IMPROVING DISTRIBUTION CHANNELS FOR PRODUCERS IN THE GREAT REGION

RURAL BUSINESS DEVELOPMENT GRANT

Final Report October 2016

A Joint Report of Northern Maine Development Commission, Sunrise County Economic Council and Piscataquis County Economic Development Council

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Agriculture plays a significant role in the economy of the three-county region comprised of Aroostook, Piscataquis and Washington counties, designated a Great Region by USDA.[1] Once dominated by large potato and blueberry concerns, the agricultural economy of the region is evolving to encompass more diverse crops and small-scale growers. These growers face challenges in developing markets and distribution channels. This document represents 18 months of work by Northern Maine Development Commission (NMDC), Sunrise County Economic Council (SCEC) and Piscataquis County Economic Development Council (PCEDC) to research challenges and opportunities for growing this sector of the economy.

Overview of Agriculture in the Great Region

Nearly 1,500 farms are in the Great Region, most are in Aroostook County. Washington and Piscataquis counties account for nearly 600.[2] (See table below)

Number of Farms and Land in Farms (Acres), 2012

	Aroostook County, ME	Piscataquis County, ME	Washington County, ME	Maine	County Region	U.S.
Number of Farms	895	203	392	8,173	1,490	2,109,303
Land in Farms (Acres)	350,911	46,687	149,047	1,454,104	546,645	914,527,657
Average Farm Size (Acres)	392	230	380	178	367	434
Approximate Land Area (Acres)	4,269,498	2,534,975	1,640,118	19,739,717	8,444,591	2,260,583,852
Approximate Percent of Land Area in Farms	8.2%	1.8%	9.1%	7.4%	6.5%	40.5%

Farm employment in the Great Region totals 2,755.[3] Of that total, farm proprietors account for 1,361.

Farm income in the Great Region totals $308,346,000, as depicted in the table below.

Farm Business Income, 2014 (Thousands of 2015 $s)

	Aroostook County, ME	Piscataquis County, ME	Washington County, ME	Maine	County Region	U.S.
Total Cash Receipts & Other Inc. ($1000)	208,673	10,907	88,766	843,022	308,346	473,140,991
Cash Receipts from Marketing	188,799	8,830	83,702	744,450	281,330	428,891,959
Livestock & Products	22,454	4,550	15,363	339,084	42,367	233,820,408
Crops	166,344	4,280	68,338	405,366	238,963	195,071,552
Other Income	19,875	2,077	5,064	98,572	27,016	44,249,032
Government Payments	3,814	438	1,550	14,589	5,802	9,776,617
Imputed Rent & Misc. Income	16,061	1,639	3,515	83,984	21,214	34,472,415
Total Production Expenses	192,980	10,930	85,163	746,014	289,073	394,323,065
Realized Net Income (Receipts - Expenses)	15,694	na	3,603	97,008	19,296	78,817,927
Value of Inventory Change	-140	95	na	1,350	-45	14,212,746
Total Net Income Including Corp. Farms	15,554	72	3,567	98,358	19,192	93,030,673
Ratio: Total Cash Receipts & Other Income/Total Production Expenses	1.08	1.00	1.04	1.13	1.07	1.20

[1] A USDA designated Great Region is a multi-county region with a regional economic development plan developed by a local/regional team with broad participation. The plan is built upon careful analysis of the region's assets, including its key current and emerging economic clusters.

[2] U.S. Department of Agriculture. 2014. National Agricultural Statistics Service, Census of Agriculture

[3] U.S. Department of Commerce, Bureau of Economic Analysis Data from 2014

Farm land and type varies greatly in the Great Region, from the blueberry barrens of Washington County, a cornfield in Piscataquis County, or a large potato farm in Aroostook County. Livestock production is also present, as is small niche farming like a Woodland, Aroostook County grower, who plants 3 acres of organic greens for sale in the Portland market. See chart below for the number and percent of all farms per what they produce.[4]

Number of Farms by Type, 2012

	Aroostook County, ME	Piscataquis County, ME	Washington County, ME	Maine	County Region	U.S.
All Farms	895	203	392	8,173	1,490	2,109,303
Oilseed & Grain Farming	13	1	1	45	15	369,332
Vegetable & Melon Farming	207	23	41	891	271	43,021
Fruit & Nut Tree Farming	11	8	166	681	185	93,020
Greenhouse, Nursery, etc.	92	13	28	958	133	52,777
Other Crop Farming	395	83	83	2,340	561	496,837
Beef Cattle Ranch. & Farm.	63	22	15	950	100	619,172
Cattle Feedlots	2	0	0	14	2	13,734
Dairy Cattle & Milk Prod.	12	9	8	308	29	46,005
Hog & Pig Farming	8	6	7	160	21	21,687
Poultry & Egg Production	8	10	2	209	20	52,849
Sheep & Goat Farming	35	8	8	326	51	73,272
Animal Aquaculture & Other Animal Prod.	49	20	33	1,291	102	227,597
Percent of Total						
Oilseed & Grain Farming	1.5%	0.5%	0.3%	0.6%	1.0%	17.5%
Vegetable & Melon Farming	23.1%	11.3%	10.5%	10.9%	18.2%	2.0%
Fruit & Nut Tree Farming	1.2%	3.9%	42.3%	8.3%	12.4%	4.4%
Greenhouse, Nursery, etc.	10.3%	6.4%	7.1%	11.7%	8.9%	2.5%
Other Crop Farming	44.1%	40.9%	21.2%	28.6%	37.7%	23.6%
Beef Cattle Ranch. & Farm.	7.0%	10.8%	3.8%	11.6%	6.7%	29.4%
Cattle Feedlots	0.2%	0.0%	0.0%	0.2%	0.1%	0.7%
Dairy Cattle & Milk Prod.	1.3%	4.4%	2.0%	3.8%	1.9%	2.2%
Hog & Pig Farming	0.9%	3.0%	1.8%	2.0%	1.4%	1.0%
Poultry & Egg Production	0.9%	4.9%	0.5%	2.6%	1.3%	2.5%
Sheep & Goat Farming	3.9%	3.9%	2.0%	4.0%	3.4%	3.5%
Aquaculture & Other Prod.	5.5%	9.9%	8.4%	15.8%	6.8%	10.8%

Although farm income and farm employment has declined in the three-county region over the past several decades, there is reason to be optimistic. Statewide the number of farmers aged 34 and younger grew by nearly 40 percent in the five years from 2007 to 2012, the last time the USDA did a comprehensive agriculture census. That growth surge — from 396 to 551 young farmers — far surpassed the 1.5 percent increase in the numbers of young farmers in the United States as a whole. Also, the USDA survey shows other statistics that also indicate that farming in Maine is on the upswing. The data show that the value of agricultural products in the state has increased 24 percent in five years, that a growing number of landowners now list farming as their primary occupation and the amount of land in farms has increased by eight percent in the same period.

[4] U.S. Department of Agriculture. 2014. National Agricultural Statistics Service, Census of Agriculture

Regional/National Trends

In 1970, Aroostook County planted nearly 114,000 acres of potatoes. In 2015, that had dropped to 51,000 acres statewide, per USDA National Agricultural Statistics Service. Ninety percent of potato production in Maine is in Aroostook County. The decline in potato acreage has been most severe in the three years prior to 2015, dropping from 59,000 acres in 2012, to 55,000 in 2013 and bottoming out at 51,000 in 2014.

