



Maine's Organic Farms - An Impact Report

November 2010

Maine Organic Farmers
and Gardeners Association

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Executive Summary

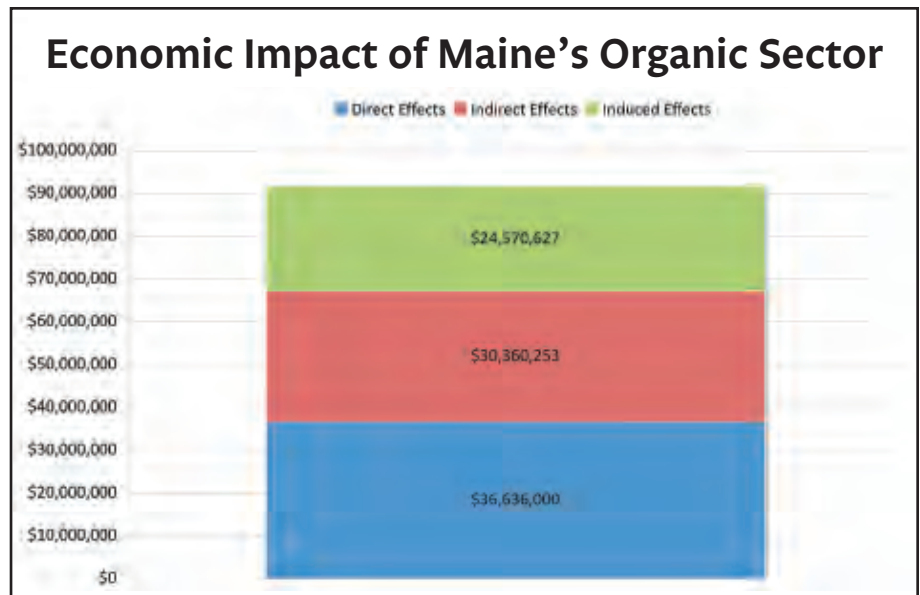
From humble beginnings, Maine's organic farm sector has cultivated a sizeable presence for itself on the State's agricultural landscape. The purpose of this report is to assess the size and economic impact of organic agriculture in Maine. It uses a special tabulation from the 2007 Census of Agriculture to do so.

In 2007, Maine had 582 organic farms. Maine's organic farmers generated \$36,636,000 of total economic output in 2007, and profited \$3,850,000 from an asset base of \$251,578,000. They do this on 94,446 acres of land while supporting 1,596 jobs. Organic farmers are more likely to be younger and female than their conventional counterparts.

Organic agriculture, while small in total output relative to other types of farming, creates more jobs per farm. Organic farming utilizes natural fertility and human labor more than manufactured inputs to produce value. This means that organic farms create more jobs per farm than the State average, and profitable organic farmers return a higher margin of value to local economies than farms that rely on purchased inputs. This translates into a disproportionately larger economic impact for organic farms, especially in household spending. Organic farming leverages \$91.6 million in economic impact into the state of Maine.



Jean English photo



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Susan Leiter photo

Organic farms represent a potential leverage point for economic growth and job creation, especially for younger Mainers.

Maine’s organic farm sector has grown by leaps and bounds over the last two decades. But this heady growth has also created new vulnerabilities that could undermine recent successes if not addressed. While still anchored by a core of diversified farms, most of the recent growth has been in commodity-based organic products, such as dairy and maple syrup. This leaves the organic sector more vulnerable to market fluctuations. Meanwhile, a sizeable group of diversified, “sustainable” farmers may share much in common with organic farmers, but are not choosing organic certification. Finally, the direct markets for organic products may not be able to sustain rapid growth indefinitely.

In order to mitigate these risks and remove barriers to profitability, this report offers the following recommendations for MOFGA and its supporters:

- Develop better financial and business planning resources for organic farmers.
- Strengthen alliances between certified organic farms and non-certified “sustainable” farms.
- Diversify market opportunities for organic dairy farmers – both products and channels.
- Develop market channels with small and mid-sized grocery stores for local, organic products.
- Continue to purchase local Maine foods from MOFGA-certified farms.

Every time a Maine citizen pays \$1 directly to a Maine organic farmer, we:

1. Provide that farm with \$1 in direct funding.
2. Create \$.83 in spending for other local businesses.
3. Create \$.67 derived from spending of Maine’s organic farm families.
4. Support one of 1,596 jobs on 582 farms.
5. Help to maintain 33,000 acres of cropland and another 8,500 of pasture in organic production.
6. Express our direct appreciation for the high-quality products that Maine’s organic farmers produce.

I. Purpose of Report

From humble beginnings, Maine's organic farm sector has cultivated a sizeable presence for itself on the State's agricultural landscape. In spite of Maine's declining shares of national commodity markets for farm products, its organic farmers are innovating new production and marketing techniques to grow their businesses. And in doing so, they have helped to turned the tide of Maine's historically declining farm numbers, and are bringing new economic and social vitality to the state.

The purpose of this report is to take stock of Maine's organic farm sector, to identify its strengths and risks, to demonstrate that growth of organic farms is good for the State's economy, and to offer suggestions for how the sector can continue to grow. This report grapples with the following questions:

- What is meant by the organic farm sector?
- How many organic farms are there, and what is their share of Maine agriculture as a whole?
- How much land do they manage?
- How many jobs do they create?
- What is their economic impact?
- How do they return value to the communities they are nested within?
- How do they make their profits?
- What risks do they face?
- How can supporting organizations work to mitigate these risks and remove barriers to profitability?

II. Definitions and Sources

Organic agriculture is built upon the foundation of a holistic ecological approach to farming.

Organic agriculture is a system of farming derived from living, natural processes. Almost everything organic farmers put in their soils,



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Susan Leiter photo

plants, and animals is alive, was alive, or came from a living thing; the remaining inputs come from naturally produced minerals.

But organic farming is more than the sum of a list of all-natural ingredients. Organic farmers work with the living systems native to their farms to create food and revenue. This reduces their need to purchase off-farm inputs. Not only is this a more resilient business strategy; it also retains more of the economic value that organic farms create within the state of Maine.

Maine boasts one of the oldest organizations dedicated to supporting organic farming: the Maine Organic Farmers and Gardeners Association formed in 1971. MOFGA defines organic agriculture as, “based on growing crops and livestock through the use of soil-enriching systems. Organic farmers are not allowed to use synthetic fertilizers or pesticides, and organic livestock are raised with organic feed and a narrow range of permitted medicines.”

The National Organic Program has created a legal definition for organic that has helped to expand its market share.

In 2002, after twelve years of debate, the “National Organic Program” went into legal effect. Now, all food products that use the term, “organic” in their marketing must have been produced under standards defined by the United States Department of Agriculture’s National Organic Program. No matter where you buy organic food in the United States, it must be produced under the same standards. While NOP holds the rights to control the standards, it contracts the actual inspections and certifications out to local organizations. In Maine, MOFGA Certification Services, LLC conducts the vast majority of inspections.

How the Organic Data for this Report was Compiled.

In 2007, the USDA Census of Agriculture captured detailed information about organic farmers in Maine. This report uses a special tabulation compiled by the USDA’s National Agricultural Statistics Service of production and financial for Maine’s organic farmers by industry classification.

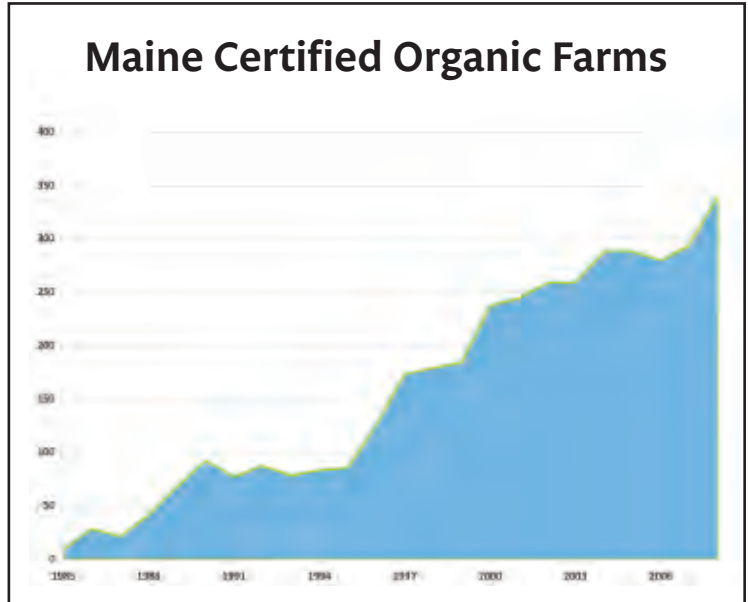
Unless otherwise cited, data and analysis in this report comes from this tabulation in combination with data from the regular Census for comparison. Other sources include MOFGA’s archives and the USDA Economic Research Service.

