁹ *Id.*

³⁰ *Id.*

³¹ See *Agricultural Conservation Easement Language from Selected Farmland Protection Programs*, Am. Farmland Trust *55, http://www.farmlandinfo.org/documents/39352/Easement_Language_No_Notes_October_2012.pdf (last visited Dec. 24, 2013).

- The Vermont Farmland Preservation Program includes an option to purchase protected land at its agricultural value for the state (or grantee) when the landowner enters into a purchase and sale agreement with a third party. Once a sale agreement has been reached, the landowner must notify the state, which will have 30 days to exercise the option to purchase. This option is not applicable when the transfer of ownership is to certain family members or to a qualified farmer who earns at least half of his or her income from farming.
- Since fall 2012, there have been 98 resales of protected farms with an option to purchase at agricultural value in Massachusetts and 87 in Vermont.³²
- The option to purchase at agricultural value was only considered in 10 of the 87 sales of protected farmland in Vermont; the remaining sales were between family members or to qualified farmers. In nine of the 10 cases that could have triggered the option to purchase at agricultural value, the option was not exercised based on the buyers' business plans for the farms and their credentials as prospective farmers. In the lone exception, the easement holder, Vermont Land Trust, purchased the farm and became an interim owner. In Massachusetts, all the sales of farms with the option to purchase at agricultural value were qualified sales and the option has not yet been exercised.³³
- The review of protected farm sales in Massachusetts and Vermont found that existing farmers expanding their current farming operations represented the largest group of buyers. In Massachusetts, more than half of the individuals purchasing the protected land were doing so to expand existing farming operations. In Vermont, 78 percent of the arms-length, nonfamily, sales were to established farmers.³⁴
- The analysis of protected farm resales in Vermont and Massachusetts clearly show that the option to purchase at agricultural value is working as intended, by keeping protected land in the hands of farmers and farm families. It is not necessarily ensuring that protected farmland is affordable to all sectors of farmers interested in purchasing it, however.³⁵

Conservation Tax Incentives

- Under the federal enhanced conservation tax incentive, which expired at the end of 2013, qualified farmers and ranchers could deduct up to 100 percent of their adjusted gross income for donating a conservation easement. Nonqualified farmers could deduct up to 50 percent of their adjusted gross income annually. The donor could carry forward unused portions of the deduction for 15 years.³⁶ Prior to enactment of the enhanced incentive in 2006, and under current law unless and until the enhanced incentive is reauthorized, the federal deduction for a conservation easement is limited to 30 percent of a donor's adjusted gross income and can be carried forward for only five years. Introduced in 2013, H.R. 2807 and S. 526 would make the enhanced incentives permanent and apply retroactively to easements donated since December 31, 2013. Neither measure had been acted on as of January 2014.³⁷

³² *Does the Option at Agricultural Value Protect Farmland for Beginning Farmers? A Policy Analysis 4*, Land for Good (2013), <http://newyork.farmland.org/wp-content/uploads/2013/06/OPAV-FINAL.pdf>.

³³ *Id.*

³⁴ *Id.* at 5.

³⁵ *Id.* at 2.

³⁶ The enhanced incentive was created in the 2006 Pension Protection Act, extended through 2009 in the 2008 Farm Bill, and then extended through 2011 by section 723 of H. R. 4853. See *The Enhanced Easement Incentive*, Land Trust Alliance, <http://www.landtrustalliance.org/policy/tax-matters/campaigns/the-enhanced-easement-incentive> (last visited Jan. 13, 2014).

³⁷ See *The Enhanced Easement Incentive*, Land Trust Alliance, <http://www.landtrustalliance.org/policy/tax-matters/campaigns/the-enhanced-easement-incentive> (last visited Jan. 13, 2014).

- The Connecticut tax credit for the donation of open space was created in 1999 by Conn. Gen. Stat. § 12-217dd. It provides a state corporate income tax credit for donations or for any discount of the price in any sale of land or conservation easement. The value of the credit is 50 percent of the donation's fair market value. The sale or donation must be to the state, a water company or a nonprofit land conservation organization. The credit is not available for individuals and is not transferable, but may be carried forward for up to 25 years.³⁸ It is applicable to the conservation of water resources; soils, wetlands, beaches or tidal marshes; agricultural lands; and forestry lands larger than 25 acres.
- The Massachusetts Conservation Land Tax Credit was created in 2009 by M.G.L.c. 62 § 6(p) and M.G.L.c. 38AA. It provides a state income tax credit for donations or for any discount of the price in any sale of land or conservation easement. The value of the credit is 50 percent of the donation's fair market value, up to a maximum value of \$50,000. The credit is refundable; if a farmer or landowner does not have income against which to offset the credit in the year that the sale or gift was made, the state will refund to the landowner the difference, up to \$50,000 or 50 percent of the donated value, whichever is less. The program has a cap of \$2 million per year. The sale or donation must be to the state, a municipality or a nonprofit land conservation organization. To be eligible, the land must be in the public interest for natural resource protection, including drinking water supplies, wildlife habitat and biological diversity, agricultural and forestry production, recreational opportunities, or scenic and cultural values. An application process determines the land's eligibility.

³⁸ Public Act 09-3 extended the carry-forward period from 15 years to 25 years, effective Sept. 9, 2009, and applicable to income years on or after Jan. 1, 2009. See An Act Concerning Certain State Programs and the American Recovery and Reinvestment Act of 2009, H.B. 6715, Conn. Pub. Act 09-03 (Apr. 15, 2009).

APPENDIX F: URBAN AGRICULTURE: ZONING

State Law

Connecticut

Conn. Gen. Stat. § 8-2 states that “zoning regulations shall be made with reasonable consideration for their impact on agriculture.”

Massachusetts

M.G.L.c. 40A § 3, contains a general prohibition against local zoning ordinances and bylaws regulating or restricting commercial agriculture parcels that are at least five acres, or at least two acres if each acre produces more than \$1,000 in gross sales.

New Hampshire

N.H. Rev. Stat. Ann. § 674:32-a creates a presumption that primary and accessory agricultural activities are permitted wherever they are not explicitly excluded uses, as long as they are “conducted in accordance with best management practices adopted by the commissioner of agriculture, markets, and food and with federal and state laws, regulations, and rules.” N.H. Rev. Stat. Ann. § 674:32-c(I) provides that tilling soil and harvesting crops, as a primary or accessory use, cannot be prohibited in any district. N.H. Rev. Stat. Ann. § 674:32-c (II) provides that such uses are subject to general building and site requirements, such as dimensional standards and setbacks, but creates a waiver process if those requirements would effectively prohibit agriculture that is otherwise permitted by that statute.