Similarly, in Washington County, the number of farms has declined in the past decade by 17%. Six percent of the land under cultivation in 2007 has now fallen fallow. This is driven by both an aging population and harsh commodity prices assaulting both the blueberry and cranberry industries. Washington County farmers are contending with a 30% fall in grower price per pound of processed blueberries. Independent cranberry growers are reporting prices as low as $0.13. /lb. for their product—well below production costs.

But as traditional commodity crops decline, niche growers are developing new crops and new markets, but that has led to challenges, such as establishing those markets and getting products to markets. Of benefit to growers is the local food movement. Local foods are a movement which aim to connect food producers and food consumers in the same geographic region; to develop more self-reliant and resilient food networks, improve local economies, or for health, environmental, community, or social impact in a place. The term has also been extended to include not only geographic location of supplier and consumer but can also be "defined in terms of social and supply chain characteristics." For example, local food initiatives often promote sustainable and organic farming practices, although these are not explicitly related to the geographic proximity of the producer and consumer.

Local food represents an alternative to the global food model, a model which often sees food travelling long distances before it reaches the consumer. A local food network involves relationships between food producers, distributors, retailers, and consumers in a place where they work together to increase food security and ensure economic, ecological and social sustainability of a community.

Washington County is further along in the local food movement, than either Aroostook or Piscataquis counties, as detailed in the Sunrise Food Infrastructure Initiative Local Markets Viability Report. Although recent meetings with the Maine Farm and Sea Cooperative in Aroostook County has pushed local foods to the forefront.

Per the recent report entitled "A New England Food Vision"[5], it takes an estimated 16 million acres to feed New England's 14.5 million people. In other words, over 1 acre per person is needed to grow all the food the region consumes. With less than 2 million acres of active farmland, New England produces about 12% of the amount of food it consumes. A Harvard University report[6] also draws similar conclusions. The Great Region has the assets to help bridge that gap using the time, talent, and treasure the region already possesses.

[5] http://www.foodsolutionsne.org/sites/default/files/LowResNEFV_0.pdf
[6] https://www.hks.harvard.edu/centers/mrcbg/programs/maine/report

Work Product Overview

In the fall of 2016, NMDC, SCEC and PCEDC staff met in person and via phone to determine a course of action to accomplish goals outlined in the grant application. The Aroostook Partnership Diversified Ag working group was contacted to determine survey questions.

The Aroostook Partnership is a public private partnership organization, representing about 100 businesses in the region, the four higher education institutions and NMDC. For the past four years, agriculture, specifically diversified agriculture, has been identified as an economic growth area.

NMDC, SCEC and PCEDC reached out to producers in their respective regions With a survey developed and promoted to growers in the Great Region. Individual responses were not shared. Instead, responses were aggregated without identifying individual farms or farmers. The information was used to develop this report to improve farm production and distribution across the state. From the survey an analysis of collective and individual needs was conducted.

From the survey and information from USDA and the Maine Department of Agriculture, Conservation and Forestry an inventory of producers was compiled. Information was then inputted to the Maine Food Atlas[7] and producer maps, with travel routes created using Caliper Maptitude mapping software. (Maps will be archived on both the NMDC and Aroostook Partnership websites. Links will be provided to SCEC and PCEDC for inclusion in their respective web offerings.)

NMDC staff researched various food system development plans to incorporate in the Great Region distribution plan and researched methods of sustainability to continue work started through the USDA Rural Development investment.

During the entire grant cycle NMDC and SCEC staff also conducted interviews with additional growers, Maine Farmland Trust experts, livestock producers, transportation officials, Maine Farm and Sea Cooperative staff and others.

[7] http://www.mainefoodatlas.com

Survey Analysis

Summary: With funding provided by USDA's Rural Business Development Grant, NMDC and its partners are now able to engage in a critical effort with the goal of developing marketing strategies and improve distribution channels for agricultural producers in the USDA Great Region of Aroostook, Washington and Piscataquis counties. To accurately identify and assess the issues that encourage or impede the growth of the "Great Region Diversified Agriculture Economy", a comprehensive survey was developed and distributed through the various regional and local organizations responsible for supporting the regional diversified ag industry. Using the various social media channels, mailings, industry group meetings and one-on-one visits to local producers, the Great Region Diversified Ag Initiative(GRDAI) was able to generate a representative sampling of the opportunities and gaps that exist.

Over the months of September through mid-December, 2015, results from the survey were aggregated and tabulated. The following are the findings that were generated because of the effort.

Survey Results: The following summarizes the general findings for each of the questions that were offered

Question 1: **Participation**: A total of 66 survey results were collected and tabulated representing the entire Great Region in the following geographical distribution:

Washington County	30%
Piscataquis County	13%
Aroostook County	57%

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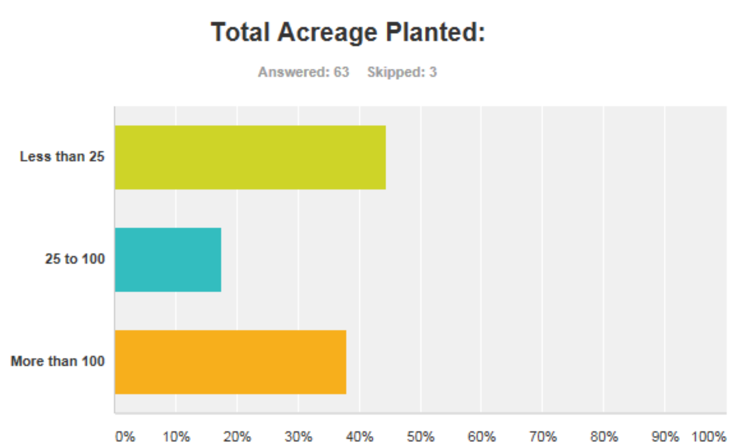
Question 2: **Total Acreage Planted**

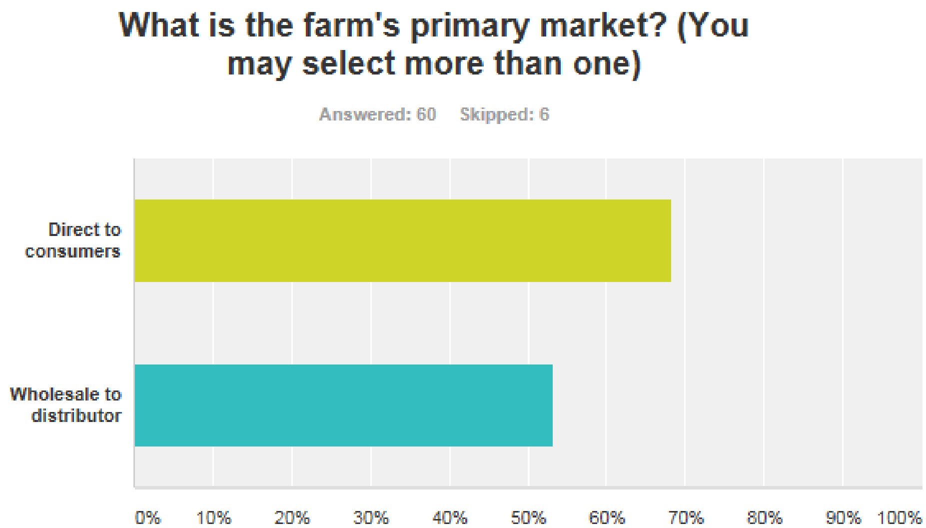
- Nearly 45% of the respondents grow 25 acres or less, while over 38% grew over 100 acres. The remaining 17% were producers who conducted their operation on 25-100 acres.