III. Size and Scope

Organic farming is growing rapidly.

From 1988 to 2008, the number of certified organic farms rose from 41 to 339, a total growth of over 800%! Some of these are new farms starting up; others are conventional farms that decide to become organically certified. In 2007, Maine had 294 certified organic farms. Since farms with gross revenues of less than \$5,000 don't have to be certified, the USDA Census reports 582 organic farms in the state.

According to the 2008 Organic Production Survey put out by the National Agricultural Statistics Service, Maine had the 12th highest number of organic farms in 2008 – not bad for a state with relatively little clout on the national agricultural scene!



Economic output, impact, and jobs created.

Taken as a whole, Maine's organic farmers generated \$36,636,000 of total economic output in 2007, and profited \$3,850,000 from an asset base of \$251,578,000. They did this on 94,446 acres of land while supporting 1,596 jobs.

Organic farming's share of Maine agriculture.

Maine's organic farms occupy a relatively small slice of the whole Maine farm scene in terms of acreage, assets, and gross revenue – about 7% each. But organic farms create more jobs (8%) and are more likely to sell locally than their conventional counterparts. 10% of all Maine's organic products in 2007 were sold direct to consumers, representing 20% of all such sales in the state, which is disproportionately large compared to the organic sector's 5.5% share of total revenues. Organic vegetable farmers in particular sold 30% of their products directly.

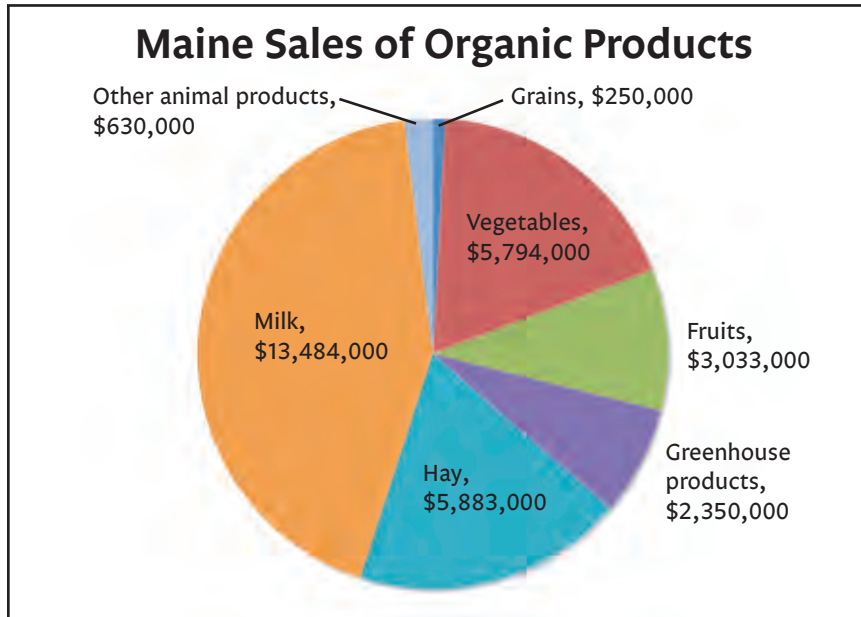


Jean English photo

Sales Distribution of Organic Products

\$13.5 million, or 41% of all sales of Maine organic products, came from milk in 2007. When combined with the 18% of sales that came

from organic hay (much of which probably went to feed Maine’s organic dairy cows), Maine’s organic dairy sector accounted for over half the gross revenues of all organic products. Other big sellers included vegetables at \$5.8 million and fruit at \$3 million.

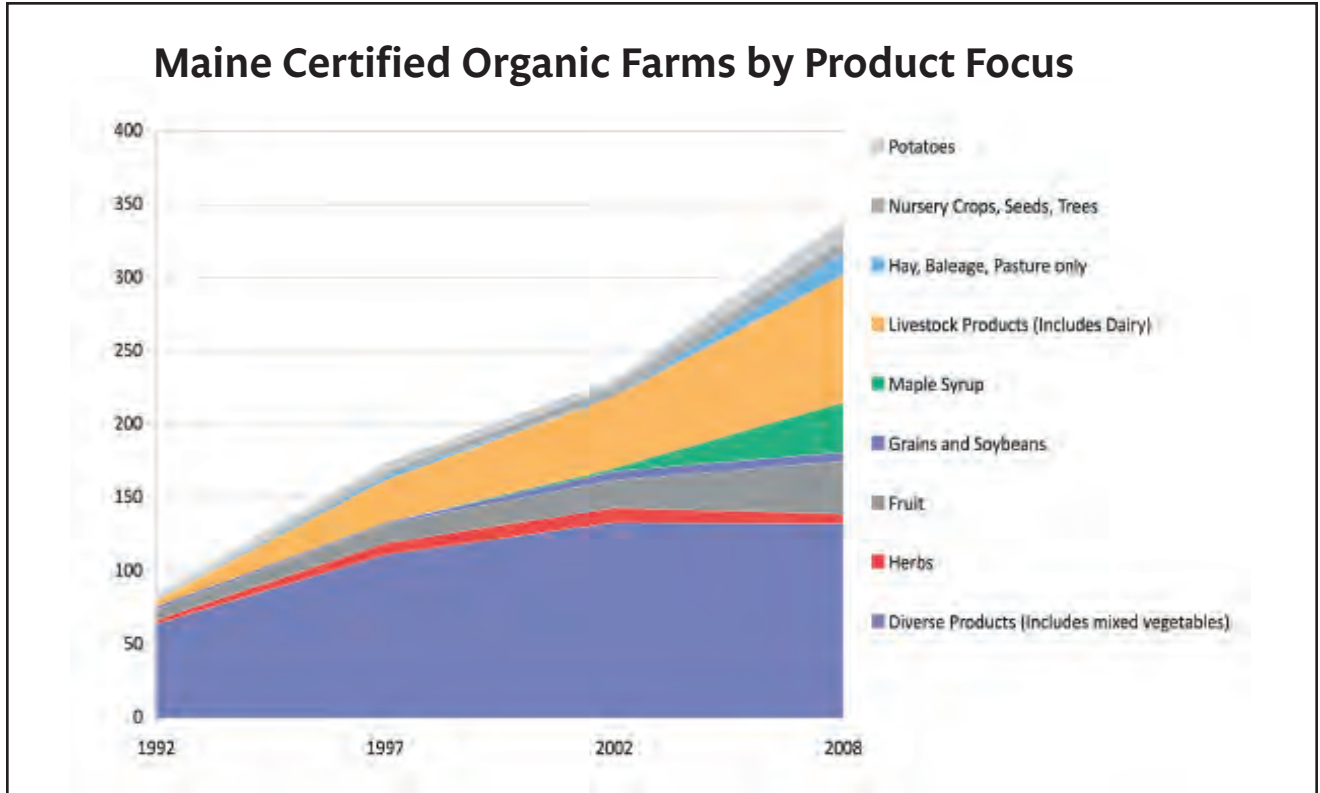


The National Organic Program has changed the makeup of Maine’s organic farms.

Through the 1990s, the majority of organic farmers were diversified vegetable farmers – selling a range of products to mostly local markets. This began to

change around 2002. Assured by the uniform standards of the NOP, larger grocery stores began to stock organic products and sell them to a wider audience. This opened up market potential for organic foods that Maine’s farmers began to fill – but in a slightly different way. More specialized producers, focusing on the production of fewer types of products, began to become certified. These producers – especially dairy and maple syrup farmers – make up the majority of Maine’s growth over the last ten years, while the number of certified diversified vegetable producers – long the mainstay of the organic community – has leveled off. Since 2002, Maine has gained a net of 80 organic farms from 2002 to 2008, a growth of 24%.¹ Almost half of this growth comes from dairy farms that have transitioned to organic production, now that national standards have enabled organic milk to reach a larger regional customer base.

