



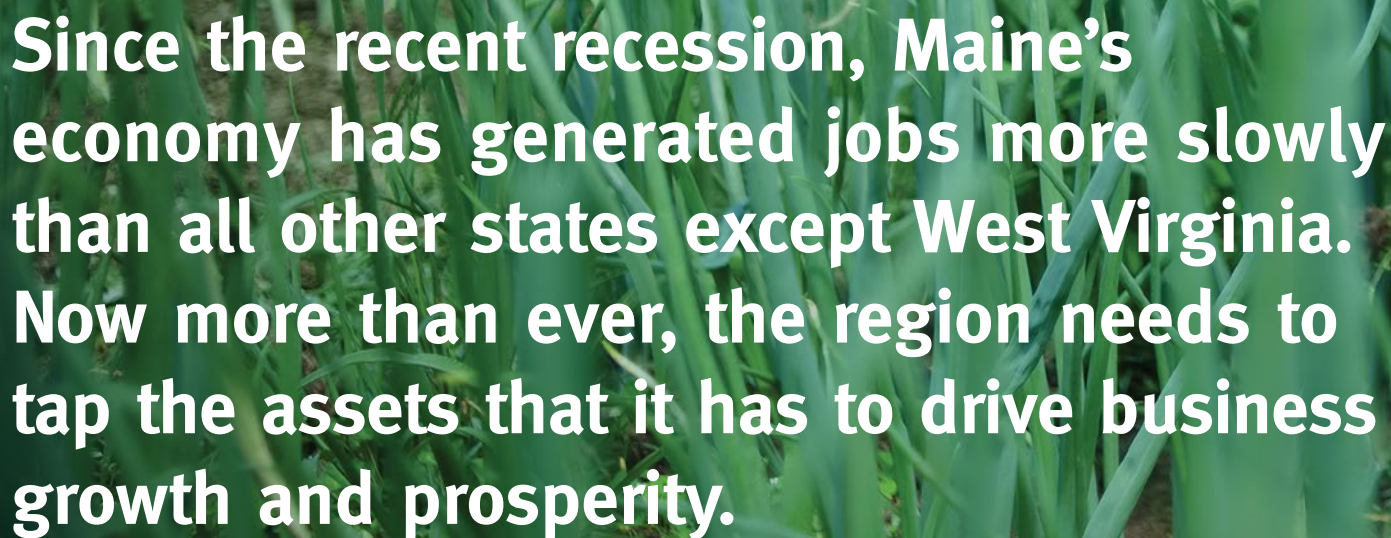
HARVARD Kennedy School

MOSSAVAR-RAHMANI CENTER
for Business and Government

Growing Maine's Food Industry, Growing Maine

Highlights from the Maine Food Cluster Project
October 2015





Since the recent recession, Maine's economy has generated jobs more slowly than all other states except West Virginia. Now more than ever, the region needs to tap the assets that it has to drive business growth and prosperity.

Maine people have a rich tradition of growing, harvesting and processing food and beverages. For many generations, they have tapped the state's abundant land, water and marine resources to supply food to local, regional and global markets. To understand the potential of these industries for greater growth, researchers from the John F. Kennedy School of Government at Harvard University and Harvard Business School investigated the industry-wide or "cluster" dimensions of today's agriculture, seafood, and food and beverage processing sectors. The team drew on its analysis to highlight how Maine could build on the strengths of these industries as a springboard for business growth and job creation.

This summary highlights key project findings and outlines examples of pragmatic steps that business leaders, together with leaders from state government, nonprofit organizations, universities and foundations could take to make Maine a place where more food companies can grow and prosper.

We hope these findings will spark debate and inform action by people who care about Maine's food industries and are working to build a stronger economy in this rural state. And we thank the Libra Foundation for its support of this study through the Buzz Fitzgerald Endowment Grant to Harvard Kennedy School.

