

COMMENTARY

An Abundant Food System

By Russell Libby

Farmers in their fields, checking on new-born calves. Orchards in full bloom. Alewife runs up streams where they haven't been seen in generations. Fishing fleets returning safely to harbors all along the coast. Foods of the season in every store and restaurant because it's what's available, and these are the foods wanted and expected by all.

This is the food system we can have.

Currently Maine has available land, sufficient rain, and a relatively moderate climate. These are increasingly in short supply in the region and across the country.

What we don't have are enough people growing food, well-developed distribution and marketing systems, and a public commitment to make it happen. For some reason we think a job in a call center is a good job and a job in food production or processing is not.

WHAT WOULD IT LOOK LIKE? HOW DO WE GET THERE?

Maine can be a national example, and leader, in creating an abundant food system, one that meets a simple definition of sustainability: enough for everyone, forever. Our farms and fisheries could be the centerpiece of a diverse and abundant food system a decade from now, one that supplies Mainers, visitors, and a substantial portion of New England and beyond. We could also be left with only a few products that try to compete in national and international commodity

markets—potatoes, lobsters, blueberries—and continued erosion in our overall food production capacity. It's really our choice.

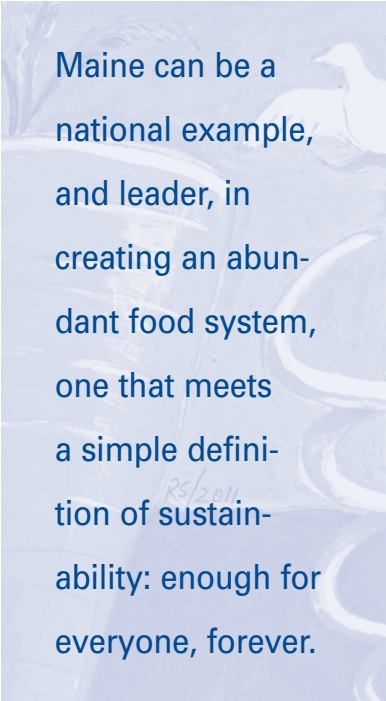
Getting there will take creativity, energy, and a long-term commitment. It will also require us to think in terms of a whole ecosystem in ways that the existing policy structure doesn't consider. The Eat Local Foods Coalition's "By Land and By Sea" project found many connections between issues facing farmers and fishermen, between the land and the sea, but it's not the standard approach to issues. Maine has already built little pieces of that more-connected food system—but we haven't taken them as the foundation for where we need to go in the future.

"The first law of ecology is that everything is related to everything else," said Barry Commoner. We can't have abundance without going back to the underlying resources: air, water, soil. And if we look at those, we can see that we have severely abused all of them, and continue to do so now. (See articles by Jemison and Beal, and Beal and Jemison, this issue.) We also need to look creatively at how to manage our farms and the larger landscape in ways that don't have negative impacts downstream—on the streams and rivers that feed the Gulf of Maine.

By 2020, we could have an additional 20,000 jobs on farms and associated businesses, with the potential for more in the future. That's the kind of systematic change that could shape Maine for generations to come. But we'll have to start now.

WHERE WE ARE NOW

Maine has an extensive and diverse Agriculture. No single crop or livestock product makes up more than 20 percent of total farm sales of about \$600 million. Potatoes, milk, and eggs



Maine can be a national example, and leader, in creating an abundant food system, one that meets a simple definition of sustainability: enough for everyone, forever.

are the first three in terms of annual sales, followed by nursery crops and blueberries.

We have extensive direct market sales, which continue to grow each year. U.S. Department of Agriculture (USDA) reports direct-to-consumer sales at \$18 million, about three percent of sales. Certified organic farms make up five percent of total farms and total farm sales.

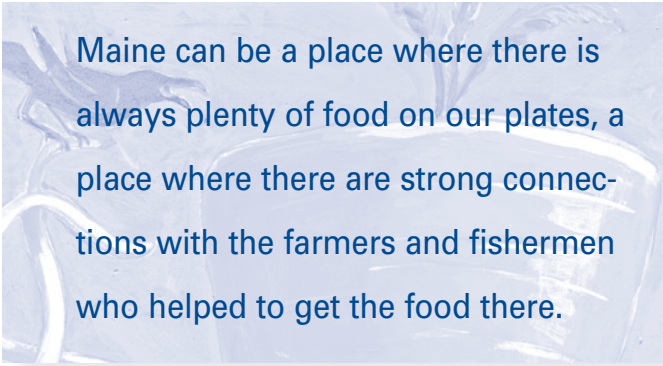
A survey conducted for the Maine Organic Farmers and Gardeners Association (MOFGA) in the spring of 2010 found more than half of Maine families report buying at a farmers' market, farm stand, or community-supported agriculture (CSA) "very often" or "somewhat often." Why? They want to support local farmers (49 percent), support the local economy (32 percent), support Maine (19 percent), and get fresh food (33 percent) at fair prices (21 percent).