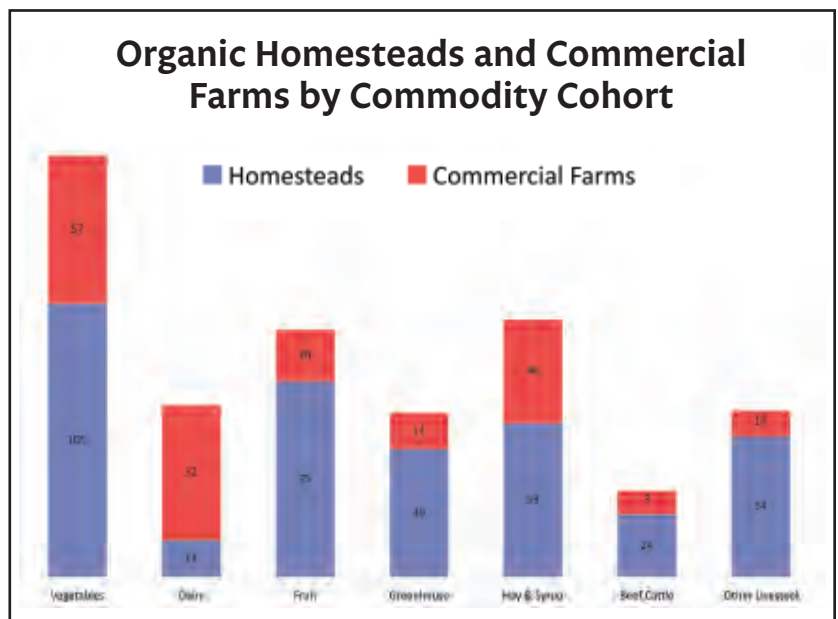
Some smaller, more diversified farmers may have dropped out of organic certification when the national standards arrived². This may be because they were not satisfied with the federal organic standards, or their marketing strategies were focused on local customers and they did not see value in nationally recognized certification.



Many organic farms are oriented toward homesteading rather than commercial production.

The USDA census list three types of farms whose financial output does not fully meet their operators' needs: "limited resource farms," "retirement farms," and "residential/lifestyle farms." As a whole, these farms have net cash losses; but this does not reflect the true value they produce. Their farmers are growing food for home consumption, barter, and the fun of doing it, in addition to some modest sales. In order to support their farms, homesteaders have an off-farm source of income, such as a job, a spouse that works, or passive income.

About 65% of all organic farms on the Census are homestead-oriented. Organic fruit, greenhouse, and small livestock farms are most likely to be homesteads; organic dairies are least likely.



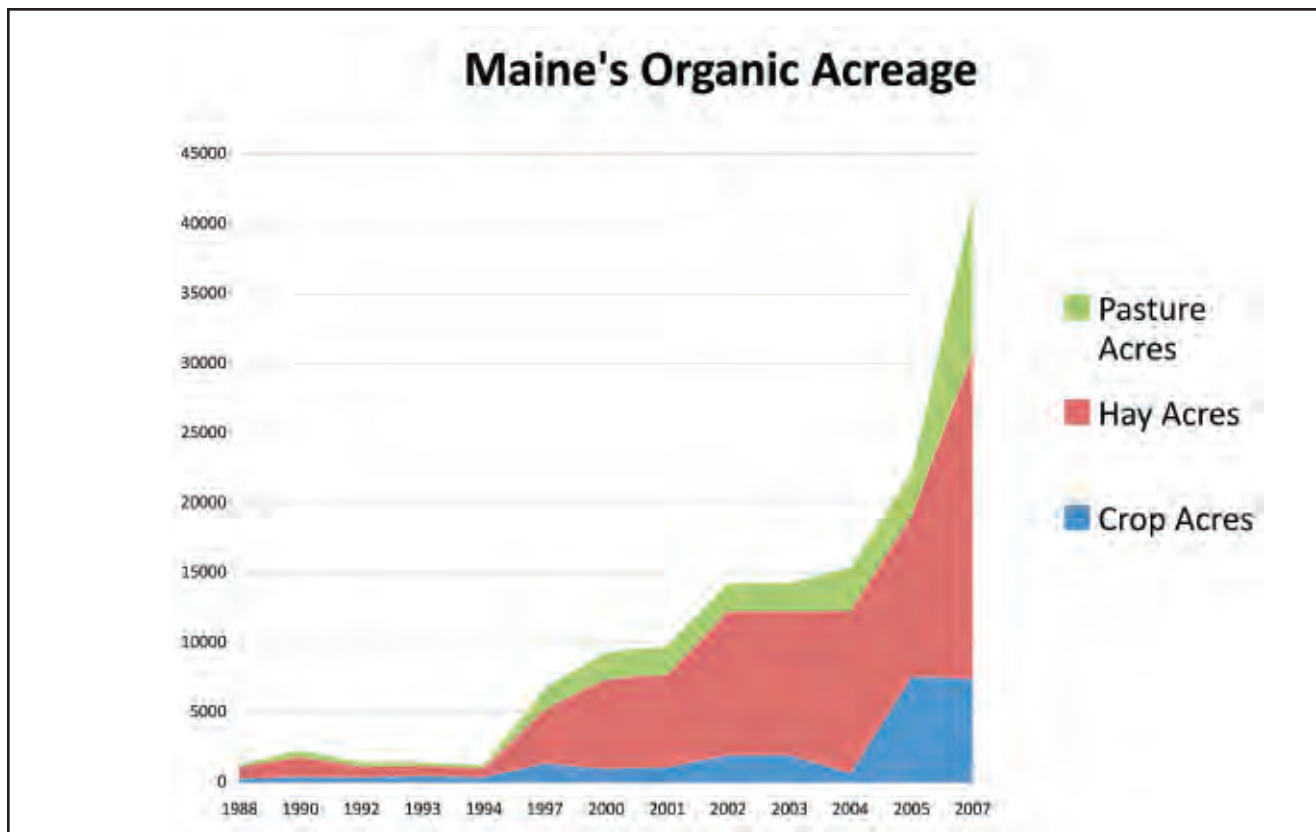
IV. Land

Maine’s organic farms owned 94,446 acres of land in 2007, of which 38,767 were reported used for organic production³. This acreage represents 7% of all land in farms in Maine. The 38,767 productive acres represent open space that is not treated with non-organic chemicals or amendments. And the soil that Maine’s organic farms are building represents the wealth of future generations of Maine farmers.

Maine’s organic cropland and pasture is rapidly increasing.

Since 2002, the amount of organic cropland, hayfields, and pasture has more than doubled, if numbers from the Economic Research Service⁴ are correlated with Census data. This is a growth rate faster than the number of organic farms, showing that not only are more farms going organic, but bigger farms are as well.

In 2007, over half of all Maine’s crop and pasture land was in hay, and an additional 16% in permanent pasture. Add pastured woodland and cropland in pasture to this, and about 83% of all Maine’s organic crop and pasture land were used in producing feedstocks for livestock.



In addition to crop and pasture land, Maine’s organic farmers also managed about 45,000 acres of unpastured woodland, from which they make maple syrup and harvest timber.

Maine’s organic farmers rely heavily on cover cropping and composting to build soil fertility.