Rhode Island

State law provides that plant agriculture is a permitted use in all zoning districts — residential, commercial and industrial — except as necessary to protect public health or wildlife habitat, according to R.I.G.L. § 45-24-37(g). A municipality is otherwise free to restrict agricultural uses, as long as those regulations comply with Rhode Island’s Zoning Enabling Act, R.I.G.L. § 45-24.

Vermont

Vermont municipal bylaws “shall not regulate accepted agricultural and silvicultural practices, including the construction of farm structures, as those practices are defined by the secretary of agriculture, food and markets or the commissioner of forests, parks and recreation, respectively, under 10 V.S.A. §§ 1021(f) and 1259(f) and 6 V.S.A. § 4810.”³⁹ Accepted agricultural practices, as adopted, implemented and enforced by the secretary of agriculture, food, and markets, are standards applicable to “activities which have a potential for causing pollutants to enter the groundwater and waters of the state, including dairy and other livestock operations plus all forms of crop and nursery operations and on-farm or agricultural fairground, registered pursuant to 20 V.S.A. § 3902, livestock and poultry slaughter and processing activities.”⁴⁰ Anyone building a farm structure must notify the appropriate municipality of his or her intent to build, but need not obtain a permit from the municipality. Farm structures must abide by setbacks provided by the secretary of agriculture, food, and markets.⁴¹

39 24 V.S.A. § 4413(d).

40 6 V.S.A. § 4810.

41 24 V.S.A. § 4413(d).

APPENDIX G: BEGINNING FARMER TAX CREDIT

Iowa Beginning Farmer Tax Credit

- The Agricultural Assets Transfer Tax Credit was created in 2006 by Iowa Code § 175.37 and provides a tax credit to the owners of agricultural assets, including agricultural land, depreciable machinery or equipment, breeding livestock and buildings, for leasing land or other assets to beginning farmers.
- To qualify, the beginning farmers to whom the owners lease must have a net worth of less than \$343,000; be at least 18 years old; and “have sufficient education and training to operate a production operation.”⁴²
- The lease term must be between two and five years, and the lease value must be at or near market value.
- Tax credits are 5 percent of the rental income received for cash rent or 15 percent of the owner’s share of product for crop or livestock share agreements. The credit can be carried forward for five years and can be transferred to a related party.⁴³
- From 2007 through 2011, the program issued 2,624 credits at a value of more than \$15 million.⁴⁴

Nebraska Beginning Farmer Tax Credit

- The Beginning Farmer Tax Credit was created in 2009 by the Neb. Rev. Stat. §§ 77-5201 to 77-5215. It provides a tax credit to the owners of agricultural assets, including agricultural land, cattle, tractors, grain storage, irrigation equipment and other assets, for leasing land or other assets to beginning farmers.
- To qualify, beginning farmers to whom the owners lease must have a net worth of less than \$200,000; have farmed or ranched fewer than 10 of the past 15 years; plan to farm full-time; have farming experience or education; and have participated in a financial management education program.
- Participating beginning farmers receive up to a \$500 tax credit reimbursement for the financial management class.
- The lease term must be three years and the lease value must be at or near market value.
- Tax credits are 10 percent of the rental income received for cash rent or 15 percent of the owner’s share of the product for crop or livestock share agreements.⁴⁵ From 2005 through 2009, the program issued credits to 435 asset owners at a value of \$1.9 million.⁴⁶

⁴² Iowa Beginning Farmer Tax Credit, Iowa State Univ., http://www.google.com/url?sa=t&rct=j&q=%22have%20sufficient%20education%20and%20training%20to%20operate%20a%20production%20operation%22source=web&cd=1&ved=OCCKQFjAA&url=http%3A%2F%2Fwww.calt.iastate.edu%2FPDF%2Flowa%2520Beginning%2520Farmer%2520Tax%2520Credit.docx&ei=OxW6UtmjMKzNsQTHz4G4Cw&usg=AFQjCNHOUkL_tt-kyVuarIi3pxYIWxekDQ&bvm=bv.58187178,d.cWc (last visited Dec. 24, 2013).

⁴³ See generally Iowa Beginning Farmer Tax Credit, Iowa Finance Auth., <http://iowafinanceauthority.gov/Public/Pages/PC204LN48> (last visited Dec. 24, 2013).

⁴⁴ *Id.*

⁴⁵ See generally Beginning Farmer Programs — Tax Credit Program, Neb. Dep’t of Agric., http://www.agr.ne.gov/beg_farmer/taxcp.html (last visited Dec. 24, 2013).

⁴⁶ See Beginning Farmer Tax Credit Act—Annual Report, Neb. Dep’t of Agric. 5 (June 2009), <http://ncl.nc.state.ne.us/epubs/A5000/A004-200809.pdf>.

APPENDIX H: FINANCING LAND ACQUISITION

Beginning Farmer and Rancher Individual Development Accounts

- The Beginning Farmer and Rancher Individual Development Accounts Pilot Program was created in the 2008 Farm Bill (Food, Conservation, and Energy Act of 2008, section 5301).
- Eligible beginning farmers or ranchers are those who do not have significant financial resources or assets and have an income less than 80 percent of the median income of the state in which they live, or 200 percent of the most recent annual federal poverty income guidelines published by the Department of Health and Human Services.
- Any nonprofit organization, tribe, local or state government can apply to the USDA to receive a grant, establish and administer the individual development accounts, and provide access to business and financial education. State programs listed below could potentially participate in the program if they were designed to meet the program objectives of purchasing farmland, farm equipment or other assets. The administering entity of the program establishes a reserve fund made up of the total amount of the individual development account grant — up to \$250,000 — and a nonfederal match of 50 percent of that award.
- Once a participating organization establishes a beginning farmer individual development account project, an eligible beginning farmer or rancher can set up an account with the organization and deposit money. The organization then matches the amount the farmer deposited at a rate of at least 100 percent and up to 200 percent. Up to \$3,000 of an individual's savings can be matched per year.
- Program participants are required to complete financial training programs and develop a savings plan before the funds may be withdrawn to purchase assets.