How does Maine stack up? In 2010, 93 farmers' markets were open during the

C O M M E N T A R Y

summer months, and 22 through some or all of the winter months. In 1971, there was only one, the old Portland Farmers' Market that has operated continuously for more than 200 years. CSA programs (about 150) now supply more than 1.5 percent of Maine families with fresh produce and other products through the growing season. In a CSA program, consumers pay the farmers up front in return for a share of the harvest throughout the year. Maine is also home to some of the country's first community-supported fishery (CSF) programs, supplying shrimp and fish through the year.

Maine is a destination for people who want to see how to make these connections. Portland, and now much of the state, is a place to go for people wanting to eat at good restaurants that feature local farm and seafood products. Maine chefs are regular winners and nominees of James Beard awards, and people from across the country come here to visit their restaurants and many others that have received national attention.



Maine can be a place where there is always plenty of food on our plates, a place where there are strong connections with the farmers and fishermen who helped to get the food there.

I'd be remiss if I didn't mention MOFGA's Common Ground Country Fair, held in Unity the third weekend after Labor Day. Thirty-five years old in 2011, this is the largest organic food event in the country each year, with more than 60,000 attendees over three

days. It's a major outlet for hundreds of Maine businesses and a key example of how local and organic food can form the basis for real and significant economic development.

Over the past decade there has been rapid and strong growth in a range of value-added products. Members of the Maine Cheese Guild regularly win national awards at the American Cheese Society competitions. A growing beverage business started with beers and now includes specialty wines and spirits. Many of these businesses reach out and buy more ingredients from local farmers as they work to build their identities in the marketplace. Breads and bakeries are making connections with wheat growers in both Aroostook County and southern Maine.

Missing Markets?

Like much of the rest of the country, the mid-sized farm and the mid-sized wholesale market are in short supply. As supermarkets have increased in size and sell a larger portion of groceries year to year, there are fewer and fewer farmers with the capacity to supply the whole chain/warehouse system. Over the past five years several businesses have started to fill that middle spot—at the community market scale—and natural foods stores have

expanded also. Institutional buyers—schools, hospitals, and businesses—also have an important role to play, since they feed many people each day.

Without those mid-sized markets, we need even more effective gathering and distribution networks so that many

farms, together, might supply the larger markets. That's beginning to happen, through Farm Fresh Connection and Crown O' Maine Organic Cooperative and others, but it isn't yet at a scale where it can pull large volumes of products from communities where the populations aren't large enough to support a farmers' market.

HOW WILL WE MOVE FORWARD?

The initiative for these changes will have to come from a new way of looking at agriculture and fisheries. They are part of an interconnected whole. Elsewhere in this issue, Robin Alden describes some of the key elements of a revitalized fishery. But one of the critical factors in creating this more abundant food system is the role of the food buyers, whether as institutions or individuals. Now, more than at any time in decades, the public is becoming aware of and interested in the entirety of the food chain—from the way the food was produced, and by whom, to how it was prepared. The initiatives proposed in this article are just part of that integrated whole, and it will take a major effort by many organizations and individuals to move forward.

Many of these initiatives have potential funding sources listed, but there are as many opportunities as solutions. The new conversations around Slow Money and community investing are part of the answer. So are the traditional lenders to rural businesses, USDA and Farm Credit Service, and the newer ones, such as Coastal Enterprises, Inc. (CEI) and MOFGA's Organic Farm Loan Fund. (Phillips, this issue, discusses the financing of Maine's food enterprises.)

Each of these initiatives is a building block in this new food system. Maine can be a place where there is always plenty

COMMENTARY

of food on our plates, a place where there are strong connections with the farmers and fishermen who helped to get the food there. We can be a place where there is enough for all, and we can be an example of how to do this while building a healthier, more resilient Gulf of Maine ecosystem. It's our choice.