October 2015

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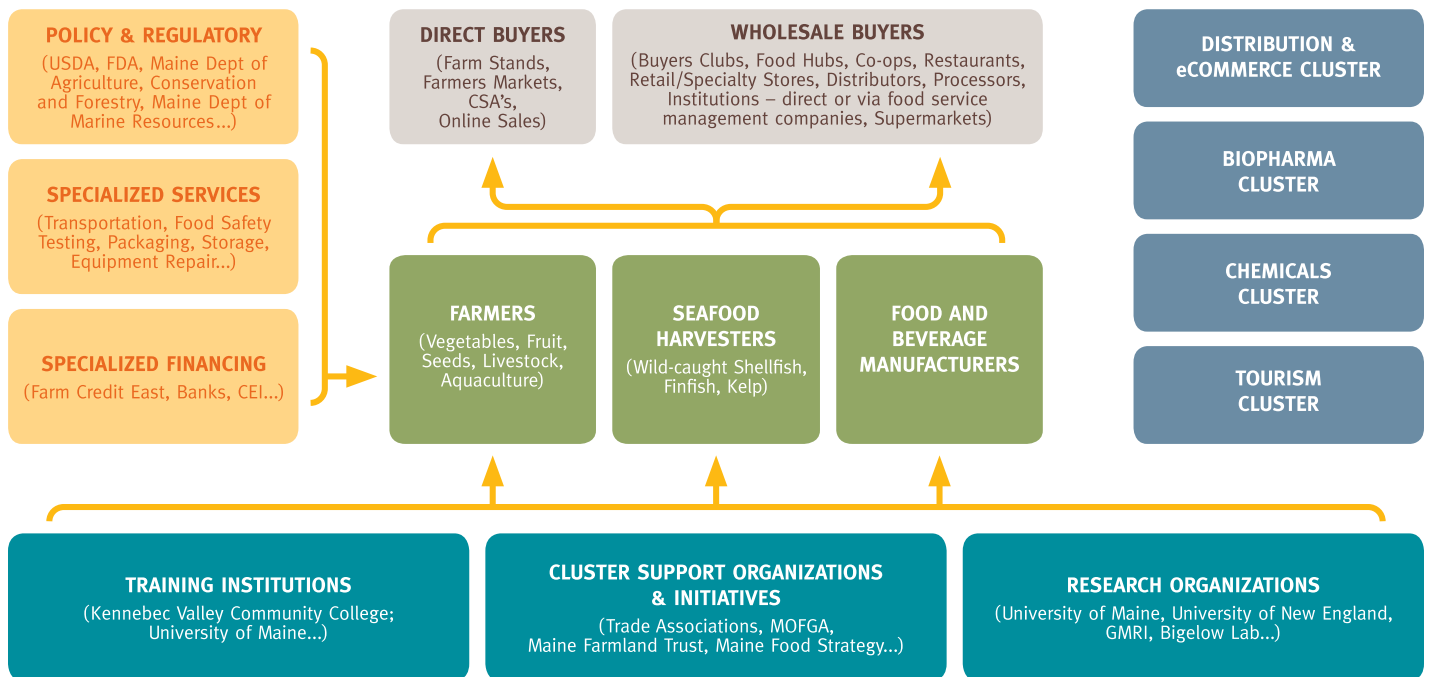
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MAINE'S FOOD CLUSTER

Industry clusters are regional hubs of inter-related industries and the organizations that help them to thrive. Strong clusters help drive productivity and innovation in a region, and thus prosperity.



COLOR KEY

- MAINE FOOD & BEVERAGE INDUSTRIES
- SPECIALIZED SERVICES/SUPPLIES
- SUPPORTING ORGANIZATIONS
- CUSTOMERS
- RELATED CLUSTERS

INDUSTRY GROWTH OPPORTUNITIES

FOOD CAN DRIVE BUSINESS AND EMPLOYMENT GROWTH STATEWIDE

- **Maine's food and beverage industry cluster is a large employer.** Over 21,000 people work in the state's farming, food processing, fishing and aquaculture industries as employees and sole proprietors. Twenty-nine thousand more work in local food industry businesses such as grocery stores and restaurants.
- **It is a significant employer in both northern and southern Maine.** Accelerating Maine's farming, seafood and food processing industries can benefit Mainers in all regions of the state.
- **Maine's cluster profile shows strengths upon which to grow.** These include employment specialization (an important ingredient for regional competitiveness), promising underlying production conditions that include available farmland, water and the productive Gulf of Maine, as well as proximity to large Northeastern markets.