Connecticut Individual Development Account Initiative

- The Connecticut Individual Development Account Initiative was created by the state's General Assembly in 2000 through Public Act 00-192. It is designed to help families and individuals purchase assets including a home, small business, post-secondary education or vehicle, or place a deposit on an apartment. As of 2011, the Connecticut legislature has appropriated roughly \$2.34 million to the Department of Labor for the initiative.⁴⁷
- Businesses that contribute to state funds for the Individual Development Account Initiative can receive tax credits through the state's Human Capital Investment Tax Credit.⁴⁸

Maine Family Development Account

- Title 10 M.R.S. sections 1075-79 establish a family development account program that lets eligible people establish savings accounts for education, job training, purchasing or repairing a home, purchasing or repairing a vehicle for access to work or education, capitalization of a small business, health care costs greater than \$500 not covered by private or public insurance, or other basic necessities. The program is administered by community development organizations.

⁴⁷ See generally *Connecticut Individual Development Account Initiative*, Conn. Dep't of Labor, <http://www.ctdol.state.ct.us/ida/idahome.htm>.

⁴⁸ See *Connecticut Individual Development Account Initiative (IDA): Frequently Asked Questions*, Conn. Dep't of Labor, <http://www.ctdol.state.ct.us/ida/dir/faq.html> (last visited Dec. 24, 2013).

Massachusetts Individual Development Account Program

- The Individual Development Account program is administered by the Massachusetts Department of Housing and Community Development and allows low-income participants to save for the purchase of a first home, receive post-secondary education or training, or start or expand a small business. The program received \$600,000 in state funding in fiscal year 2008 and \$700,000 in fiscal year 2009.⁴⁹

New Hampshire

- Some individual development account programs exist, but are administered by nongovernmental agencies.

Vermont Individual Development Accounts

- The Individual Development Account program is administered by the Vermont Department for Children and Families through Community Action Agencies. The program helps income-eligible individuals save money to buy a home, pursue higher education or capitalize a small business. Participants' savings are matched at varying rates by third parties such as businesses, government, financial institutions or philanthropic organizations. Savings are matched two-to-one on \$500 savings for up to two years.⁵⁰

Delaware Young Farmers Farmland Purchase and Preservation Loan Program

- This program is designed to help young farmers acquire farmland through a long-term, no-interest loan, which cannot exceed \$500,000.
- In exchange for the loan, the farmland being acquired is subjected at closing to a permanent preservation easement.
- The eligibility criteria include:
 - » The applicant must be between 18 and 40 years old at the time the loan
 - » The applicant must have a net worth of no more than \$300,000.
 - » The farmland must contain at least 15 tillable acres, and the applicant must not own or have an ownership interest in more than twice the tillable acres subject to purchase with funds from the program.
 - » The applicant must commit that he or she will remain actively engaged in agricultural usage of the farmland during the term of the program loan.⁵¹

⁴⁹ See *Individual Development Account*, Mass.gov, <http://www.mass.gov/hed/community/funding/individual-development-account-ida.html> (last visited Dec. 24, 2013).

⁵⁰ See *generally Individual Development Accounts*, Vermont.gov, <http://dcf.vermont.gov/oeo/ida> (last visited Dec. 24 2013).

⁵¹ See *Farmland Purchase and Preservation Loan Program Procedures and Guidelines*, Del. Agric. Lands Preservation Found., http://dda.delaware.gov/young_farmers_packet.pdf (last visited Dec. 24, 2013).

New Brunswick New Land Purchase Program

- The program in New Brunswick, Canada, purchases land and leases it to an applicant for up to six years. The applicant agrees to purchase the land at the end of the lease.
 - » During the first and second years, annual lease payments are deferred based on the equivalent of the annual provincial lending rate and the lease amount.
 - » Starting in year three, annual lease payments are made at the beginning of each year.
- The eligibility criteria include:
 - » The proposed land has not had any agricultural crop produced or harvested during the previous two years.
 - » A business plan must be developed and show reasonable chances of viability.⁵²

⁵² See *New Land Purchase Program*, New Brunswick, Ca., http://www2.gnb.ca/content/gnb/en/services/services_renderer.201160.New_Land_Purchase_Program_.html (last visited Dec. 24, 2013).

APPENDIX I: BEGINNING FARMERS AND NEW FARM ENTERPRISES

New Farmer Training

College and University Degree Programs

- The following are examples of agricultural degree programs in New England:
 - » The University of Maine's Sustainable Agriculture Program offers an interdisciplinary bachelor of science for beginning farmers with the faculties of the departments of plant, soil and environmental sciences, biology, and resource economics and policy. Courses include cropping systems, soil organic matter management, weed identification, and soil chemistry and plant nutrition. Graduate students conducting research in sustainable agriculture can earn master's degree or doctorate in various departments.⁵³
 - » The University of Connecticut's College of Agriculture and Natural Resources offers a bachelor of science in 15 majors, including animal science, horticulture and turfgrass and soil science. The Ratcliffe Hicks School of Agriculture has a two-year associate degree with majors in ornamental horticulture, turfgrass management and animal science, which offers concentrations in equine science or dairy and livestock management.⁵⁴
 - » The University of New Hampshire offers an EcoGastronomy dual major, which can be paired with any primary major. EcoGastronomy integrates sustainable agriculture, hospitality management and nutrition, and emphasizes "the interdisciplinary, international, and experiential knowledge that connects all three fields."⁵⁵ The University of New Hampshire also offers degrees in sustainable agriculture and food systems, as well as integrated agriculture management.⁵⁶

Business Planning

Massachusetts Matching Enterprise Grants for Agriculture Program

- This program is intended to help start up farm enterprises.
- Farmers do not need to own their land, but must have a written lease agreement.
- Funding of up to \$10,000 must be matched one-to-one.⁵⁷
- In 2013, a total of \$82,600 was awarded to 10 projects, including for the purchase of equipment to improve production and post-harvest operations and equipment to create value-added products. Funding also went toward infrastructure improvements, such as irrigation systems and farm stands.⁵⁸

Access to Capital

USDA-Farm Service Agency

- Under the Down Payment Program, the maximum Farm Service Agency (FSA) loan amount is \$225,000. The remaining portion must come from other sources. The loan term is 20 years, with

⁵³ *Sustainable Agriculture Program*, Univ. of Me., <http://umaine.edu/sag/more/> (last visited Dec. 24, 2013).

⁵⁴ *College of Agriculture and Natural Resources: Degree Programs*, Univ. of Conn., <http://www.myagnr.uconn.edu/degrees.php> (last visited Dec. 24, 2013).