Answer Choices	Responses	
Less than 25	44.44%	28
25 to 100	17.46%	11
More than 100	38.10%	24
Total		63

Question 3: **Identification of primary markets**

- Responses were somewhat evenly distributed where nearly 70% indicated they sold their products direct to consumers.

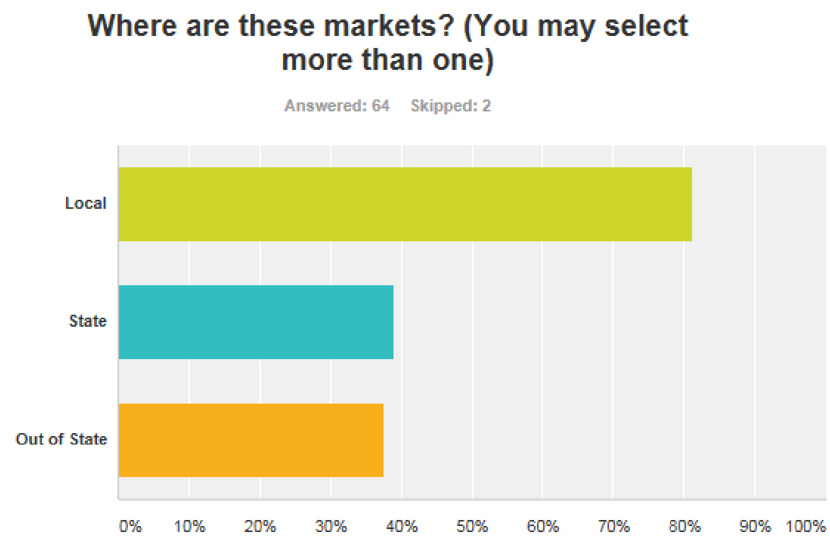


Answer Choices	Responses	
Direct to consumers	68.33%	41
Wholesale to distributor	53.33%	32
Total Respondents: 60		

Comments (18)

Question 4: **Market Locations**

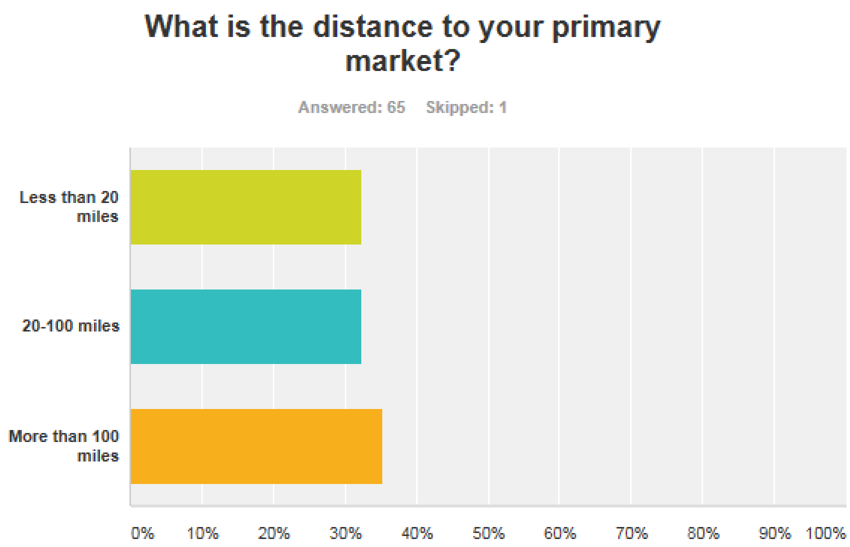
- Over 80% of sales were to local markets while remaining sales were to state-wide and out-of-state markets. Each were evenly represented at approximately 38%.



Answer Choices	Responses	
Local	81.25%	52
State	39.06%	25
Out of State	37.50%	24
Total Respondents: 64		

Question 5: **Distance to Primary Markets**

- Distance traveled was evenly distributed where over 32% traveled fewer than 20 miles, 32% traveled between 20-100 miles, and over 35% traveled more than 100 miles to their primary markets.



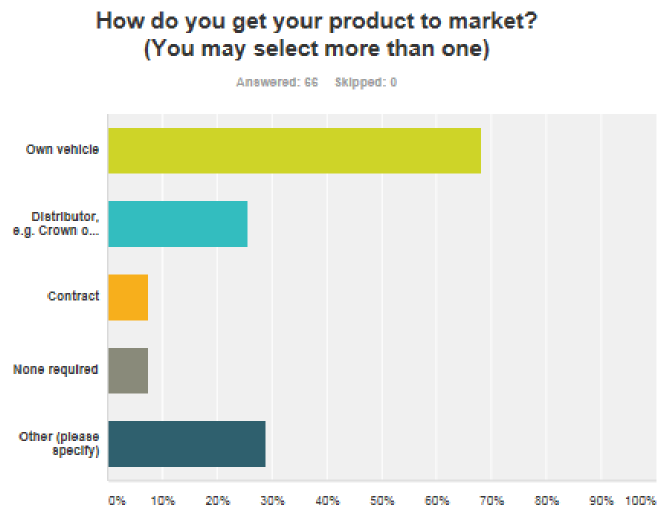
Answer Choices	Responses	
Less than 20 miles	32.31%	21
20-100 miles	32.31%	21
More than 100 miles	35.38%	23
Total		65

Question 6: **Products Grown or Produced**

- For a detailed breakdown of products grown/produced, please see attachment A of this report.

Question 7: **How Products Are Delivered to Market**

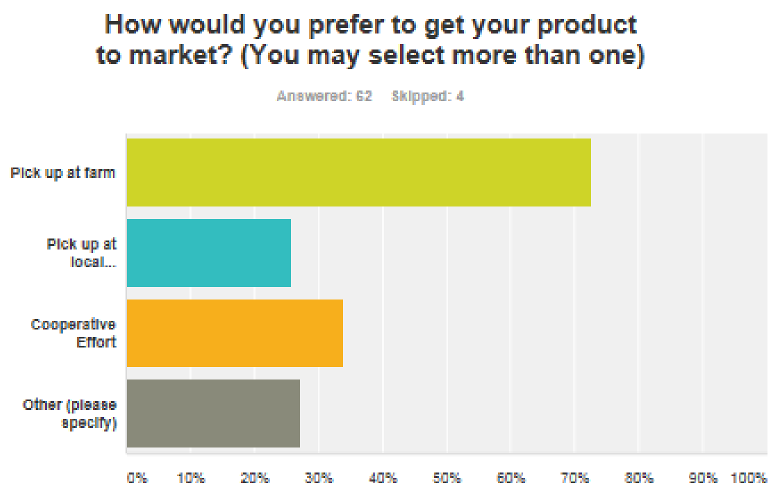
- By far the clear majority of respondents (68%) used their own vehicle, where 25% used a distributor. Nearly 29% used other forms such as local trucks, common carriers (UPS), and private carriers. The balance (8%) had established contracts for their delivery services or with family members who own refrigerated trucks.