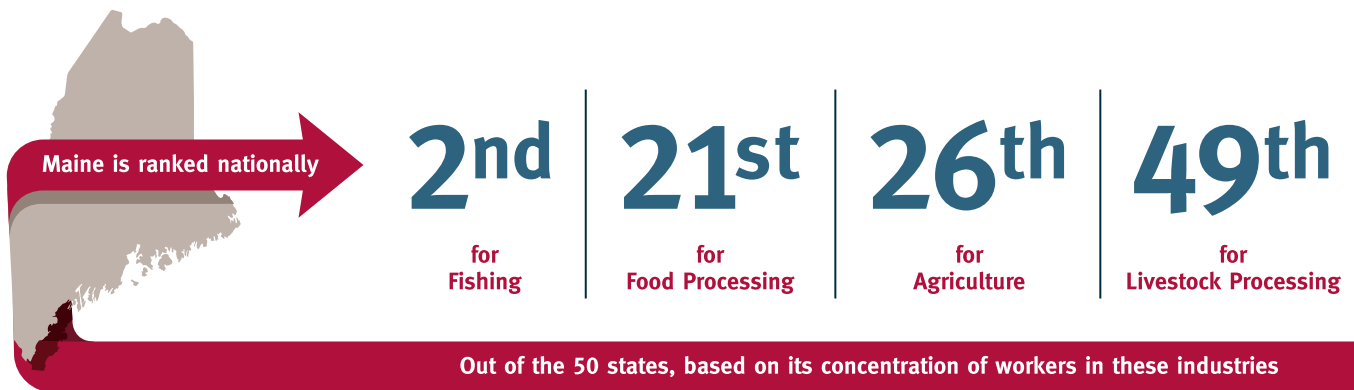
INDUSTRY TRENDS POINT IN A POSITIVE DIRECTION

- **Niche sectors in Maine like lobsters, scallops, aquaculture, craft beer and natural and organic foods are seeing growth in sales, in new businesses, or both.** Moreover, Maine's diverse mix of food and beverage products means that its food economy is not dependent on a single crop or species. In fact, it can benefit from synergies that come from extending supply chains (such as growing organic feed for livestock) and rotating crops.
- **Maine's farming sector is growing and attracting new farmers, and ranks high nationally for direct sales in local markets.** This represents a robust foundation for growing sales to wholesale and institutional buyers in Maine as well as to much larger markets outside of Maine.
- **Maine's growing distinction as a "foodie" destination is putting the state on the map for delicious, locally-sourced food and beverages.** Maine can benefit from the growing national demand for healthy, authentic and sustainably-produced food.
- **Maine companies and researchers are experimenting with innovations designed to lengthen Maine's growing season and add value to agricultural and marine products.** Examples include energy-efficient greenhouses, hydroponics and aquaponics, multi-species grazing, and higher-value products like berry purees, medicinal syrups and functional foods. Furthermore, in the last 18 months Maine universities and nonprofits have secured grants of \$20M for aquaculture research and over \$1M for research on organic grain and dairy production.



BUT MAINE'S FOOD CLUSTER ALSO FACES CHALLENGES.

- **Maine's low rankings on key economic competitiveness indicators do not provide a strong foundation for cluster growth.** Especially worrisome is Maine's third worst rank (after West Virginia and Montana) for its share of employment in "traded" clusters – industries that sell to customers outside of their region and have greatest potential for growth.
- **Maine's food and beverage industries are mainly composed of micro and small companies, which collectively face high transportation and distribution costs and have below average productivity.** Small producers have a harder time achieving scale, accessing capital and adapting and using technologies that can help them to prosper.
- **Maine's food company leaders are struggling to manage profitable enterprises.** They note that they face complex business challenges – managing operations, finances and growth and expanding into new markets – yet most lack formal business training. They also point to challenges in the business environment: supply chain bottlenecks, infrastructure gaps, labor availability and cost, transportation and energy costs, and government regulation. Finally, some farmers report increased competition for local food sales due to the influx of new farms in their regions.
- **Many Maine farmers, seafood company leaders and artisanal food producers want their businesses to remain the same size or to grow incrementally as a lifestyle enterprise.** The minority of entrepreneurs seeking to scale their businesses aggressively and sell their products to wholesale and national customers sometimes struggle to find the financial and technical resources and industry expertise that they need to succeed.



HOW MAINE CAN MEET THESE CHALLENGES AND GROW

Maine can engage food industry leaders and cluster support organizations behind a focused initiative with the explicit goal of growing Maine's food and beverage industries and contributing to the state's prosperity.

1 Engage food industry leaders in developing an action plan focused on business growth

In states like Vermont and Oregon, food business leaders have worked with leaders of trade associations, business development groups, state agencies and university programs to develop action-oriented food cluster growth plans with clear goals and metrics for tracking progress. Working collaboratively, they have upgraded their business environment, taken steps that have improved company performance across their industries, strengthened networks between companies that have resulted in new business growth, and boosted innovation.