⁵⁵ *Dual Major in EcoGastronomy*, Univ. of N.H., <http://www.unh.edu/ecogastronomy/> (last visited Dec. 24, 2013).

⁵⁶ *Sustainable Agriculture and Food Systems*, Univ. of N.H., <http://www.sustainableag.unh.edu/> (last visited Dec. 2, 2013); *Thompson School of Applied Science*, Univ. of N.H., <http://www.thompsonschooll.unh.edu/hort/iamt> (last visited Dec. 24, 2013).

⁵⁷ *See Matching Enterprise Grants for Agriculture Program*, Mass.gov, <http://www.mass.gov/eea/agencies/agr/about/divisions/mega.html> (last visited Dec. 24, 2013).

⁵⁸ *Patrick-Murray Administration Awards Matching Grants for Beginning Massachusetts Farms*, Mass.gov, <http://www.mass.gov/eea/pr-2013/admin-awards-matching-grants-for-beginning-ma-farms.html> (last visited Dec. 24, 2013).

an interest rate that is 4 percent lower than the regular FSA direct ownership loan rate, but no less than 1.5 percent.⁵⁹

- Under the Loan Contract Guarantees Program, the buyer must provide a down payment of at least 5 percent. The guarantee period is 10 years.⁶⁰
- The microloan program is administered through the Operating Loan Program. The microloan program includes financing for niche crops sold directly to ethnic markets and farmers markets. Loans can cover initial start-up expenses such as hoop houses, tools, irrigation, delivery vehicles, and annual expenses such as seed, fertilizer, utilities, land rental, marketing and distribution expenses.⁶¹
- The Farm Service Agency reserves a portion of several loan funds exclusively for beginning farmers, including 35 percent of Direct Farm Operating loans, 40 percent of Guaranteed Operating loans, 70 percent of Direct Farm Ownership loans and 25 percent of Guaranteed Farm Ownership loans.⁶²
 - » Direct Operating loans of up to \$300,000 may be used for normal operating expenses, machinery and equipment, minor real estate repairs or improvements, and refinancing debt. The repayment term may vary, but typically will not exceed seven years; annual operating loans are generally repaid within 12 months.⁶³
 - » In a Guaranteed Operating loan, the FSA guarantees up to 90 percent (95 percent in certain cases) of a loan from a commercial lender for normal operating expenses, machinery and equipment, minor real estate repairs or improvements, and refinancing debt. The guarantee is limited to \$1.3 million, adjusted annually for inflation; the repayment term may vary, but typically will not exceed seven years; annual operating loans are generally repaid within 12 months.⁶⁴
 - » Direct Farm Ownership loans of up to \$300,000 may be used to purchase a farm, enlarge an existing farm, construct new farm buildings, improve farm structures, or pay closing costs. The maximum repayment term is 40 years.⁶⁵
 - » In a Guaranteed Farm Ownership loan, the FSA will guarantee up to 90 percent (95 percent in certain cases) of a loan from a commercial lender to purchase a farm, enlarge an existing farm, construct new farm buildings, improve farm structures, or pay closing costs. The guarantee is limited to \$1.3 million, adjusted annually for inflation; the maximum repayment term is 40 years.⁶⁶

Aggie Bonds

- Under an Aggie Bond program, a state creates a bond that allows lenders to earn federally tax-exempt interest on loans to eligible beginning farmers and ranchers. With these tax savings, lenders can offer reduced rates on these loans. Aggie Bonds were enhanced in the 2008 Farm Bill by increasing the maximum loan amount for land to \$450,000 per farmer, adjusted annually for

⁵⁹ *Farm Service Agency Guaranteed Lender Training*, USDA 43 (Sept. 2013), http://www.fsa.usda.gov/Internet/FSA_File/2013fsagulendertraining.pdf.

⁶⁰ *Id.*

⁶¹ *Id.* at 41.

⁶² See generally *Beginning Farmers and Ranchers Loans*, USDA, <http://www.fsa.usda.gov/FSA/webapp?area=home&subject=fmlp&topic=bfl> (last visited Dec. 24, 2013).

⁶³ *Fact Sheet: Farm Loans*, USDA 1 (Oct. 2012), http://www.fsa.usda.gov/Internet/FSA_File/loanprograms2012.pdf.

⁶⁴ *Id.*

⁶⁵ *Id.*

⁶⁶ *Id.*

inflation. An earlier stipulation that beginning farmers and ranchers could not have previously owned real estate valuing more than \$125,000 was also removed from the provision in 2008.⁶⁷

USDA Beginning Farmer and Rancher Development Program

- The Beginning Farmer and Rancher Development Program is a grant program administered by the USDA National Institute of Food and Agriculture. Collaborative state, local or regionally based networks and partnerships between public and private entities are eligible to apply. These may include a state cooperative extension service, a state agency, a community-based, nongovernmental organization, or a college or university. Grants are limited to three years and \$250,000 per year, with a minimum 25 percent nonfederal match.⁶⁸
- The program addresses production and management strategies to enhance land stewardship; business management and decision support strategies that enhance financial viability, marketing strategies that enhance competitiveness, legal strategies that assist with farm or land acquisition and transfer, and other topics to enhance competitiveness and sustainability.

Recent Beginning Farmer and Rancher Development Grants Made to New England Entities⁶⁹

2012

- The University of Connecticut Cooperative Extension System received \$520,026 for *Scaling Up: Helping Connecticut's Beginning Farmers Evolve from Small-Scale Enterprises into Viable Farm Businesses*. The project offers tailored support to 10 beginning farmers to evolve their small-scale farms to viable farm businesses. In a second phase, the project will develop new training tools and curriculum in production planning, farm infrastructure and non-production management. The project will assist farmers looking for farmland to lease and host a scaling up conference.⁷⁰
- The Massachusetts-based Community Involved in Sustaining Agriculture received \$65,594 for a project to build capacity through training on land acquisition, marketing and business strategies.
- The Organization for Refugee and Immigrant Success received \$358,484 for a project to help new Americans build sustainable farm enterprises that are consistent with their culture and lifestyle aspirations and that strengthen regional, sustainable food systems as a whole.

2011

- The Maine Organic Farmers and Gardeners Association received \$532,045 to enhance and expand its Journeyperson Farm Training Program, which offers a two-year package of educational and financial support — including mentorship from an experienced farmer, business and management training and scholarship funds — to new farmers in Maine.
- The Somali Bantu Association of New Hampshire received \$78,889 to help Somali Bantu, Bhutanese and other refugee groups build sustainable farm enterprises that are consistent with their culture and lifestyle aspirations and that strengthen regional, sustainable food systems as a whole.