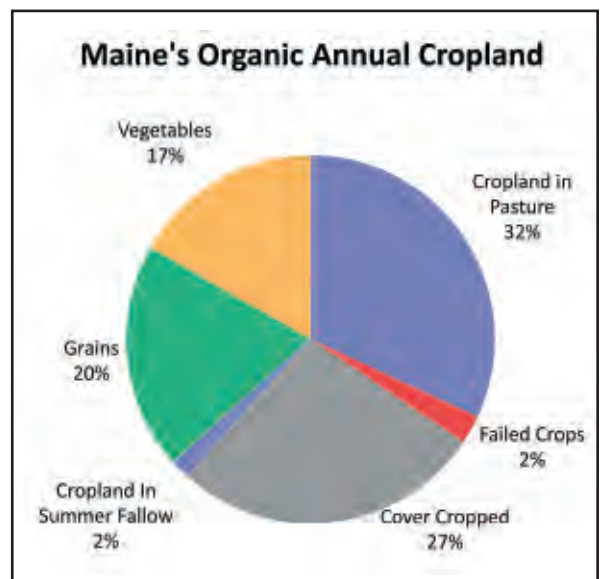
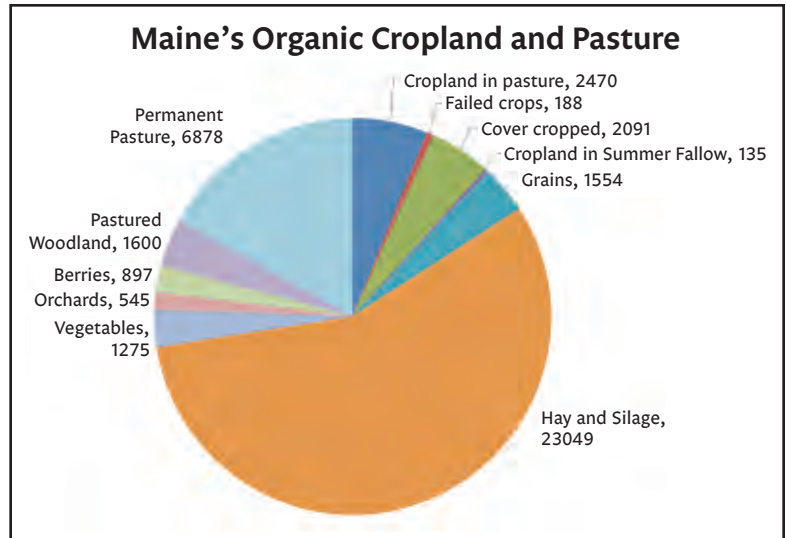
Soil is the most important asset on an organic farm. It provides crops fertility, houses beneficial organisms, regulates water supply, prevents erosion and runoff, and fixes carbon. Organic farmers have a maxim: “feed the soil, not the plant.” By building their soil, organic farmers create the conditions for healthy plants and animals.

Organic farmers use many methods of building soil. They make compost from manure and other organic materials, and spread this on their fields. They plant cover crops, usually grasses and legumes, that build organic matter before being plowed under in preparation for a cash crop. With the right grazing management, farmers can even build fertility on cropland in pasture.

Assuming that virtually all cover cropped acreage is in rotation with annual crops (2,091 acres), Maine’s organic farmers keep more under crop rotation than they do in planted annual crops (just over 1,800 acres). They also placed another 2,470 acres of cropland into short-term pasture, which also accumulates fertility for later annual use if managed properly. These actions assure that their soil will remain fertile even as their cash crops remove nutrients.

Maine’s organic crop farmers represent a financially viable way to maintain productive space on farmland threatened by development.

Organic crop farming can leverage greater preservation per dollar than almost any other type of farming. Maine’s organic vegetable and fruit farmers netted \$217 and \$246 per acre of cropland and pasture respectively, far above the state average of \$83. This means they need far less land to be viable, which fits synergistically with the higher prices and smaller



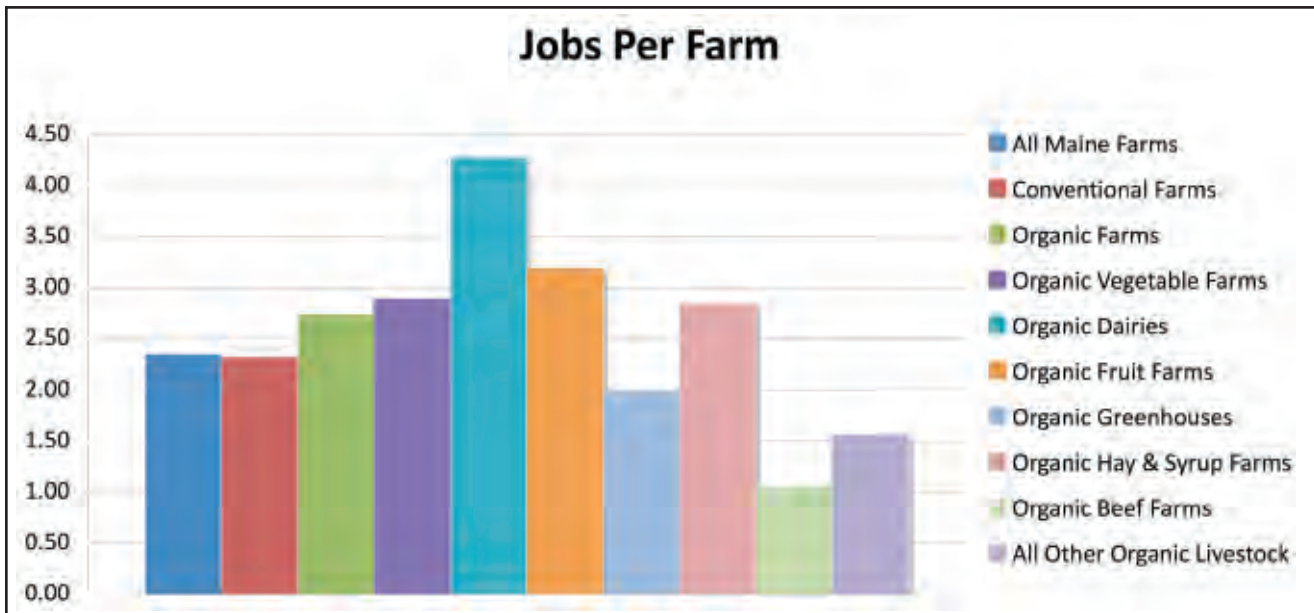
parcels of land near developed areas. Furthermore, they are more likely to invert the challenge of farming near a population center on its head and turn it into an advantage: organic vegetable farmers sell 30% of their products direct to consumers. Being near population is a strategic marketing advantage for these types of farms.

V. Jobs

Organic farms create more jobs per farm than conventional farms.

Maine’s organic farmers netted \$3.85 million in 2007, paid their workers \$5.9 million in wages, and supported 1,596 jobs.⁵ And Maine’s organic farms support more jobs – 2.7 per farm compared to 2.3 for conventional farms. Organic dairies support four jobs per farm.

Some organic farms are extremely labor intensive – for instance, organic vegetable and fruit farms spend 29% and 27% of their expenses on labor, compared to the State average of 18%. This means more of these farms’ total output is ploughed back into their communities as farm workers spend their wages at local businesses.



VI. Demographics

Not only do organic farms create a high level of jobs per farm – the workers in those jobs are more likely to be younger and female than on conventional farms.

Led by a vanguard “spike” of baby boomers, organic farmers as a group tend to be younger than conventional farmers.

37% of all organic farmers are aged 55-64, representing a demographic spike not as marked in the conventional farming group. This represents the “back to the landers” who initially founded MOFGA and started the organic movement in Maine.

Behind this spike, more organic farmers are younger than conventional farmers. Additionally, MOFGA reports a sharp increase in the number of farmers in their 20s and 30s starting farm businesses in the last three years (since the Census was tabulated). Conventional farmers are more likely to be older than 70 than organic farmers.

Organic farmers are also more likely to be female. 34% of all principal operators on organic farms are female, compared to 24% for conventional farms.

The organic farm listings in old editions of *The Maine Organic Farmer & Gardener* reveal a slightly different story. On the Census, there can be only one “principal operator” listed, no matter who pitches in in what way. *The MOF&G* lets farms attach as many names as they want. Over half of all certified farms listed, historically and now, are run by a man and woman couple. If there is not a couple running the farm, the farmer is more likely to be male.