These efforts have yielded impressive results. Since the launch of Vermont's Farm to Plate initiative in 2009, the number of food companies in that state has risen by 5.9%, food manufacturing jobs have grown by 34.5%, and the state has added 4,189 jobs in agriculture. And in Oregon, a Northwest Food Processors Association-led initiative contributed to food manufacturing employment growth of 7.8% during the period 2007-2012, while overall manufacturing employment in the state shrank by 15.8%.

A sustained initiative with business leadership and a focus on strategic growth opportunities for Maine's food cluster has the potential to achieve similarly dramatic results.

BUILDING BLOCKS FOR A SUCCESSFUL FOOD CLUSTER INITIATIVE

WHAT	WHO
An action plan for business growth, with mutually-reinforcing activities (based on market and industry analysis) and clear metrics for tracking progress	Business leaders from the farming, fishing and food processing industries draw on industry data and experience to identify priorities and guide action
A public-private partnership or industry group that oversees the initiative via a steering or governance group	State agencies recognize, align with and support action plan and reduce regulatory barriers
Entrepreneurial leadership that strengthens connections between companies, coordinates activities and tracks results	Food sector nonprofit groups with missions and capabilities that complement the action plan engage and collaborate with the initiative
Sustained funding for these activities from a mix of sources (private and public sector, member or activity fees, foundations seeking to grow state's food economy and jobs)	Universities and other research institutions align research programs with cluster growth priorities
	Training institutions like universities and community colleges engage employers in identifying critical skill areas, developing curricula, coordinating internships, etc.

2 Align Maine's diverse cluster support resources behind the action plan – and mind the gaps

Maine is fortunate to have many people who are passionate about Maine farms, fish, food and beverages. **In fact, over 100 nonprofit organizations, university programs and government agencies are actively working to support Maine's food economy statewide, and many more work locally.** Their efforts span vital functions: networking and promotion, policy and regulation, financing, business and economic development, research, education and training.

These organizations make up the industry's support system. How they work together and pool their resources will be key to the success of an industry acceleration strategy. **Maine's food industry support system is more fragmented than those in Vermont and Oregon – states with successful track records boosting food industry growth. It lacks a broadly-accepted action plan focused on growing Maine food enterprises and employment, and its size and dynamism do not seem to be translating into strong economic performance to the same degree as it has in the other two states.**

Furthermore, the current mix of Maine's support resources reveals **gaps and opportunities to align activity** so that Maine farms, fisheries and food manufacturers can reach their greatest potential.

- **Growth-oriented farms, seafood companies and food manufacturers need business support with specialized industry experience to help them expand production and sell products outside of Maine.** In addition to existing one-on-one counseling resources, support organized around groups of companies can help build supply chains, shorten learning cycles, pool market knowledge, coordinate outreach, and create distribution efficiencies. Innovative distribution and sales models complementing Maine's small business-production system could be explored, such as Red Tomato, a venture that connects fresh farm produce from New England farms to wholesale customers across the Northeast.
- **Processors need specialized equipment, facilities and guidance to scale from home kitchens or farms to full-scale commercial production.** Maine lacks food processor-focused business accelerators as well as sufficient infrastructure for intermediate expansion stages, like co-packers and accessible

food-safety-certified commercial kitchen space. These resources can connect food manufacturers to industry expertise and capital, create economies of scale for supplies and services, introduce new sales opportunities, and create a community that celebrates entrepreneurs and innovators in Maine's food and beverage industries.

- **Leaders of Maine's small companies note that their trade association is one of their most valued resources. However, most of the over 35 food trade groups have few or no staff, thus limiting their capacity to support member growth.** Many already network with each other, such as through the Agricultural Council of Maine. Sharing back office support, coordinating member assistance, or even mergers and other partnership structures could also be explored.
- **With so many organizations in Maine's support ecosystem - and despite numerous examples of collaboration - there are many opportunities for inefficiencies.** The Maine Food Strategy has been working to identify ways to strengthen Maine's food system across many dimensions, and may become an avenue for greater coordination. At the metropolitan level, food production and access projects can share information with similar efforts in other parts of the state, split consultant costs, or jointly apply for funding. Finally, the sheer number of organizations is confusing to newcomers, so a road map identifying groups and their functions could help start-up entrepreneurs navigate resources more easily.