⁶⁷ State with Aggie Bond programs: Arkansas, Colorado, Illinois, Indiana, Iowa, Kansas, Maryland, Minnesota, Missouri, Montana, Nebraska, North Carolina, North Dakota, Oklahoma, Pennsylvania, South Dakota and Washington. See *Index of U.S. States' Agricultural Finance Programs*, Nat'l Council of State Agric. Finance Programs, <http://www.stateagfinance.org/#> (last visited Dec. 24, 2013).

⁶⁸ See *Guide to USDA Funding for Local and Regional Food Systems*, Nat'l Sustainable Agric. Coal. 4-14 (Apr. 2010), http://sustainableagriculture.net/wp-content/uploads/2010/05/NSAC_FoodSystemsFundingGuide_FirstEdition_4_2010.pdf.

⁶⁹ *Current Research Information System*, USDA, [http://cris.nifa.usda.gov/cgi-bin/starfinder/O?path=fastlink1.txt&id=anon&pass=&search=CG=\(*-49400*\)%20AND%20GY=2009:2012&format=WEBTITLES&](http://cris.nifa.usda.gov/cgi-bin/starfinder/O?path=fastlink1.txt&id=anon&pass=&search=CG=(*-49400*)%20AND%20GY=2009:2012&format=WEBTITLES&) (last visited Dec. 24, 2013).

⁷⁰ Interview with Jiff Martin, Sustainable Food Systems, Univ. Conn. Coop. Extension (Nov. 27, 2012).

- The Rhode Island Association of Conservation Districts received \$148,853 to provide beginning farmers with access to land, equipment and mentoring while they hone their skills and establish their businesses. The grant helped establish a shared equipment bank and develop an online decision-making exploration tool and farm business course modules to improve access to regionally relevant information.
- The Vermont New Farmer Network Strategies for Success project, at the University of Vermont's Extension received \$659,784 for a three-year effort to strengthen capacity providing education, technical assistance, coaching and mentoring to beginning farmers in the areas of production and management strategies, business management and decision support, marketing strategies, legal strategies, and topics related to processing safe and nutritious food.

2010

- Nuestras Raices received \$740,131 for Tierra de Oportunidades, an immigrant and refugee beginning farmer training and incubation program in western and central Massachusetts.
- The Friedman School of Nutrition Science and Policy at Tufts University received \$749,014 for the Massachusetts Beginning Farmer Agricultural Alliance, a statewide collaboration of farmers and more than 40 farm service providers. The program's aim was to promote and coordinate education, training and technical assistance opportunities for hundreds of beginning farmers.
- Land For Good received \$547,307 for a project to assure land access for New England's beginning farmers by filling specific program gaps, building professional capacity, informing and assisting target audiences, and developing and disseminating land tenure and transfer innovations.

2009

- Cultivating Community received \$600,000 for a project called Cultivating New American Farmers and Youth Entrepreneurs in Maine and New Hampshire. The project worked to increase participant's self-sufficiency by providing job training and/or relevant marketing, financial and business planning information.

APPENDIX J: ACCESS TO WATER

State Water Allocation Programs

Connecticut

The Connecticut Water Diversion Policy Act (Conn. Gen. Stat. §§ 22a-365 to 22a-378) requires anyone who wants to withdraw water to first obtain a permit. The commissioner of energy and environmental protection may grant or deny such a permit based on several factors reflecting a standard reasonable-use balancing test. Grandfathered pre-1982 water extractions must be reported to the commissioner, but agricultural extractions may be estimated.

Maine

The Maine Natural Resources Protection Act (38 M.R.S. §§ 480-A to 480-HH) requires any person “draining or otherwise dewatering” a body of water to first obtain a permit. The Department of Environmental Protection may grant or deny such a permit based on several factors reflecting a standard reasonable-use balancing test. The Maine Water Withdrawal Reporting Program (Me. Rev. Stat. tit. 38, §§ 470-A to 470-H) generally requires large withdrawals of water to be reported. The threshold for reporting is determined relative to the size of the water body from which water is being withdrawn. Agricultural producers, however, are exempt from this reporting requirement. Overall, water withdrawals may not draw down streams below a level that protects both water quality and aquatic life.

Massachusetts

The Massachusetts Water Management Act (M.G.L.c. 21G) requires anyone withdrawing more than 100,000 gallons of water per day to first get a permit. The Department of Environmental Protection may grant or deny such a permit based on several factors reflecting a standard reasonable-use balancing test.

New Hampshire

The New Hampshire Groundwater Protection Act (N.H. Rev. Stat. ch. 485C) requires anyone withdrawing more than 57,600 gallons of groundwater per day to get prior approval from the Department of Environmental Services. The department may grant or deny such approval based on several factors reflecting a standard reasonable-use balancing test. N.H. Rev. Stat. ch. 488 requires anyone who withdraws 20,000 gallons per day or 600,000 gallons per 30-month period to register this withdrawal with the department.

Rhode Island

Rhode Island has no water-allocation permitting regime.

Vermont

A chapter of the Vermont Statutes titled Groundwater Protection (10 V.S.A. ch. 48) requires anyone withdrawing 57,600 gallons of water per day to first obtain a permit. Groundwater withdrawal for agriculture is exempt from this permit requirement. Vermont also generally requires anyone withdrawing 20,000 gallons of water per day to register this withdrawal with the secretary of natural resources. Groundwater withdrawal for agriculture and for dairy farmers is exempt from this reporting requirement.