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VII. Making Profit on Organic Farms

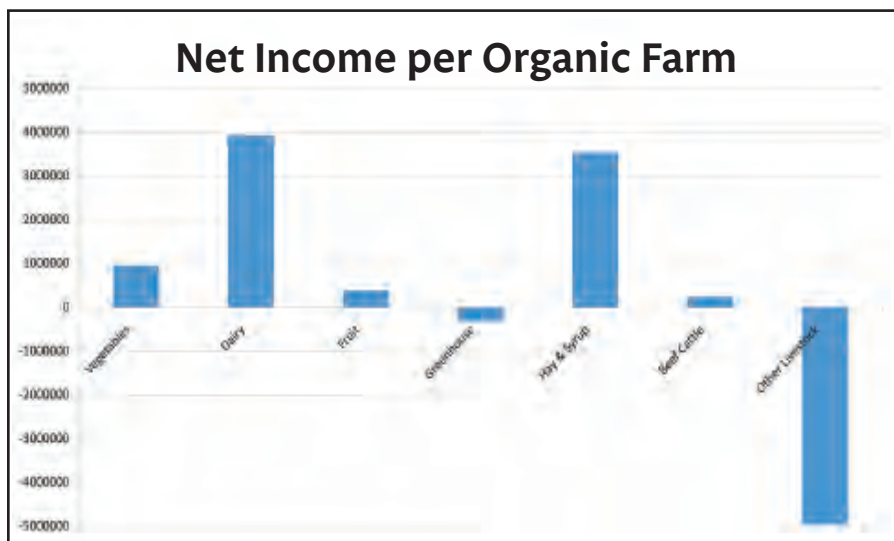
Organic farms can be profitable when managed for commercial, rather than homestead, production.

Organic farms rely on the natural vitality of their farms to produce value, thus reducing input costs. And the organic brand generates a price premium – which the organic farmer captures a share of. It is these two factors – the ability to cost-effectively substitute purchased inputs with homegrown, and the ability to negotiate a substantial share of the final organic premium – that determine a commercial organic farm’s profitability.

In 2007, organic dairy farms tended to be larger, and they netted the highest per farm profits in 2007, at \$59k per farm. Hay and syrup farms came in second at \$35k per farm. These two groups also had the highest profit ratios.

Averages can be deceiving, however; for instance, while the average net per organic vegetable farm is a little less than \$6,000, 51 of 172 organic veggie growers report that the farm meets their financial needs – and they’re probably profiting a little bit more than \$6k each annually. 42 growers reported net incomes of \$10,000 or more – about one quarter of the total. With fruit and beef farmers, the results are similar.

This reflects the gap between “homestead” and “commercial” farms. Across the board, those cohorts that have more “homesteaders” reveal a smaller net profit per farm. Indeed the correlation between net profits per farm and percentage of commercial farms in each cohort is a strong 79%.



Breakeven analysis offers a slightly different perspective on profitability.

Another way to measure profitability is by doing a “breakeven” analysis. This lets us see how much a farm might need to produce to break even on costs or profit a sum – and it gives us a more accurate answer as to the profitability of different types of organic farming. A

farm “breaks even” when its margin of revenues over variable costs equals its fixed costs. A farm may not be making any money at that point; but at least it’s not losing any either!

Fixed costs are expenses that do not vary in their amount, no matter how much a farm produces. These include interest payments on loans and depreciation (which usually gets expensed at a set rate no matter how much equipment gets used). Variable costs, on the other hand, are expenses that vary based on how much you want to produce. For instance, if you want to grow more tomatoes, you buy more seeds and more compost. Variable costs include soil inputs, seeds, fuel, and labor.

A farm with a heavy amount of fixed costs may be more profitable in any given year; but it also stands a higher risk of losing money if something goes sour, because it has to meet its monthly fixed bills, regardless of revenue.

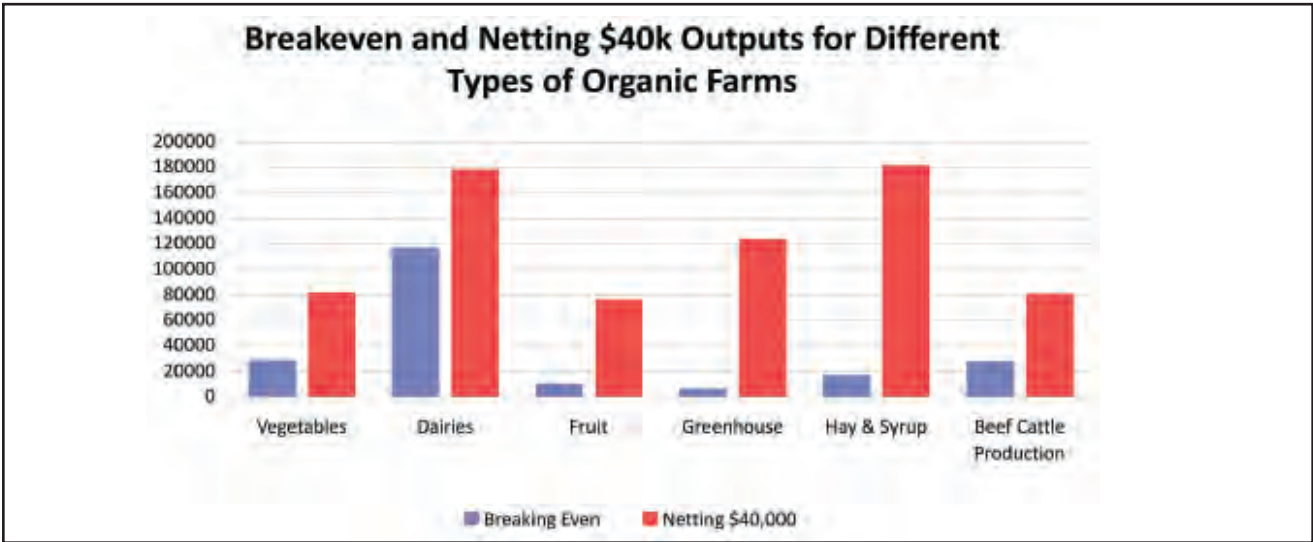
As might be expected, dairy farms carry much higher fixed costs. Hay and farms also carry a higher degree of fixed costs to variable costs.

This means that crop farms, especially fruit and vegetable farms, break even at much lower outputs. The average breakeven point for an organic fruit farm, for instance, is just under \$11,000, compared to \$117,000 for an organic dairy farm.



Jean English photo

Another way to look at it is to ask, “How much would a farm need to produce to profit \$40,000?” Seen this way, the most profitable farms at the lowest level of gross income are vegetable, fruit, and beef farms – all at around \$80,000. Dairy, hay, and syrup farms each require an average of about \$180,000 gross to net \$40,000.





Tim Nason photo

It is important to note that these “profits” do not necessarily reflect all of a farm’s cash expenses. For instance, only the interest on mortgage payments is reported as an expense, not the principal. Depending on where a farm business is in its life cycle, it may net less income than these numbers reflect.

Two types of organic farms, two strategies for profitability.

Organic dairy farms are potentially the most profitable per farm. But they also required the largest investment to start up, and carry the highest level of fixed liabilities that could leave them vulnerable if the weather or market sours. These also tend to be more input-heavy, and less diversified. Their profitability depends on their ability to negotiate a fair share of the price premium for their product while controlling input prices, especially feed.

Organic vegetable, fruit and beef farms tend to be less profitable per farm, but require smaller investments to start up and produce decent income at lower levels of production. Their profitability depends on their ability to find high-value niche markets while keeping fixed capital costs low.

Both types of organic farming will need to thrive in order to increase the share of organic farms in Maine.

VII. Economic Impact

The Fly in the Ointment

When Clarence Day, preeminent historian of Maine agriculture, concluded his seminal *Farming in Maine, 1860-1940*, he noted, “the trend was away from general, self-sufficient farming toward commercial farming.” Diversified homesteads had given way to farm “sectors,” primarily dairy and potatoes. In general, Clarence Day lauded the transition from homesteading to commercial farming – Maine’s farmers were more productive and had more wealth.

“But there was a fly in the ointment. Maine had lost 25,000 farms between 1880 and 1940, and more than half the improved land ... many because they could not meet the requirements of the machine age ... the towns in which they were located lost population and human resources. Their schools were smaller, their churches weaker, their taxes higher, and lilacs grew where once a garden smiled.”

This trend of “fewer but larger” that Day observed has only been exacerbated since he wrote. As Maine’s farms have grown in size, they have replaced labor with inputs and machinery, and have come to depend on out-of-state sources for their purchases. This means that smaller and smaller margins of their gross output are returned to their communities in the form of net income, wages, and property taxes. In order to stay profitable against those declining margins, many farmers constantly look for ways to replace expensive, inefficient labor with cheaper, more efficient machines and inputs. Ironically, while policymakers and communities are constantly trying to figure out how to create more jobs in Maine, many farmers are busy trying to figure out how to eliminate them. They’ll go out of business if they don’t.