To help Maine farms, fishermen and food manufacturers grow to their full potential, Maine will need to engage food industry leaders, support organizations and financial resources behind a focused and coordinated industry growth initiative.

OPPORTUNITIES AN INDUSTRY INITIATIVE COULD TAKE ON

What follows are examples of three ambitious growth opportunities that a Maine food cluster action plan could target. Complemented by focused investments and aligned public policies, regulations and programs, a private sector-led cluster initiative could help Maine become known for cultivating dynamic food and beverage companies and expanding jobs across the state.



Add more value to Maine food – support start up and scale up of Maine’s food processors

WHY

Maine’s food cluster’s productivity is only 88% of the national average. Higher productivity, which comes from innovation and adding more value to products, will boost competitiveness, leading to job growth and higher wages.

HOW

EXAMPLES OF PRAGMATIC STEPS

Target critical transitions from home kitchen to commercial scale operation

Identify equipment, facility and resource gaps at key growth stages for food processing where market demand is greatest.

Hold a funding competition for food processing accelerators and other models to address these gaps. Winning ventures should incorporate relevant best practices for business development, commercial kitchen facilities, and other shared resources like mobile equipment. Nonprofit and for-profit models could be eligible, but all should engage food manufacturing business leadership and have realistic plans for financial sustainability.

Assess whether and how these ventures and the University of Maine pilot kitchen can support processors in other parts of the state.

Prepare a skilled workforce that can help accelerate sector growth

Fine tune skills-training programs and university extension resources to meet food processor workforce and management needs. Increase the frequency of quality “recipe to market” programs. Emphasize business skills in training programs. Explore establishment of food processor management and operations executive education and certificate programs.

Connect processors with larger markets across the Northeast

Identify high-potential New England market niches and help Maine’s small and medium-sized business expand into these markets through activities like regional trade missions and webinars. Publicize resources for market research so that entrepreneurs can access and benefit from them.

Celebrate, inform and cultivate connections across the processor community

Celebrate innovative and growing food processors. Launch a monthly networking series and invite entrepreneurs and investors from Maine and other regions to share their stories in person and via webinars.



Expand production & sale of Maine food in Maine and the Northeast

WHY

Maine is a small market. But it is only one-day's drive away from the much larger markets in New England (14.5M) and parts of the Mid-Atlantic (41.6M) and Eastern Canada (23M), and has regular shipments from Portland to Northern Europe via Icelandic Eimskip.

HOW

EXAMPLES OF PRAGMATIC STEPS

Build the **capacity** of Maine companies to supply distinctive, quality food and beverages to institutional and grocery buyers in Maine and larger markets in the Northeast

Launch a statewide food business accelerator program targeting mid-sized growth-oriented Maine farms, seafood companies and food manufacturers. Follow a comprehensive, cohort-based best practices model that includes helping companies to secure the capital they need to grow.

Create a transportation & distribution working group to identify supply chain and distribution efficiencies between Maine producers and Northeastern customers. Investigate innovative models that have worked to enable mid-sized producers to supply large or regional purchasers.

Increase the **number** of Maine food businesses with sales to institutional and grocery customers in the Northeast

Connect entrepreneurs with information about regional market demand, through matchmaking events and other activities that bring together growth-oriented producers with buyers. Engage grocery chains and independent grocers — where over 80% of Mainers buy their food — and other wholesale and institutional customers in initiatives expanding Maine food sales in Maine and the Northeast.

Support innovative ways to boost sales to regional institutional customers. Examples can include meeting the growing customer demand for sustainable foods traced to the source (similar to Gulf of Maine Sustainably Harvested Seafood) and new technology platforms to improve sales efficiencies for small and medium-sized companies.

Develop an umbrella brand or campaign promoting Maine food and beverages, capitalizing on the state's reputation for quality, authentic and sustainably-harvested food and drawing on compelling stories about Maine food producers. Consider how this relates to Maine's long-time "Get Real, Get Maine" marketing effort, its "The Maine Thing" tourism campaign, and collaboration with other New England marketing campaigns.



Expand production and sale of sustainably-harvested protein

WHY

According to the United Nations Food and Agriculture Organization, world demand for animal protein will double by 2050. Along with this rapid growth in demand, public attention is increasing about environmentally-sustainable meat production, the impact of hormones and contaminants on health, and food traceability. With Maine's abundant farmland, water and marine resources, can the state leverage its seafood, dairy, livestock or egg production capabilities to supply healthy animal protein to this growing market, using sustainable practices?