APPENDIX K: RESEARCH, DEVELOPMENT AND EXTENSION

USDA National Institute of Food and Agriculture

- The National Institute of Food and Agriculture was created in the 2008 Farm Bill as a reorganization of the USDA Research, Education and Economics and the former Cooperative State Research, Education and Extension Service.⁷¹
- The Institute's nearly 40 competitive grant programs for research, extension and higher education activities include multiple funding opportunities. Eligibility and funding levels vary widely and some grants are addressed in other sections of this report.⁷²
- Through at least 11 formula grants, the National Institute of Food and Agriculture provides funding to land-grant institutions, schools of forestry and veterinary schools. The level of funding provided to each institution under formula grants is determined by a method, often defined in federal statutes, that includes variables such as farm and rural populations. Decisions about the allocation of these funds to specific projects are made at the state or university level.
- The institute provides noncompetitive grant funding for projects authorized by Congress to support a designated institution or set of institutions for particular research, education or extension topics of importance to a state or region.⁷³

Agricultural Experiment Stations

- The Hatch Act of 1887 initiated federal funding for stations and established them as part of land-grant colleges across the country; the stations work closely with cooperative extension.
- Most stations still operate under the colleges, although some, such as the Connecticut Agricultural Experiment Station, are separate state agencies.
- Experiment stations exist in all six New England states and often have multiple locations.
- Important research continues today: In Massachusetts, for example, scientists are examining the possible effects of climate change by exploring the impact on agricultural crops of increased carbon dioxide and ozone levels.⁷⁴
- The focus of experiment stations has expanded and covers a range of topics. In Rhode Island, for example, research focus areas include aquaculture and fishing, food safety, health and well-being of fish and animals, landscape horticulture, natural resources, nutrition, and sustainable and nurturing communities.⁷⁵

Sustainable Agriculture Research and Education Program

- The Sustainable Agriculture Research and Education (SARE) program is part of the National Institute of Food and Agriculture. SARE-funded projects range from large, multiyear endeavors that may be awarded grants of between \$30,000 and \$200,000, to smaller, shorter-term

⁷¹ See USDA Nat'l Inst. of Food and Agric., <http://www.csrees.usda.gov/index.html> (last visited Dec. 24, 2013).

⁷² See *Federal Assistance*, USDA Nat'l Inst. of Food and Agric., http://www.csrees.usda.gov/about/fed_asst.html#formulaGrants (last visited Dec. 24, 2013).

⁷³ See *id.*

⁷⁴ See *Current Research Projects*, Univ. Mass. Amherst, <http://ag.umass.edu/current-research-projects> (last visited Dec. 24, 2013).

⁷⁵ *Rhode Island Agricultural Experiment Station*, The Univ. of R.I., <http://web.uri.edu/riaes/research/> (last visited Dec. 24, 2013).

projects that receive grants of \$15,000 or less. Eligibility varies and a variety of grant programs is available.⁷⁶

- Research and Education grants typically range from \$10,000 to \$200,000, and are available to researchers and nonprofits, university and extension staff, and research farms and experiment stations. Funded projects offer research, education and demonstration projects that benefit farmers and explore new sustainable farming practices.⁷⁷
 - » In grant year 2010, for example, the University of Vermont was awarded \$195,781 to explore ways to improve the energy efficiency of greenhouses and subsequently reduce production costs.
 - » In 2010, the University of Massachusetts was awarded \$193,557 to examine methods to expand cold season production of vegetables and storage of fall crops to help meet the demand for local food in winter months.⁷⁸
- Farmer Grants of \$1,000 to \$15,000 are available to commercial farmers who have an innovative idea they want to test using a field trial, on-farm demonstration, marketing initiative or other technique.
 - » In 2012 a Massachusetts farm was awarded \$14,951 to explore the use of small sensors through mobile applications on smartphones and tablets to monitor temperature, moisture and other variables on vegetable farms.
 - » In 2010 a Maine farm was awarded \$7,314 to determine the potential for dairy farmers to grow buckwheat for hay or silage on marginal land, which could reduce feed costs and make better use of available land.⁷⁹
- Agricultural service providers, such as extension staff and state departments of agriculture, are eligible for Partnership Grants of up to \$15,000. These grants allow service providers to conduct on-farm demonstrations, research, marketing and other projects with farmers as active cooperators.
 - » A grant of \$14,923 in 2012 allowed researchers to explore the impact of climate change on rice production, particularly as relates to available water.⁸⁰

Cooperative Extension

- Land-grant colleges were established by the Morrill Act of 1862, which granted federal land to each state to create a college of agriculture; many grew to become large state universities.
- New England's six land grant universities are the University of Connecticut, the University of Maine, the University of Massachusetts Amherst, the University of New Hampshire, the University of Rhode Island and the University of Vermont.

⁷⁶ The Northeast SARE region also includes Delaware, Maryland, New Jersey, New York, Pennsylvania and West Virginia. *Grants and Education to Advance Innovations in Sustainable Agriculture*, Northeast SARE, <http://www.nesare.org/> (last visited Dec. 24, 2013).

⁷⁷ *Research and Education Grant Overview*, Northeast SARE, <http://www.nesare.org/Grants/Get-a-Grant/Research-and-Education-Grant/Grant-Overview> (last visited Dec. 24, 2013).

⁷⁸ *See generally Research and Education Grant Examples*, Northeast SARE, <http://www.nesare.org/Grants/Get-a-Grant/Research-and-Education-Grant/Grant-Examples> (last visited Dec. 24, 2013).

⁷⁹ *See Farmer Grants*, Northeast SARE, <http://www.nesare.org/Grants/Get-a-Grant/Farmer-Grant> (last visited Dec. 24, 2013).

⁸⁰ *See Partnership Grants*, Northeast SARE, <http://www.nesare.org/Grants/Get-a-Grant/Partnership-Grant> (last visited Dec. 24, 2013).

- Examples of cooperative extension's areas of focus in New England include: integrated pest management; animal agriculture and veterinary medicine; pasture management; soil, fertilization and nutrient management; and farm business management.
- Examples of the extension system's support for non-farming programs for urban and suburban communities include education for home and landowners about composting, lawn management, and recycling; consumer education including food safety, nutrition and child care; and community development activities such as helping local governments address job creation, local business development and land use planning.⁸¹

⁸¹ See *About Us*, USDA, <http://www.csrees.usda.gov/qlinks/extension.html> (last visited Dec. 24, 2013).