Answer Choices		Responses	
Own vehicle		68.18%	45
Distributor, e.g. Crown of ME or similar		25.76%	17
Contract		7.58%	5
None required		7.58%	5
Other (please specify)	Responses	28.79%	19
Total Respondents: 66			

Question 8: **Product Delivery Preferences**

- Nearly 73% of the respondents preferred their products picked up “at the farm”. As an alternative, nearly 34% would be amenable to developing a cooperative effort if it were logistically practical. Pick up at a local collection point was an option selected by nearly 26% of the respondents.

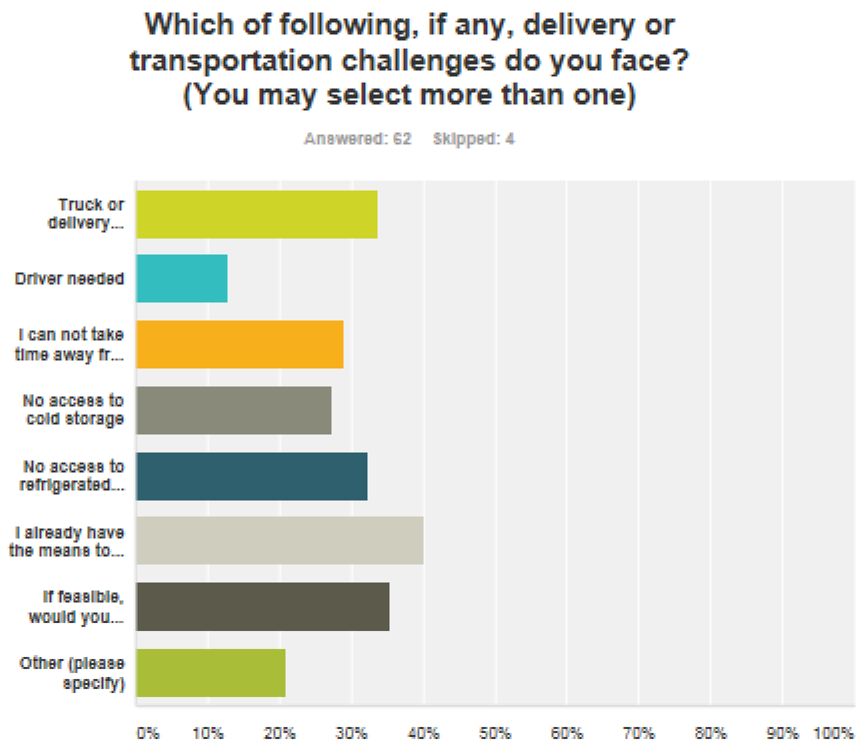


Answer Choices		Responses	
Pick up at farm		72.58%	45
Pick up at local collection point		25.81%	16
Cooperative Effort		33.87%	21
Other (please specify)	Responses	27.42%	17
Total Respondents: 62			

- Comments included:
    - Make our own deliveries to customers or local grocery stores and the coop.
    - Although I currently deliver, it really isn't that bad because it is all within 5 miles of my house. So I'd love to not have to transport, but it really isn't a deal breaker for me. I do not sell outside of Lubec because of transportation costs.
    - If I were to grow more than I can currently take to Farmers Market. As it is now, I grow enough to make it feasible for me to participate in 2 weekly markets
    - I'm interested in learning more about working with distributors who work out of state for products like cheese . . .

Question 9: **Delivery or Transportation Challenges**

- Of all the questions that were offered, this one generated a fairly evenly distributed range of responses. Leading the options was interest in consideration for cooperative delivery systems, seconded by interest in purchasing a delivery vehicle. A significant percentage of respondents indicated that access to cold storage and refrigerated truck services would improve opportunities for growth within their respective businesses, while those who had reported they had a reliable means of delivery (40%), nearly 13% needed drivers



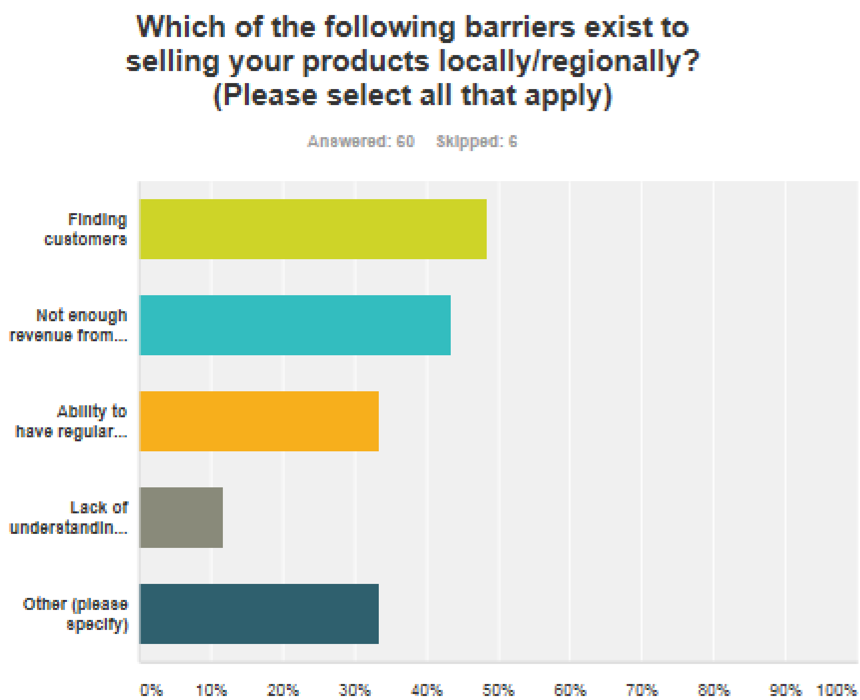
Answer Choices		Responses	
Truck or delivery vehicle needed		33.87%	21
Driver needed		12.90%	8
I can not take time away from my farm to make deliveries		29.03%	18
No access to cold storage		27.42%	17
No access to refrigerated trucks		32.26%	20
I already have the means to deliver		40.32%	25
If feasible, would you consider cooperative deliveries?		35.48%	22
Other (please specify)	Responses	20.97%	13
Total Respondents: 62			

- Comments included:
  - distance between home and farmland are a slight inconvenience
  - Trucks get in short supply occasionally.