HOW

EXAMPLES OF PRAGMATIC STEPS

Identify niche opportunities for Maine companies to meet the growing demand for protein

Create a protein demand and supply chain working group to map global market niches in seafood, livestock, eggs and dairy where Maine has production promise and can be cost competitive. Consider ways to modernize Maine's protein processing in ways that move protein production up the value chain.

Develop a five-year action plan to meet current protein demand in promising market segments, such as building out supply chains in aquaculture/seafood processing or organic dairy/organic feed supply chains.

Develop a long-term action plan to expand Maine's protein production targeting future market opportunities, including research, extension and demonstration as well as business development. For example, sustainable expansion and intensification of livestock production in line with projected changing weather conditions between 2015 and 2050.

Launch a targeted initiative to compete in this highly-competitive sector

Launch a business accelerator program targeting growth-oriented Maine protein producers - by segment (seafood, meat, dairy) OR a cross-cutting protein group.

Expand state and private sector investment in protein production and processing innovation as well as global market and trade promotion.



SUPPORTIVE ACTIONS TO ENHANCE MAINE'S BUSINESS ENVIRONMENT FOR FOOD INDUSTRY GROWTH

PUBLIC SECTOR

Align policies, resources and regulations in support of the cluster growth plan. Adopt an economic development agenda that encourages public and private investment in production and processing innovation and equipment upgrades, skills training, and development of distribution and sales channels to larger markets outside of Maine. Target state funding from programs such as Farms for the Future, Agricultural Development Grants and Loans towards projects likely to yield the greatest economic impact for Maine, such as high-value crops, growth-oriented companies, activity that impacts multiple companies, and entering larger markets.

RESEARCH & TRAINING

Marshal university and community college resources in support of industry growth priorities. Connect curricula, research and extension in agriculture, aquaculture and marine science more closely to business needs. Expand internships and course projects with Maine food and beverage companies. Increase degree, non-degree and certificate options for in-demand occupations. Add business school faculty with agribusiness experience. Do more outreach to inform the business community about resources that are underused, or shift resources to higher-impact uses.

Align workforce training resources with industry needs. Raise awareness about skills needed by growth-oriented farms, seafood companies and food processors and direct job training resources towards these needs. Consider launching a workforce attraction partnership involving employers constrained by chronic workforce needs and organizations working with job seekers who may be a good fit for agriculture, fishing, aquaculture or food processing careers.

INVESTMENT

Build bridges between traditional lenders and investors, public financing sources, foundations and impact investors to increase financing for food industry growth - and connect them with food industry entrepreneurs. Create opportunities for people investing diverse types of capital to come together and learn about investment opportunities along the life cycle of high-growth and steady-growth food companies. Include New England-based investors specializing in relevant industries and foundation officers dedicated to the region's food systems and fisheries. Encourage expansion of financing that fits food cluster growth risk and return profiles and timelines (such as royalty-based financing, public-private financing structures, peer-to-peer lending, pooled loan funds) and needs (such as financing equipment modernization and companies integrating vertically along the producer/processor/customer supply chain). Build in opportunities for entrepreneurs to network with investors, get guidance on how to position their companies to succeed at raising needed capital, and to get feedback when their efforts fall short.

CLUSTER PROMOTION

Boost cluster awareness, innovation and networking. Recognize Maine's innovative and growing farms, seafood companies, food and beverage processors with awards for leadership and growth. Promote creation and adaptation of models for aggregating, distributing and marketing food and beverages in this cluster populated largely by small businesses. Build the capacity of trade associations to grow their member companies, through skill-building and joint marketing activities such as the Maine Brewers Guild has done with the Beer School, Beer Trail and Summer Beer Festival.

Engage in ongoing assessment of cluster gaps and opportunities. Analysis should draw on cluster data, business leader perspectives, food buyer input and consumer trend information. Include regular evaluations of Maine's food cluster position relative to other regions in the U.S.

Leverage complementary clusters. Explore tapping Maine's strength in tourism by collaborating with the Maine tourism industry to boost agritourism. Assess growth opportunities that intersect with the biopharmaceutical and chemical clusters.



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EXPLORE THE PROJECT REPORT AT [HKS.HARVARD.EDU/CENTERS/MRCBG/PROGRAMS/MAINE/REPORT](https://hks.harvard.edu/centers/mrcbg/programs/maine/report)



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