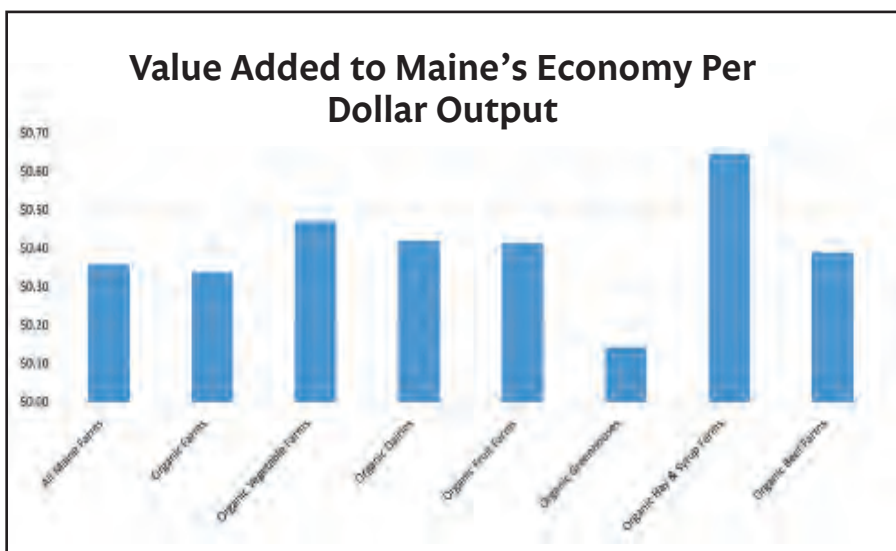
Melissa White Pillsbury photo

This is Clarence Day’s “fly in the ointment” magnified. Fewer farms and fewer jobs mean smaller communities and a smaller tax base. Take the conventional dairy industry. In 1961, there were 3,100 dairy farmers. In 1970, there were 1,700. In 2007, there were 396 dairy farms, of which 66 were organic. Conventional dairying accounted for \$124,651,000 worth of gross output, a full 19% of the State’s total – still dwarfing the organic sector’s 6% share. Clearly dairying in Maine will continue to be a very large and influential piece of the state’s farm sector.

But conventional dairying is reliant on importing large amounts of inputs to stay profitable. Farmers and their hired help retained \$35,936,000, or about 28% of total output, for their efforts. This is comparable to the 28% of total revenue that they spent on imported feed alone.

Many organic farms return a high margin of value back to the communities they are nested within.

Many organic farms are better at generating and retaining a high margin of value in local economies. On all Maine farms, net profits, wages, rent for land, and property taxes represent \$.34 on every dollar of total output. Economists call this figure, “value added,” because it represents the total value generated by an industry minus the inputs that it imports and manufactures into finished goods.





Jean English photo

Against this state average, several organic cohorts stand out. Vegetable farms add \$.47 on every dollar; dairies and fruit \$.42 each; and hay and maple syrup add \$.65 on each dollar.

Why is this? Organic farmers work together with the natural and social systems of their farms to create value, rather than “purchasing” and “manufacturing” inputs. Economically, this means organic agriculture *returns a higher margin of value to the farm families, communities, and soils it binds together.*

Farms with a higher value added represent a key leverage point for growing the State’s local economy.

It has long been believed that organic farming is better for the environment than conventional farming. Over the last two decades, many farmers have discovered it can be better for the bottom line. Now we are learning that organic farming can be a positive force in the overall economy. For every dollar of output that organic vegetable, dairy, fruit, hay, and syrup farms can grow, a greater proportion stays in the State’s local economy. They represent a leverage point for growth, job creation, farmland protection, and community vitality as Maine agriculture continues to adapt to change. This is the antidote to Clarence Day’s “fly in the ointment.”

The higher value added from the organic sector’s profitable segments translates into a disproportionately large economic impact for organic farming, especially in household-induced spending.

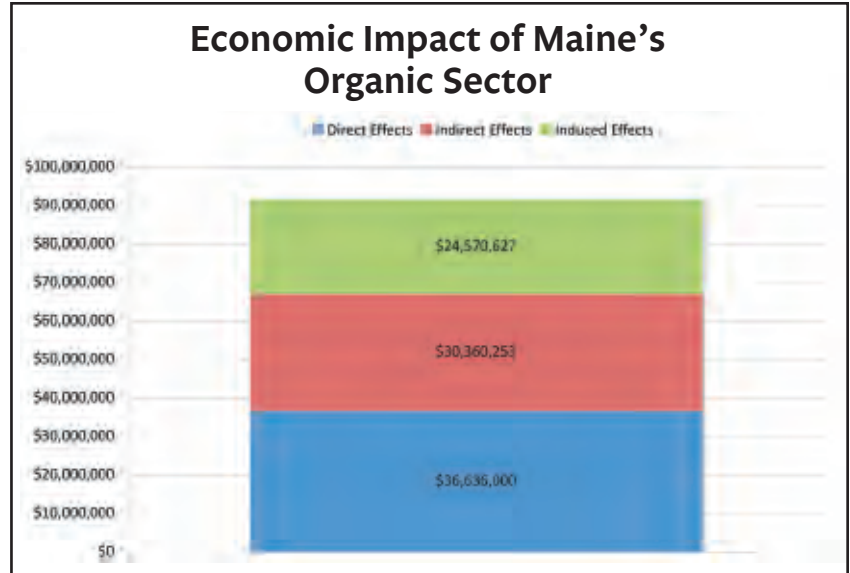
When any industry incurs costs and returns dividends, that money meanders through the rest of the local area, eventually dissipating out into larger economy. This happens in one of three ways:

1. Farms pay expenses for inputs, labor, and taxes, and return dividends to owners. This is called *direct* impact.
2. The businesses from whom they’ve bought things then turn around and make payments for their own expenses. This is called *indirect* impact.
3. The households who have been paid wages and profits from the farm spend that money at other businesses. This is called *induced* impact.

The sum of all three impacts – direct, indirect, and induced – is called the *total* economic impact for that industry. Induced impacts leverage a greater amount of economic impact than indirect impacts,

because money spent by households tends to stick around the local economy longer than money used by businesses to buy inputs.

The United States Bureau of Economic Analysis collects data on direct, indirect, and induced spending by region, state, and the nation as a whole, and tabulates that data into a series of tables, called “Regional Input-Output Multipliers” (RIMS II). A RIMS II table shows the amount of indirect, induced and total economic impact one dollar of economic output stimulates for each industry in any given region – called multipliers. This report uses the RIMS II table for Maine agriculture as a whole to estimate the impact of organic farming.



The \$36.6 million of direct impact by organic farmers translates into \$30.3 million in indirect impact and \$24.5 million in induced impact, for a total of \$91.5 million in economic impact. This represents a 5.3% share of Maine agriculture as a whole, in proportion with the share of certified farms.

Indirect impacts for organic agriculture are probably greater than RIMS II estimates.

The multipliers RIMS II uses to calculate direct impact are based on national averages. This means the average is heavily weighted toward industrial farms that import large quantities of inputs from non-local sources. Anecdotal evidence within the Maine organic community suggests that organic farmers tend to purchase more of their inputs from local sources. For instance, since organic soil fertility tends to come from compost, manure, and other heavy biomass, organic farmers are more likely to buy their soil inputs from other farmers or local compost businesses. And since organic farmers depend on the hardiness of their crop varieties for disease and pest resistance, they are more likely to purchase their seeds from local seed companies who have tested and proven those varieties to be suited for Maine.

This means that more of organic farmers' expenses support local businesses, their money stays in the local economy longer, and their indirect impact is probably higher than the \$.83 on the dollar that RIMS II estimates.



Jean English photo

VIII. Risks and Challenges to Maine Organic Farms

Maine’s organic farm sector has grown by leaps and bounds over the last two decades. But this heady growth has also created new vulnerabilities that could undermine recent successes if not addressed. While still anchored by a core of diversified farms, most of the recent growth has been in commodity-based organic products, such as dairy and maple syrup. This leaves organic farming more vulnerable to market fluctuations. Meanwhile, a whole group of diversified, “sustainable” farmers may share much in common with organic farmers, but are not certified. Finally, the direct markets for organic markets may not be able to sustain rapid growth indefinitely.