- NOT SURE ABOUT COOPERATIVE DELIVERIES. HAVE NEVER USED THIS BEFORE.
- not big enough for this yet
- I pick and immediately deliver in my personal vehicle because I do not have any cold storage.
- Would consider selling primarily to buying clubs in Eastport and Calais and would be interested in pick-up at the farm or meeting in a nearby location to my farm
- cost of transportation for products such as grain. cost of transportation to processing plants
- Need more frozen storage farm, a larger capacity unit (more tons of compressors) to static freeze more pounds and a large frozen storage area in a central location open to smaller farms. In Bangor area.
- No local processing facility

Question 10: **Barriers to Selling Products Locally and Regionally**

- Nearly 50% of the respondents identified their inability to secure a large enough customer base as one of the most important barriers, followed by the lack of adequate revenues generated to support their business operations (43%). Their ability to generate a "regular and consistent supply" was listed as the third most important impediment. A small percentage (7%) listed their lack of knowledge and understanding about direct sales as a barrier. Of interest was the high degree of variation in the "Other" category.

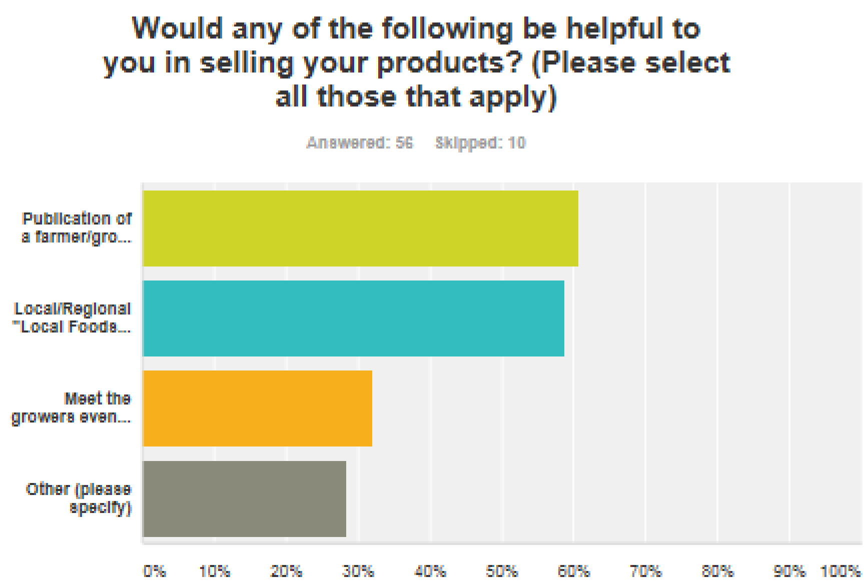


Answer Choices		Responses	
Finding customers		48.33%	29
Not enough revenue from current markets		43.33%	26
Ability to have regular and consistent supply		33.33%	20
Lack of understanding of selling directly to customers		11.67%	7
Other (please specify)	Responses	33.33%	20
Total Respondents: 60			

- Comments on barriers included:
  - "finding the time to grow the market"
  - Capital for repairs for farm infrastructure
  - "getting seen" …farm stand location

Question 11: **Reaction to Marketing and Advertising Channels Offered**

- Three marketing options were presented as suggested ideas. Nearly 61% of the respondents believed that the publication and promotion of a Farmer/Grower Directory would be a much-desired approach. This would likely take the form of an online Directory presumably accessible through a subscription process. Nearly 60% also chose the creation of a Local/Regional “Local Foods” Marketing Campaign, followed by support (32%) for the development and promotion of “Meet the Growers” events held in the more populous regions of the State of Maine.



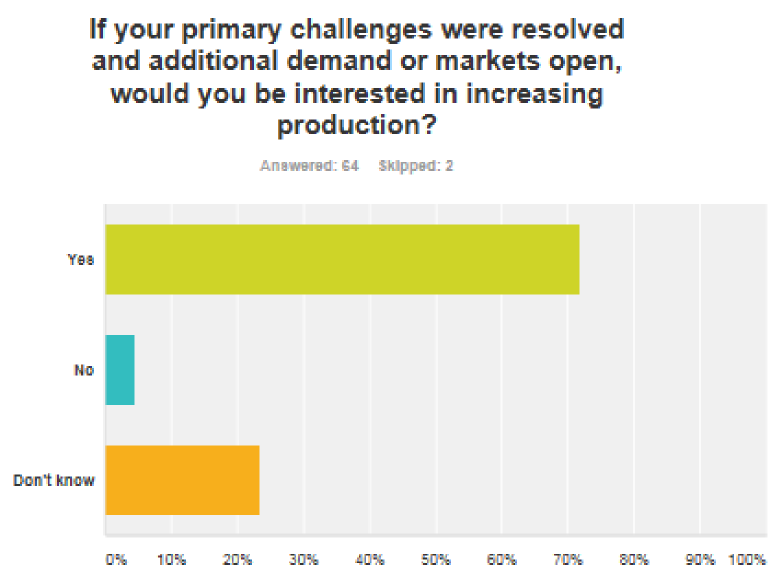
Answer Choices		Responses	
Publication of a farmer/grower directory		60.71%	34
Local/Regional "Local Foods" marketing campaign		58.93%	33
Meet the growers events downstate		32.14%	18
Other (please specify)	Responses	28.57%	16
Total Respondents: 56			

- Comments included:
  - knowing and meeting licensing requirements
  - networking
  - how about 'meet the growers’ events' locally? 'downstate' is a poison word up here?
  - Aroostook county needs a dedicated person that is in the southern Maine / Boston markets that will handle Northern Maine products first.
  - Food Hub
  - Directly supporting and subsidizing our sales reps. Directly funding retail sampling teams. Providing grants for marketing expenditures.

- Trade dollars to promote directly to the wholesale trade locally. Advertising/promotion/labeling improvements/store displays/etc.
- Most of the WIC and SNAP/EBT customers are unaware that the local markets can accommodate them. Calais Farmers Market received a grant to double EBT/SNAP purchases. (Spend $10 get $10 extra produce). Very few took advantage as they did not know about it.
- Educational outreach on season extension, nutritional value of products produced locally vs nationwide/internationally shipped produce harvested early for shipping, handling etc. Would be very encouraged to see a massive educational/marketing outreach in terms of extended seasons in unheated hoop houses, high tunnels, etc.
- an affordable, quality grain supply and a meat processing facility

Question 12: **Level of Interest in Increasing Production/Volume**

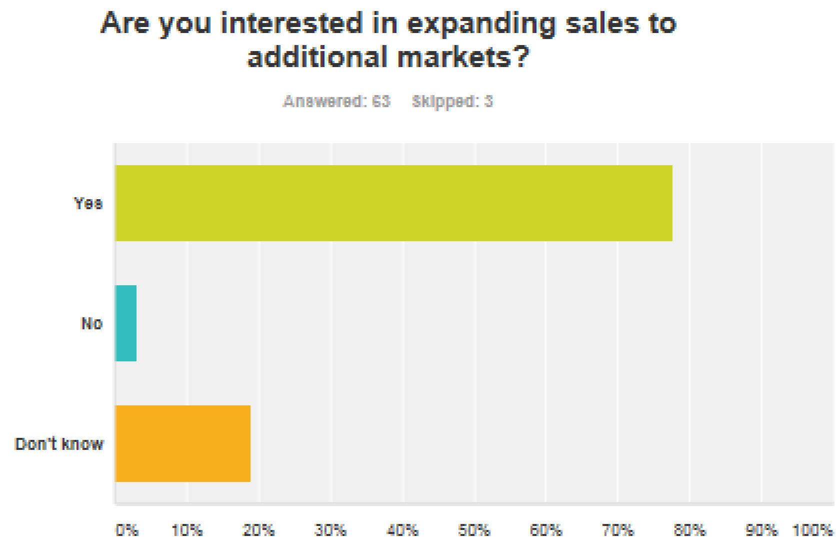
- The question was structured in such a way so to ascertain whether respondents would increase their level of production should the primary challenges be addressed and additional markets were to open. An overwhelming majority (72%) of the survey participants felt they would increase production while fewer than 5% would maintain current production levels. Approximately 23% felt uncertain about what option they would choose.