BUILDING BLOCKS FOR AN ABUNDANT FOOD SYSTEM

Take an Ecological Approach to Agriculture and Fisheries

Rachel was right. Almost 50 years ago, Rachel Carson described a world without birds and insects due to overuse of toxic pesticides such as DDT. In honor of the 50th anniversary of *Silent Spring*, published in 1972, it's time to make a major push to develop biological systems to help control insects, diseases, and weeds. This will require the resources of the USDA and land grant research system. The only way that is going to happen is through a concerted push to change federal policies to emphasize biology over chemistry. The 2012 Farm Bill is the place to take the first steps.

Integrate farms into the ecosystems. Ideally, the water that leaves the farm and flows to streams and rivers and lakes will be as clean as the rain that falls from the sky. That means we need to capture nutrients on the farm in as many ways as possible and keep soil from moving off the farm.

1. Maine can become the nation's leader in pushing the boundaries on organic and biological agricultural systems, on integrated pest management (IPM) and integrated crop management (ICM). This will require research capacity at the University of Maine, the

USDA's Agricultural Research Service (ARS) New England Plant Soil and Water Laboratory, and elsewhere, the ability to move information from research to practice through Cooperative Extension and other means, and farmers as active and eager partners. (Funding sources: USDA and EPA research programs will be major supporters here.)

2. Farms are part of the larger Gulf of Maine ecosystem. Maine farmers and fishermen are in regular communication so that farmers are more aware that what happens upstream affects the systems downstream. Maine Department of Agriculture (DOA) and farm organizations partner with USDA's Natural Resource Conservation Service (NRCS) to make sure at least 95 percent of Maine farms become active cooperators and 10 percent of each farm is managed for appropriate ecological values—buffer strips, wildlife habitat, and other conservation practices. (Funding source: Primarily USDA-NRCS, with active participation of local Soil and Water Conservation Districts.)
3. Farmers use fewer, less-toxic pesticides. This is a goal articulated in Maine law since 1997 (Title 22, § 1471-X). Farm groups and the DOA need to work with USDA-NRCS to develop a program for incentives for farmers to use the least toxic pesticides, rather than the least expensive. For example, there are alternatives for many uses of the organophosphate pesticide class. Let's find and

use them. Similarly, we could develop incentives to use the most accurate, lowest-drift application equipment. (Funding sources: Information from university and related research; incentive programs: potentially a NRCS priority.)

Make compost a key component of farm fertility. As fuel prices rise, fertilizers made from, or with, oil or natural gas become more expensive. Similarly, it costs more to dispose of “waste” materials. Some Maine businesses and organizations are nationally recognized for their pioneering work in composting systems. We need to push the boundaries. There is no waste in natural systems. Farms need fertility.

Actions needed:

1. Full-scale nutrient analysis—how much land can be farmed with the resources we have available now? What will we need to do to make up the difference? How do we do that? If we're going to do large-scale nutrient cycling, we'll need better systems and strategies for getting shellfish into compost operations, handling leaves in large quantities, and moving manure from livestock farms to crop farms. (Partners: University of Maine, Woods End Research Laboratory, Mount Vernon, is a leading national researcher on compost systems.)
2. More composting businesses. Help with training, siting, and capitalization. The University of Maine Compost School is a great asset. We need to build on that and have more businesses moving organic materials in a form that is usable on farms and in gardens.

C O M M E N T A R Y

Expand the Production Base with More Farmland and More Farmers

Bring 100,000 acres of prime farmland back into production, with new farmers ready to farm that land. One consequence of the suburban sprawl of the last half-century, and the shrinking number of dairy farmers in central and southern Maine, is that hundreds of thousands of acres of prime farmland are not being actively managed. Some are mowed for hay, with no long-term strategy for keeping the land fertile and productive. Other fields are growing back into trees. Others are part of large, sprawling lawns, or are mowed occasionally to keep them from reverting to forest.

Meanwhile, new farmers and prospective new farmers struggle to find available and affordable land.

1. Identify prime soils in blocks of five acres or more that are not currently in production. (Potential project for college students using existing GIS technology; should be coordinated through a standard filter/format developed by the Maine DOA and other partners.)
2. Work with the owners of that land to identify possible options for use, ranging from sales to leases. (Partners: Maine DOA, Maine Farmland Trust, local land trusts.)
3. Match potential farmers with the acres potentially available. (Same.)
4. Train new farmers. Maine needs several hundred new farmers each year to stay “even”—that is, to keep farm numbers level. We would need about 2,500 additional new farmers over the next decade to farm these acres and manage the associated land.