Maine’s organic dairy farmers are facing a soft organic milk market.

The national standards have undoubtedly created growth for Maine’s organic sector. But, because that growth has occurred mainly in a couple specialized commodities, it has also created new vulnerabilities for the organic community. One of them has become increasingly apparent in 2009.

2006-2007 represented a nadir for the organic dairy industry. In 2007, Maine’s organic dairy farmers were netting an average of \$59,800 per farm and returning \$.44 on every dollar back to their communities.

The opportunity to convert to organic has proved a boon to many of Maine’s smaller and mid-sized dairies. A 2008 study comparing organic dairy farms in Maine and Vermont with their conventional brethren confirms this notion.⁶ “The organic dairy sector has become a haven for smaller family-operated farms that could not, or would not, continue getting bigger to remain economically viable in conventional dairy production.”

This growth has also been good for MOFGA and the Maine organic community. Organic fluid milk accounted for \$13.5 million, or 40%, of all organic sales in 2007. And most likely, a sizeable chunk of the organic hay and syrup farms’ 20% share of total sales went to feed cows on Maine’s organic dairies. Organic dairy farms managed just over 16,000 acres, or about half, of all certified cropland.

But while their systems were profitable in 2007, dairies were among the least resilient of Maine’s organic farms. They depended on milk for 93% of their sales in 2007, and purchased inputs accounted for 78% of costs. These dependencies could compromise the sustainability of the segment over time.

As long as final demand for organic milk continued to grow, everyone was happy. Milk processors received their chunk of the profits; so did the organic dairy farmers. But unlike the organic foods sold at farmer's markets, the organic milk sold in stores had become a commodity – organic maybe, but still a commodity. And in any kind of agricultural commodity supply chain, farmers possess the least relative bargaining power.

In 2008, the economic downturn caused recent converts to organic milk to switch back. According to a recent *Boston Globe* article, “Sales of organic milk have plunged and farmers who got lucrative deals from a dairy industry that was thirsty for the stuff now can't get rid of it. The volume of organic milk sold nationwide is expected to drop nearly 15 percent this year.”⁷

Since organic dairies have locked-in prices, the processors can't lower their prices – so they lower volume instead. Many organic dairies have been receiving calls telling them to cut back on production. Even if they do this efficiently, the average Maine organic dairy carried \$40,500 in annual fixed costs in 2007 that had to be met no matter what. The national commodity market for organic milk may not be a large enough place to sustain all organic dairies.



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The direct markets for organic foods may be finite.

Maine's organic crop farmers, especially vegetable and fruit farmers, depend on direct sales to consumers for a large portion of their sales. Of these, the smaller farmers are especially dependent. It makes sense; direct sales to consumers yield the highest price premium, as the farm captures 100% of the “marketing bill.”

Direct sales to consumers have been growing at a rapid pace; 39% from 2002 to 2007, and an astonishing 269% in Waldo County! And the near future is projected to see continuing growth.

But research suggests that the market for direct farm sales is ultimately finite. The Maine Department of Agriculture's “Agricultural Creative Economy” report cites a consumer study showing where consumers purchase their food.⁸ About 12% say they purchase 1/4 or more of the family's produce at a farm direct market; these represent the hardcore “locavores” who are the low hanging fruit of farm-direct marketing ef-



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forts. About 43% of families say they purchase some produce direct from farms, but less than a 1/4 of their total. These represent the “casual” local foods shoppers, who might need the occasional promotional nudge to be reminded to support their local farms. On the other hand, nearly half of all respondents said they bought more than 1/2 their produce at a grocery store less than 10 miles away.

Right now, local agriculture is thriving on a growing direct market, and goodwill amongst producers abounds. More farmers in the market bring more consumers to the “scene” at a net rate faster than the increased supply of food. But as the committed locavore base becomes saturated in any given area, this could change.

The uncoupling of the organic brand from organic philosophy may limit the ability of MOFGA to connect with some small, diversified farms.

The National Organic Program is very clear that its official definition of the word organic is for marketing only; it does not inherently mean food is healthier or environmentally benign. While this makes sense from a legal standpoint, it has uncoupled the definition of organic certification from the original intent of organic philosophy and production.

This has caused a group of diversified farmers to either drop certification, or not to consider it in the first place. While these farmers may use many organic practices and market locally, they don’t necessarily see the advantage of attaching themselves to a nationally recognized brand.

Instead of using organic certification, many of these farmers now self-apply the term, “sustainable” to describe themselves. Sustainable agriculture combines the ecological approach of organic farming with a locally-focused marketing plan.

In their large and detailed survey study of Maine farms, “Understanding the Dichotomy Between Industrial Agriculture and Sustainable Agriculture: Types and Characteristics of Maine Farms,” Stuart Smith, along with colleagues Pamela Bell and Andrew Files, define sustainable agriculture as representing a system which is, “decentralized, diverse, restrained, in harmony with nature, respectful of community and promotes independence.”⁹

Projecting from the Smith, Bell, and Files survey, about 3,190 farms of the 8,136 total might classify themselves as using sustainable techniques. These farmers could produce about \$180.5 million worth of products on about 570,000 acres of land. By these esti-

mates, sustainable farming makes up about 40% of the Maine agriculture scene.

Some sustainable farms may have been certified organic before the National Organic Program, or dropped out of certification due to their dissatisfaction with the federal standards. This is unfortunate – these two groups of farmers share much in common, and would undoubtedly have much wisdom to cross-pollinate. Un-certified sustainable farmers represent an opportunity for alliance with certified organic farms.

IX. Recommendations

Maine's organic farm sector has come a long way over the last few decades. It has gone from a marginal position at the edge of a large conventional farm sector, to a niche that garners the hearts and attention of many Mainers. While organic farming is still small compared to the gross output of conventional farming, it has carved a place for itself that is profitable enough to sustain while returning a higher margin of value to the communities that support it.

Still, in order for Maine's organic farming to grow while meeting the challenges it faces, much work remains to be done. This report offers the following recommendations for MOFGA and its supporters:

Continue to purchase local Maine foods from MOFGA-certified farms

Every time a Maine citizen pays \$1 directly to a Maine organic farmer, we:

1. Provide that farm with \$1 in direct funding.
2. Create \$.83 in spending for other local businesses.
3. Create \$.67 derived from spending of Maine's organic farm families.
4. Support one of 1,596 jobs on 582 farms.
5. Help to maintain 33,000 acres of cropland and another 8,500 of pasture in organic production.
6. Express our direct appreciation for the high-quality products that Maine's organic farmers produce.



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Develop better business planning and financial tools for organic farms.

Comparatively little is known about organic farming compared to conventional farming – especially when it comes to their financial performance and economic impact. Without this information, farmers are often left to guessing what sorts of goals and ratios they should create for themselves – and creditors may be leery of such an under-researched field.

MOFGA and its allies should develop better financial resources for its constituents. This could include publishing survey-based financial ratios, spreadsheet tools, and consulting services. More research in this vein would benefit all stakeholders. For instance, farmers using organic practices will gain better access to financing if their creditors have a more solid grasp of the financial benchmarks and profitability ratios associated with this type of farming. And policymakers will have a better sense of which farms are returning higher margins of value back to their communities.

Diversify market opportunities for organic dairy farmers – both products and channels

Maine’s organic dairies can find markets for their high quality products – it just might some creative marketing and diversification.

The nationwide rise in demand for organic dairy products and subsequent conversion of 66 of Maine’s dairies to organic has undoubtedly been a good thing. But in order for that growth to be sustainable, organic certification alone is not sufficient. Appealing to processors and the public for an increased share of the final shelf price may work in the short-term, but those gains are sure to be temporary and hard-won. MOFGA, along with Maine’s organic dairies, will have to search for ways to diversify their products and sell into higher value, local niche markets. The recent establishment of the MOO brand of milk is good example of this.

Develop market channels with small and mid-sized grocery stores for local, organic products

As long as direct farm to consumer sales continue to grow, MOFGA and the Maine Department of Agriculture should continue to aggressively market the farm-direct channel to consumers. But as the “committed base” becomes saturated, their marketing efforts will yield a diminishing return of locavores. The real leverage point for future growth of local agriculture may lie in those grocery stores less than ten miles away from the casually supportive food shopper. In many communi-

ties, this means not just the large grocery chains, but smaller, local chains as well. MOFGA, the Dep’t. Of Ag., and other groups will have to work closely with both farmers, and grocery stores to develop channels, and make sure the distribution systems are scaled appropriately so that overhead costs are not prohibitive. This time to invest in these relationships is now, before it becomes a necessity.