Answer Choices	Responses	
Yes	71.88%	46
No	4.69%	3
Don't know	23.44%	15
Total		64

Question 13: **Level of Interest in Expanding Sales to Additional Markets**

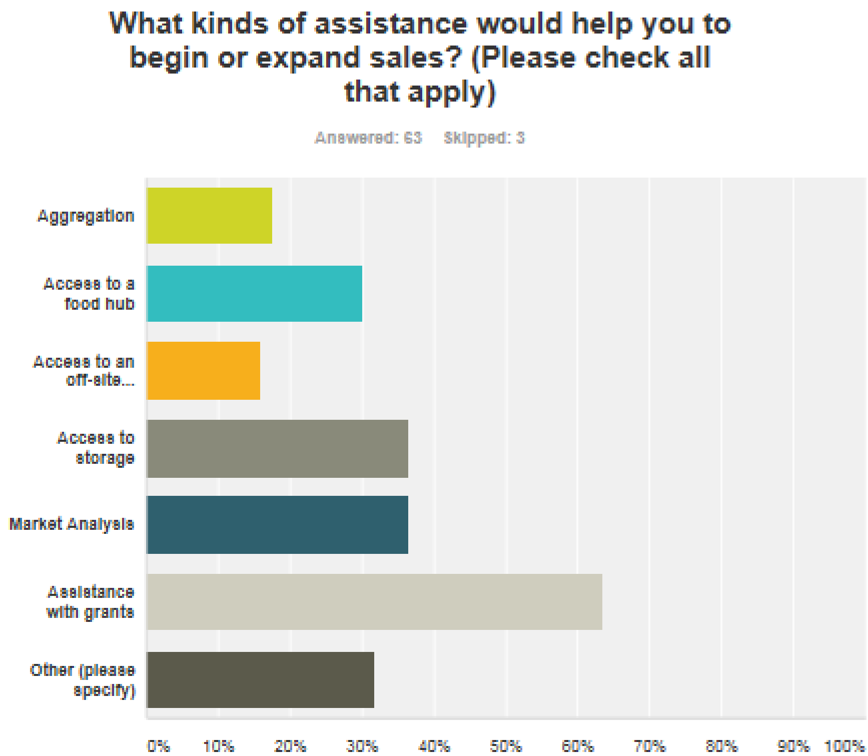
- Nearly 78% indicated interest in expanding sales to additional markets, while nearly 20% were not sure they were in a position or had such interest.



Answer Choices	Responses	
Yes	77.78%	49
No	3.17%	2
Don't know	19.05%	12
Total		63

Question 14: **Types of Assistance Desired to Expand Sales/Production**

- A majority (64%) believed assistance with access to grants and grant application assistance would be helpful should an expansion in sales/production were under consideration.
- Nearly 37% of the respondents believed that help with the development of market analysis for products grown/raised in the Great Region as well as access to storage opportunities would be of help.
- The development of, and access to, a Food Hub was considered as a viable effort by 30% of the respondents.
- Opportunities for product aggregation was selected by 17% of the participating respondents.
- Nearly 16% were supportive of the development of access to an off-site processing kitchen.



Answer Choices		Responses	
Aggregation		17.46%	11
Access to a food hub		30.16%	19
Access to an off-site processing kitchen		15.87%	10
Access to storage		36.51%	23
Market Analysis		36.51%	23
Assistance with grants		63.49%	40
Other (please specify)	Responses	31.75%	20
Total Respondents: 63			

- Additional comments to the survey responses included the following:
  - Bigger equipment for higher production output
  - slaughter facility
  - More help growing, washing, packaging.
  - Additional infrastructure for winter housing and more affordable sustainable fertilizer.
  - “Networking”
  - (Access to) Capital
  - must be hyper-local cold storage. I cannot afford to transport very far (<20 miles)
  - Affordable transportation and storage
  - We just need a better truck

- Grant writing help is needed. There are hundreds of thousands of dollars of eligible grants, USDA, rural development, MTI grants, etc. that can be awarded to Aroostook County producers. Not enough bandwidth to apply.
- Affordable labor!! There is not enough of a profit margin for a small one-person operation such as mine to allow me to pay a decent wage for labor to help me expand or not burn out.
- (Would like) my own commercial kitchen
- Schools, local grocery stores are only willing to try our products IF the price is right. I cannot get by on selling potatoes to the local schools for 60 cents a pound. More stipends for schools so they can try more local produce without over stretching their limited budgets. I feel a brilliant move would be to offer schools through some local or federal program- farm bucks that aren't attached to their budgets but as add-ons that they may apply for. Example- One hundred dollar vouchers per month or week, pertaining to school size- to be spent via local farms. Food vouchers for our senior citizens- they know very well how important fresh, local produce is yet they receive little assistance to apply to their limited budgets, often times only being able to afford sub-par food. I hear this often at market, I greatly reduce prices for our most vulnerable citizens, which impacts my bottom line but they are some of our best customers at markets and at our farms because they know the value of fresh produce but can ill afford to purchase it. I often barter with local families, harvest help, weeding, planting etc. in exchange for great food. Senior citizens are unable to participate in such activities and are often too proud to accept deep discounts due to their inability to pay, whether monetarily or through bartering. Great help is needed there.
- development of infrastructure for red meat, infrastructure for organic grain harvesting, cleaning and storage
- Larger processing machines to clean fruit.
- reliable trucking

Question 15: **Additional Comments**
The following comments were taken directly from the GRDAI Survey and served to underscore and validate the responses that were submitted.