APPENDIX L: BUSINESS PLANNING AND ASSISTANCE

Farm Viability Programs

Connecticut Farm Transition Program

- The Farm Transition Program offers grants of less than \$50,000 and was created by Conn. Gen. Stat. § 22-26j.
- One of the program's goals is to "support educational activities that will advance agricultural practices and assist beginning and/or new farmers."
- Applicants must be a registered farm business or agricultural cooperative and provide a 50 percent cash match and a business plan.⁸²
- In 2012, 16 producers received grants worth a total of \$466,611. The awarded projects included doubling the size of a greenhouse in order to begin production of lettuce, expanding an indoor mushroom growing facility to increase retail sales of exotic mushrooms, and constructing a milk house creamery for cheese making. In 2011, \$322,800 was awarded for 11 projects, and \$554,632 was awarded in 2010 for 21 projects.⁸³

Connecticut Farm Reinvestment Grant Program

- Competitive grants of up to \$40,000 are awarded based on the quality of a submitted business plan.
- Funds must be used for projects that are defined as capital fixed assets and have a life expectancy of 10 years or more.
- The funds may be used to expand existing agricultural facilities, to diversify or expand into new production areas, and to make site improvements related to such expansion or diversification.
- Applicants must provide at least a 50 percent match of the total project cost. Any producer with a business plan and three years of farm businesses tax forms is eligible to apply.⁸⁴

Maine Farms for the Future Program

- The Maine Farms for the Future program was created by Me. Rev. Stat. tit. 7, chapter 10-B, and is designed to help farmers develop and implement a successful business plan.
- In the program's first phase, funds may be used to hire consultants, conduct research or pay for training; business counselors are provided.
- The program does not target beginning farmers specifically, but those who have been producing agricultural products commercially for two years are eligible. Applicants must own their land or have a long-term lease and the landowner must co-sign the application.⁸⁵
- In 2011, the program awarded 15 Phase 1 grants; 208 farms had participated by early 2012.
- In 2007 and 2008 an independent evaluation of the program found that:

⁸² 2012 Agricultural Viability Grants Program, Conn. Dep't of Agric. 3 (Nov. 9, 2012), http://www.ct.gov/doag/lib/doag/marketing_files/ag_viability_application_and_eval_12.pdf.

⁸³ See 2012 Agriculture Viability Grants Awarded, Conn. Dep't of Agric.; 2010–2011 Ag Viability Grants, Conn. Dep't of Agric.; Ag Viability Grants 2009–2010, Conn. Dep't of Agric.

⁸⁴ See Farm Reinvestment Program: 2012 Grant, Conn. Dep't of Agric. 2 (Apr. 30, 2012), http://www.ct.gov/doag/lib/doag/marketing_files/frp_application_2012.pdf.

⁸⁵ See, e.g., Appendix A - Part 1- Cover Page, Department of Agriculture, Conservation and Forestry, Maine Farms for the Future Program - Round 13, Me. Dep't of Agric., Food, and Rural Res. 2, 18 (Oct. 2012), <http://www.maine.gov/agriculture/mpd/farmland/future.html>.

- » Participants' gross sales increased an average of 37 percent after completing the program;
- » 66 percent of participants reported a net increase in profits;
- » 83 percent stated that their farm's production had increased due to participation in the program;
- » 55 percent reported they had added new farm products; and
- » 63 percent had entered into new marketing channels as a result of participating in the program.⁸⁶

Massachusetts Farm Viability Enhancement Program

- The Massachusetts Farm Viability Enhancement Program, run by the Department of Agricultural Resources, offers up to \$25,000 for a five-year covenant, up to \$50,000 for a 10-year covenant, and up to \$75,000 for a 10-year covenant on farms with at least 135 acres. To be eligible, farmers must own at least five acres of land and have managed the land for at least three years.⁸⁷
- As of 2012, 449 farms have participated in the Farm Viability Enhancement Program, which has provided more than \$15 million in grants since 1996.
- The 2012 grant round provided business plans for 15 farms; \$125,000 was spent on technical assistance; \$925,000 was provided in direct grants. In 2012, projects included farm stand expansion, new dairy barns, equipment purchases and livestock fencing.⁸⁸

Vermont Farm Viability Enhancement Program

- The Farm Viability Enhancement Program was established in 2003 by 6 V.S.A. § 4710 and is administered by the Vermont Housing and Conservation Board.
- Farm business planners who work with program participants are from partner organizations including the University of Vermont cooperative extension, the Intervale Center, the Northeast Organic Farming Association of Vermont, and Land for Good.
- Eligible farmers can own or lease land, should have three years of farm experience, and have earned \$10,000 or more of gross farm income in the previous year.⁸⁹
- Since 2003, the program has provided assistance to 336 farms; in 2011, 40 farms were enrolled.
- Surveys conducted after the completion of the business plan and at the end of a second year display positive results. For farmers enrolled in 2010, 97 percent to 100 percent reported their financial analysis skills and business planning skills improved as a result of enrolling in the program.⁹⁰

Vermont Working Lands Enterprise Initiative

- The fund is directed by a board and administered by the Vermont Agency of Agriculture, Food, and Markets.⁹¹

⁸⁶ See Progress Report on the Maine Farms for the Future Program, Me. Dep't of Agric., Food, and Rural Res. (Mar. 1, 2012).

⁸⁷ See generally *Farm Viability Enhancement Program*, Mass. Dep't of Agric. Res., <http://www.mass.gov/eea/agencies/agr/about/divisions/fvvp.html> (last visited Dec. 24, 2013).

⁸⁸ See *id.*

⁸⁹ See *Vermont Farm Viability Enhancement Program*, Vt. Housing and Conservation Bd., <http://www.vhcb.org/viability.html#brochure> (last visited Dec. 24, 2013).

⁹⁰ See *Vermont Farm Viability Program: 2011 Annual Report*, Vt. Farm Viability Program (Jan. 31, 2012), <http://www.vhcb.org/pdfs/viability2011ar.pdf>.

⁹¹ See *Vermont Working Lands Initiative*, Vermont Working Lands Enterprise Initiative 1-2, http://www.vermontagriculture.com/news/2012/working_land_one_pager.pdf (last visited Dec. 24, 2013).

- The initiative includes three grant opportunities:
 - » Enterprise Investments provide grants between \$3,000 and \$15,000 to new or growing businesses and will provide business and technical assistance and infrastructure development to producers. A 25 percent match is required.
 - » Working Lands Service Provider Grants of \$10,000 to \$100,000 are available to nonprofits, associations and colleges. Funds may be used by service providers to offer training, technical assistance, needs assessments, product research, marketing assistance, market development, business and financial planning, access to capital and to address workforce needs. A 50 percent match is required.
 - » Finally, Capital and Infrastructure Investments grants of \$15,000 to \$100,000 are available to producers and nonprofit organizations including food hubs, farmers markets and shared processing facilities for capital investments to increase operational capacity and have an impact on their industry beyond their immediate business. Eligible activities include: hiring specialized personnel; purchasing land or easements; paying for building and equipment costs such as processing, storage or distribution; financing for long-term working capital; and other collaborative ventures that build capacity within the supply chain or open new markets. A 50 percent match is required.⁹²

⁹² *Id.* at 2.