Strengthen alliances between certified farms and non-certified “sustainable” farms.

While there were 582 organic farms in 2007, there are potentially up to 3,190 farms that might classify themselves as using “sustainable” management practices. Many of these, such as crop rotation, integration of livestock and crops, and direct marketing, closely mirror the practices of organic farming. Primarily, organic and sustainable farmers share the “systems approach” to farming. But organic and sustainable farmers are split by a barrier of branding. MOFGA, by reaching out to and including these non-certified “sustainable” farmers, could expand its support base and political leverage.



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Summary of Recommendations

Recommendation	Responsible Parties	Intended Outcome
Continue to purchase local Maine foods from MOFGA-certified farms	Maine communities	More local agriculture, more fresh foods, more farm sector jobs, more community vitality
Develop better financial tools for organic farmers	MOFGA, Maine Dep’t. of Ag, farm credit agencies, other research institutions	Will help policymakers understand which segments of the farm community are returning most value to their communities Will help organic farmers gain better access to credit through increased understanding of profitability thresholds and ratios
Diversify market opportunities for organic dairy farmers – both	MOFGA, organic dairy farmers	Develop resiliency of organic dairies’ revenue streams
Develop market channels with small and mid-sized grocery stores for local, organic products	MOFGA, organic farmers	Increase access to Maine organic produce for non-“locavores”
Strengthen Alliances between certified organic and non-certified “sustainable” farms	MOFGA	Gather non-certified farms using sustainable practices under MOFGA umbrella



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Appendix: A Quick Look at Local and Sustainable Agriculture

Local Agriculture is also a growing, vibrant force on the Maine farm landscape

“Local” agriculture refers to a system of marketing and distribution, not production. Farms that sell local often market directly to consumers, via farmstands, farmer’s markets, or community supported agriculture (CSA) shares. Or, they might sell products to local restaurant or grocery store. Or they might sell to a distributor who then relays the product to local restaurants and stores.

Local agriculture is on the rise. The Department of Agriculture report notes a 30% growth rate from 1997 to 2002. From 2002 to 2007, growth continued at 39%. This means they’ve more than doubled in 10 years!

According to the census, Maine farms sold \$18,419,000 worth of food directly to consumers in 2007. Based on data from the Maine Department of Agriculture and a study from the University of Maine,¹⁰ we can estimate that roadside stands and stores make up about 64% of these sales, farmer’s markets 17%, pick-your-own operations 14%, and CSA subscriptions 5%.

There is also some evidence that suggests that Census estimates of direct sales are too low. Because direct food sales are often on a cash basis, it may be that they are underreported. The Maine Department of Agriculture cites surveys taken by the University of Maine to suggest that direct sales might actually be somewhere near \$75,000 – \$100,000.

Growth in local agriculture is strongly correlated to Maine’s region-by-region population growth.

The Brookings Institution report opens on an optimistic note: for the first time in a century, Maine’s population is growing. From 2000 to 2005, the state’s annualized population growth was .72%, ranking it up in the top ten states!¹¹ What’s the reason? The report argues that Maine’s communities and natural resources attract immigrants from other states seeking a higher quality of life. “In-migration from other states means people from outside the state are ‘voting with their feet’ and at least for now rating the state’s quality of life on a par with with faster growing, highly desirable Sun Belt locales. . . the Pine Tree State’s new status as a regional destination bespeaks its high quality of place and provides a welcome opportunity for

progress.” Demographically, these new residents are most likely to be retiring baby boomers, but the report also notes that 25-44 year olds made up a substantial proportion of net arrivals. This could be couples looking to start families in areas where they perceive a better quality of life for their children.

Local agriculture both benefits from and contributes to these factors for population growth. The regions that have experienced strong population growth have also seen the most growth in farmer's markets, roadside stands, CSA's, and other forms of direct farm-to-consumer sales. The correlation between 2000-2005 annual population growth and '02-'07 growth in direct sales is 52%.

And income alone does not seem to be a driving factor. The correlation between median household incomes and per capita farm-to-consumer sales is mildly negative (-3%). As the Department of Agriculture notes, “A study done in Oregon between a ‘blue collar’ town and a more affluent, socially liberal community showed that both communities were supportive of local agriculture, a finding quite similar to Maine.”¹²

The data indicate that local agriculture may be a significant contributor to a region's quality of life, and may be a contributing factor for people making decisions about where to live. This is especially true in the Mid-Coast area, where population grew at 1% a year and direct market sales leapt up 118%. You might even hear real estate agents boasting about “this town's farmer's market” or “this great farm-stand up the road” to prospective home buyers.

Of course, correlation is not causation – it would be a real reach to say that local agriculture causes people to move to an area. Instead, local agriculture is part of a feedback loop that generates both value and population growth. As more people move to an area, more farms set up shop to cater to them; this creates a local farm “scene” that increases the appeal of the region to prospective immigrants. Notes the Department of Agriculture: “The economy is becoming experience-based and people are looking for products and activities that involve more than just an exchange of goods.” Local agriculture provides these experiences.

Sustainable agriculture may represent up to 40% of all Maine farms.

In their large and detailed survey study of Maine farms, “Understanding the Dichotomy Between Industrial Agriculture and Sustainable Agriculture: Types and Characteristics of Maine Farms,” Smith,



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along with colleagues Pamela Bell and Andrew Files, define sustainable agriculture as representing a system which is, “decentralized, diverse, restrained, in harmony with nature, respectful of community and promotes independence.”¹³ An intensive interview process revealed two types of Maine farms that the researchers defined as using “sustainable” management practices.

In one group are the “designer” farms, “operated as holistic, integrated biological systems that the farmer intended (designed) from the beginning . . . relatively small, generally complex with multiple enterprises, relying more on economies of scope than economies of scale, and selling into higher value niches, especially selling direct to consumers.” The second type, the “evolver” farms, are former large-scale, commodity-focused farms that are becoming like the designer farms.

Extrapolating from the survey results, of the 8,136 farms in Maine in 2007, about 3,190 might classify themselves as “designers,” or

“evolvers.” These farmers could produce about \$180.5 million worth of products on about 570,000 acres of land. By these estimates, sustainable farming makes up about 40% of the Maine agriculture scene. Total revenues are somewhat lower (about 30%), but sustainable farms account for 56% of all direct food sales.

Footnotes

- 1 *The Maine Organic Farmer and Gardener*, Common Ground Fair editions, 2002-2008. MOFGA archives.
- 2 Conversation with Russell Libby, 2/27/09
- 3 This number doesn't sum perfectly with the acres of organic hay, pasture, and cropland presented next. This could be because farmers aren't reporting the pastured woodland, counted as pasture acres, under "acres for organic production."
- 4 Source:<http://www.ers.usda.gov/Data/Organic>
- 5 A job here is defined as farm operators reporting farming as their primary occupation plus employees.
- 6 Dalton, Timothy, et. al. "A Comparative Analysis of Organic Dairy Farms in Maine and Vermont: Farm Financial Information from 2004 to 2006." July 2008: Maine Agriculture and Forest Experiment Station Bulletin #851.
- 7 Abelson, Jenn. "Prices sour demand for organic milk." June 28, 2009. Retrieved from www.boston.com/business/articles.
- 8 "The Agricultural Creative Economy," page 23.
- 9 Smith, Stewart, Bell, Pamela, and Files, Andrew. "Understanding the Dichotomy Between Industrial Agriculture and Sustainable Agriculture: Types and Characteristics of Maine Farms." October 2004: University of Maine.
- 10 The creative agricultural economy study cites University of Maine Staff Paper #563 and adds its own estimate of CSA sales on page 9. The sales data from this study were proportionately correlated to the 2007 Census.
- 11 *Charting Maine's Future*, page 24.
- 12 "The Creative Agricultural Economy." Page 22.
- 13 Smith, Stewart, Bell, Pamela, and Files, Andrew. "Understanding the Dichotomy Between Industrial Agriculture and Sustainable Agriculture: Types and Characteristics of Maine Farms." October 2004: University of Maine.