- “There is an extreme demand for fresh produce, eggs and dairy products (butter, milk, yogurt) at Market Street Coop. Products must travel a great distance.
- “I need some better equipment “
- “We are dedicated to selling our products locally. However, most people do not understand the real costs in raising real food. So we are not able to charge market price and keep selling local. Aside from public education I do not see any solutions to this problem. Most Americans want cheap food even if they are perfectly aware that the food is full of poisons and processed by unfair labor. One possible solution for us is to produce enough to sell as

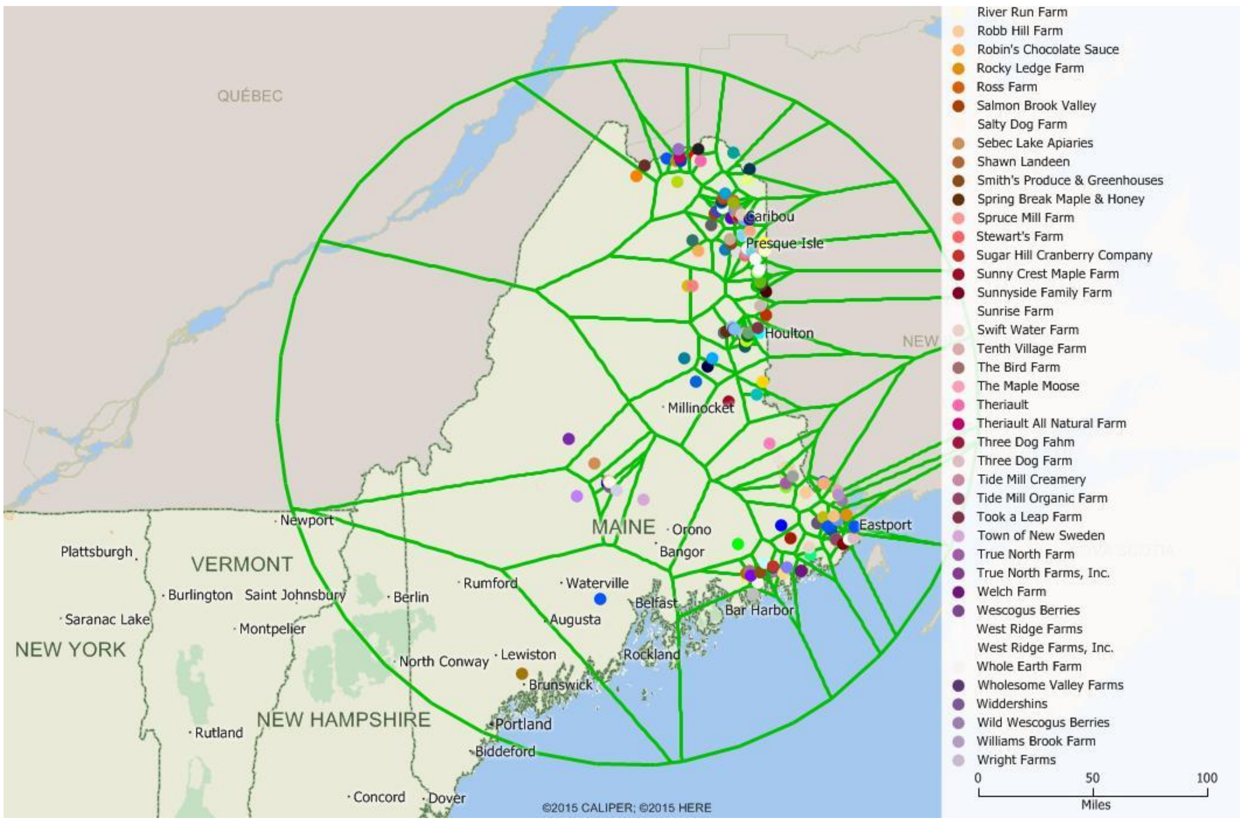
much as possible locally and still have enough to send further way to get a fair price for it. However, this involves the use of food hubs, transportation and refrigeration as we pointed out in the survey."

- "Not interested in a loan as I am risk adversive (averse) and the vagaries of farming are too complex to allow a definite pay back. Grants yes, loans no."
- "Buying local is an okay idea, but it's most important to make Maine competitive at the national level because our population is too low to consume a very high volume. So exporting is more important for the economic well-being of the state."
- "I would support an Aroostook County branding effort."
- "…My biggest issue is I need a bigger truck."
- "Markets not necessarily needing organic commodities would work better in rotation/conjunction with existing potato market/contracts."
- "Would like to see more programs for homestead farm and/or small farm startup grants/assistance."
- "I am a very small "farmer" that sells certain crops and donates many garden extras to area elderly…"

Producer Maps/Maine Food Atlas/Storage

As indicated in the table on page 2 and attachment A, the variety of crops, products and livestock being produced in the Great Region is varied. From interviews and surveys, it appears smaller farms growing niche products are growing. As a major component of this effort mapping of the producers and analysis of needs was conducted.

NMDC staff created maps using Caliper's Maptitude software, which also detailed potential markets locally and statewide. Maps and other information can be viewed at www.nmdc.org/development/divag.html. Additional information can be found at www.aroostookpartnership.org/economic/Agriculture.html. A sample map is located below.



Maptitude allows for interactive maps, with point data and other information, only when viewed using Caliper software. Website is populated with images of interactive maps and additional details can be requested by contacting NMDC.

To make information accessible to the average Internet user, data was also uploaded to the Maine Food Atlas, www.mainefoodatlas.org.

The Maine Food Atlas has been created by the [Network of Community Food Councils](), working closely with the [Center for Community GIS]().

Through local food asset mapping, Community Food Councils are actively exploring and documenting their regional food systems. This work provides essential baseline information necessary for rebuilding community food systems, assuring greater food security for all, and improving the social, economic, environmental, and health impacts of our food.

The Maine Food Atlas encourages diverse food operators—growers, processors, farm to school groups, food security organizations—to use the website and put themselves “on the map.” Users can establish free Maine Food Atlas accounts, which allow them to richly describe their work, load photos, and independently manage their postings over time.

As the Maine Food Atlas grows, Community Food Councils will provide mid-level support and serve as regional moderators for listings in their respective service areas. Through “curated crowdsourcing,” assigned local food council members will be alerted whenever a new listing is added. They will also be available to reach out to help folks create robust, beautiful listings.

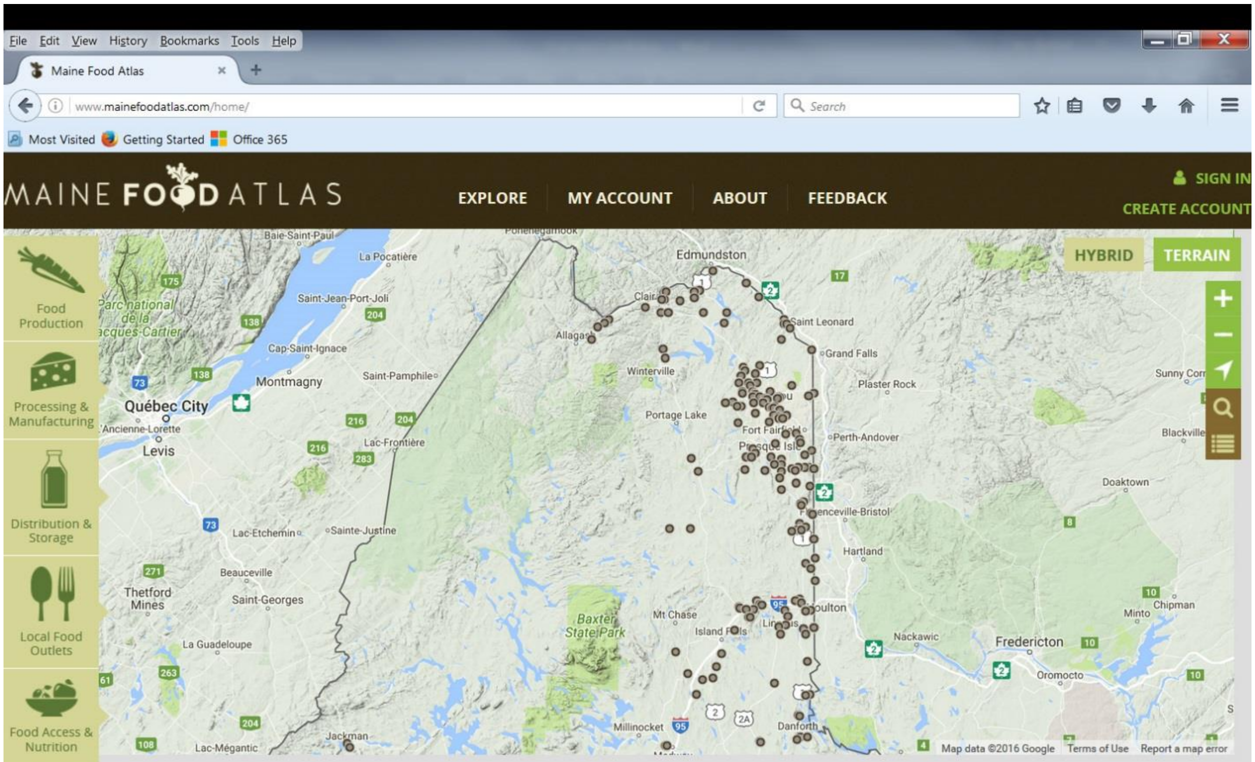
The Atlas was launched in "beta" format in May 2015 following pilot mapping work in Oxford County. The site will continue to evolve and improve. Feedback is great, so please tell us what you think.