The MOFGA apprenticeship and journey person program provide basic training/experience to about 150 people per year and advanced training to 25 more. Even this won't be sufficient. Some new farmers will emerge from the group of people who grew up on a farm, but didn't see an opportunity for themselves and left for some stretch of time. But many others will be people who have little or no experience in food production—which means a long and steep learning curve. (Partners: MOFGA, Cooperative Extension, Cultivating Community. Funding sources: USDA Beginning Farmer program, other sources.)

5. Expand farm-financing options. If it all came on the market at once, that 100,000 acres, sold for farmland, would be worth about \$100 million. That's a lot of financing. Luckily, some will be leased, some will transfer within families, and it won't all happen in one year. I'd like to propose “A Fund for Maine.” The goal would be to generate \$10 per person per year, or about \$13 million, to be used for investments in more farms and fishing operations. It would help to leverage significant funds that are already available through some of the existing institutions. (Funding sources: Individuals; possibly stock offerings and/or bonds. Structures: to be developed.)

Encourage Year-Round Production Systems

Maine winters are cold. Climate change is bringing more variability to outdoor production. The years 2008 and 2009 were cool with wet springs and summers; 2010 was an early spring with a long warm summer and just barely enough rain. Greenhouses and other technologies are important moderating systems. Maine should be a national leader in developing systems that work. We already have examples at both the small scale (Eliot Coleman at Four Season Farm) and large scale (Backyard Farms, Madison). There's lots of room for improvement. (Partners: Farmers, University of Maine researchers. Funding sources: USDA for research. USDA-NRCS did a cost-sharing program for hoop houses last year that could be expanded.)

Make Maine a Key Supplier of New England's Vegetables and Fruits

Study after study looks at Maine as the natural supplier of both organic and non-organic vegetables and fruits for New England. Besides potatoes, frozen blueberries, and broccoli, there are few crops for which we are currently sending significant amounts of product outside the state. The Central Valley of California, the nation's leading supply area, faces major water restrictions now and projected droughts over the next 20 years. We won't supply the nation—but we could supply a major part of what Boston buyers want.

Maine has the farmland base, a growing number of farmers, and easy transportation routes. We also have rainfall and relatively moderate climate, at least in the summertime. We don't have the systems in place to connect those

COMMENTARY

assets with the markets that will increasingly be available over the next decade.

Meet High Standards

As consumers become more aware of food production systems, they start to make demands that are often hard to meet within the current model: grass-fed beef, humanely raised livestock, free-range chicken, organic foods. Maine already has a national image as a “green” state, a place where a lot of good things are happening in terms of the environment. We can build on that image, a step at a time, by helping farmers meet these other certification standards and labels. It will solidify our current markets, and open the door for new ones along the way.

CONCLUSION

Pieces of this abundant food system are already in place. From seeds (e.g., Johnny’s Selected Seeds breeding program that has won six All-America awards) to tools (e.g., Art Haines company, FarmArt) to the final product (e.g., Suzuki’s Sushi Bar in Rockland, using all Maine seafood and local produce), Maine is full of innovation. We must support and encourage that creativity and hard work in every way possible.

Agriculture in Maine has transformed itself multiple times over the past 400 years. However, these changes have always happened in a world of easy resource availability. Now we face challenges that could change our entire economic system. These initiatives could lead us towards a food system that provides abundance even with larger system changes. Agriculture and fisheries were two pillars of Maine’s early economy. With care and support, they will be foundations of our future as well. 🐟

REFERENCES

- Alden, Robin. 2011. “Building a Sustainable Seafood System for Maine.” *Maine Policy Review* 20(1): 87-95.
- Beal, Amanda and John John M. Jemison Jr. 2011. “Resources, Environment and Energy Considerations for Maine Food Security in 2050 and Beyond.” *Maine Policy Review* 20(1): 172-181.
- Jemison, John M. Jr. and Amanda Beal. 2011. “Historical Perspectives on Resource Use in Maine Food Systems.” *Maine Policy Review* 20(1): 163-171.



Russell Libby

is executive director of the Maine Organic Farmers and Gardeners Association (MOFGA). An economist,

he has worked on food policy at the Maine Department of Agriculture, MOFGA, and through many organizations, including the Eat Local Foods Coalition, the Agricultural Council of Maine, the National Organic Coalition, and the National Campaign for Sustainable Agriculture. He also has a small farm in Mount Vernon.