APPENDIX M: INSTITUTIONAL MARKETS

State Policies

Massachusetts

- Massachusetts' local purchasing preference law is at M.G.L.c. 7 § 23B.
- The Massachusetts law that enables local governments, including school districts, to establish a preference for local farm products is at M.G.L.c. 30B §§ 2 and 20.
- A procurement officer for any local government, including school districts, may purchase local agricultural products directly from farm businesses without seeking quotes required under the normal bidding process, as long as the individual purchases are less than \$25,000, according to M.G.L.c. 30B § 4(d).

Federal Policy

- The federal geographic preference option was authorized in section 4302 of the 2008 Farm Bill.
- Unprocessed agricultural products are those that maintain their inherent character. This includes fresh fruits and vegetables, as well as items that have been frozen, peeled, cut, ground (including meat without any additives or preservatives) and processed in a similar way.
- This preference option applies to all of the federal Child Nutrition Programs that provide meals and snacks, including the National School Lunch Program, the School Breakfast Program, the Department of Defense Fresh Fruit and Vegetable Program, the Special Milk Program and the Summer Food Service Program.
- The preference may not “unnecessarily restrict free and open competition.” The USDA has interpreted this to mean that the option must leave an appropriate number of qualified firms, given the nature and size of the procurement, to compete for the contract.
- For purchases of less than \$100,000, schools are not required to go through the formal bid process, under the small purchase threshold. To ensure open competition, however, the USDA recommends that purchasing agents:
 - » Develop specifications in writing;
 - » Get quotes from at least three eligible sources; and
 - » Determine which is the most responsive and responsible bidder at the lowest price.

USDA Child Nutrition Foods Programs

- The Child Nutrition Foods Programs are administered by the USDA Food and Nutrition Service.
- Approximately 200 items are available each year, including meat, fruit, vegetables, grain and cheese products.
- In response to the Healthy, Hunger-Free Kids Act of 2010 (Public Law 111-296), which aimed to make school foods more nutritious, the USDA has made changes to the Foods Programs to reflect the dietary guidelines for Americans.
 - » The Foods Programs have increased the number of available canned, fresh, frozen and dried fruits and vegetables; added more whole grain options such as brown rice, whole wheat flour and whole grain pasta; use extra light sucrose syrup or slightly sweetened fruit juice in canned fruits; reduced sodium in canned beans and vegetables; and offer low-fat meat and lean poultry products, as well as fat-free potato wedges.⁹³

⁹³ *USDA Foods: Healthy Choices for Our Schools*, USDA 2 (May 2011), http://www.fns.usda.gov/sites/default/files/USDAFoods_FactSheet_FINAL.pdf.

APPENDIX N: BENEFICIAL REUSE OF ORGANICS

Composting

Connecticut

Connecticut includes composting facilities under the definition of “volume reduction plants” in Conn. Gen. Stat. § 22a-207(5), and they are subject to the state’s policies for solid waste management under the Regs, Conn. State Agencies §§ 22a-209-1 to 22a-209-17. These regulations apply to all composting facilities except those that compost only leaves, and they require that a composting facility have a solid waste permit to operate. Conn. Gen. Stat. § 22a-208q also requires the commissioner of energy and environmental protection to regulate both compost inputs by screening out hazardous chemicals and outputs by grading compost and designating uses for each grade.⁹⁴

Maine

Maine regulates composting both through general regulations applicable to all solid waste management facilities (06-096 C.M.R. ch. 400) and through detailed regulations applicable only to composting facilities (06-096 C.M.R. ch. 410). The composting regulations exempt small facilities (how small depends on the type of input used for composting), on-farm facilities that use leaves to compost manure and on-farm facilities that use 70 percent of the compost they produce on-site. A compost management plan approved by the Maine Department of Agriculture, Food and Rural Resources is required for on-farm composting facilities.⁹⁵

Massachusetts

Massachusetts regulates composting through site assignment regulations for solid waste facilities in 310 C.M.R. §§ 16.00-16.99. These regulations exempt small facilities — those that accept less than 20 cubic yards or 10 tons per week — and on-farm composting, provided that on-farm composting operations comply with the Department of Agricultural Resources’ regulations and guidance. Those regulations (330 C.M.R. §§ 25.00-25.06) establish a registration program and set basic standards, including a requirement that contaminants be screened from composting inputs.⁹⁶

New Hampshire

New Hampshire regulates composting through Composting Facility Requirements (N.H. Code Admin. R. Annotated ENV-SW 600). In general, a composting facility cannot operate without a permit. The composting regulations, however, exempt facilities that compost food scraps and animal manure generated on-site, including farms. For nonexempt composting facilities, the regulations establish rigorous screening requirements to ensure inputs are free from hazardous contaminants.⁹⁷

⁹⁴ For more information, go to <http://www.ct.gov/deep/cwp/view.asp?A=2709&Q=324200>.

⁹⁵ For more information, go to <http://www.state.me.us/dep/waste/residuals/index.html>.

⁹⁶ For more information, go to <http://www.mass.gov/eea/agencies/agr/about/divisions/agr-composting-program-generic.html>.

⁹⁷ For more information, go to <http://des.nh.gov/organization/divisions/waste/swmb/pdrs/index.htm>.

Rhode Island

Rhode Island includes composting facilities in its General Requirements for solid waste facilities in Solid Waste Reg. No. 1, and has specific rules for certain designated composting facilities in Solid Waste Reg. No. 8. Solid Waste Reg. No. 1 generally requires a license or registration in order to operate a composting facility. Agricultural composting facilities are exempt from paying certain fees required by the regulation but are otherwise subject to the regulations. Solid Waste Reg. No. 8 requires composting products to be tested, categorizes products by quality and contaminants, and limits the uses of lower-quality and contaminated compost.⁹⁸

Vermont

Vermont's recent Solid Waste Management Rules include a subchapter titled Organics Management that establishes siting and operational requirements for composting facilities. Small composting facilities (how small depends on input), facilities composting only manure for soil enrichment, and several types of on-farm composting are exempt from these requirements. For composting facilities subject to the requirements, final composting products must meet certain criteria for contaminants.⁹⁹

⁹⁸ For more information, go to <http://www.dem.ri.gov/programs/benviron/waste/topicsol.htm>.

⁹⁹ For more information, go to <http://www.anr.state.vt.us/dec/wastediv/compost/main2.htm>.



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