The Maine Network of Community Food Councils is seeking partners to grow and enhance the Maine Food Atlas and welcomes opportunities to discuss and explore collaborations and partnerships.

Initial funding for this phase of work was provided by the Elmina B. Sewall Foundation. Additional funding is being sought to not only expand the Atlas’ functionality, but to help us engage and train other Community Food Councils statewide in the use of the Atlas.

Through this partnership with the Maine Food Atlas it is hoped growers, purchasers and those in the transportation industry can make better connections to move product from the Great Region to additional markets.

Prior to NMDC staff uploading data, less than 20% of producers in the Great Region were represented in the Maine Food Atlas.


File Edit View History Bookmarks Tools Help
Maine Food Atlas
www.mainefoodatlas.com/home/
Search
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Getting Started
Office 365
MAINE FOOD ATLAS
EXPLORE
MY ACCOUNT
ABOUT
FEEDBACK
SIGN IN
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HYBRID
TERRAIN
Food Production
Processing & Manufacturing
Distribution & Storage
Local Food Outlets
Food Access & Nutrition
Edmundston
Québec City
Levis
Montmagny
Fredericton
Baxter State Park
Portage Lake
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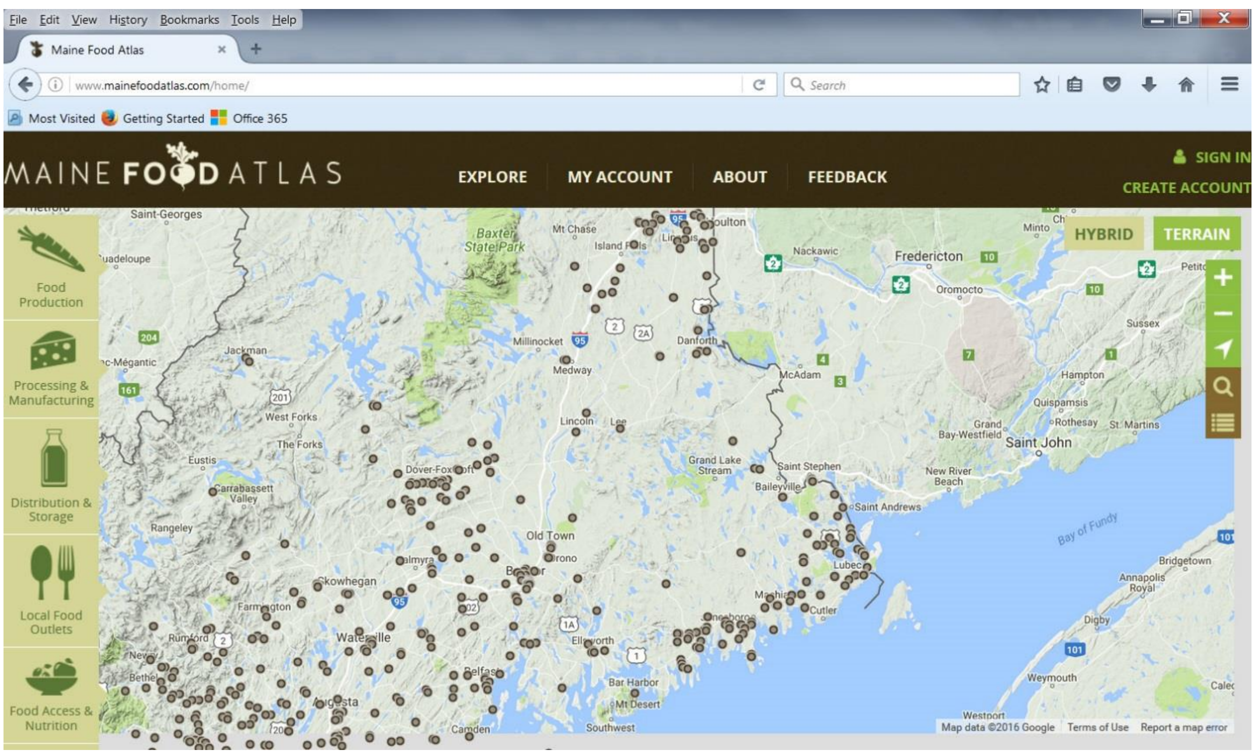
Report a map error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Maine Food Atlas
www.mainefoodatlas.com/home/
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EXPLORE
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ABOUT
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Local Food Outlets
Food Access & Nutrition
Fredericton
Saint John
Bay of Fundy
Millinocket
Old Town
Skowhegan
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From information gathered during the Producer/Grower survey phase of the initiative, one of the overwhelming responses that surfaced was recognition for the need to explore aggregation and off site storage needs to accommodate the growing volumes of locally produced food. To that end, an extensive survey of existing storage was conducted to determine the level and type of storage that is currently in place. The results of our work have determined that there exist two types of product storage; on farm and off site storage facilities that either meet local needs or need additional aggregative storage. Further, to meet processor needs, unlike small food and meat producers, the commercial potato industry has over the years developed individual storage facilities that must comply with end buyers, namely McCain Foods, and Frito-Lay companies.
With assistance provided by Sunrise County Economic Council, the Aroostook County Cooperative Extension Service, the Maine Farmland Trust and MOFGA and the Mane Potato Board the following information was generated:

Northern Maine large scale commercial Potato Storage:

- 40 potato growers in the County who have on site refrigerated storage (30 for McCain, 10 for Frito Lay)
- Not likely to lease space due to cost of insurance and risk of damage
- Dealers/Installers do exist however they appear to specialize in potato storage
- Northern Refrigeration in Houlton
- Turner Electric in Easton
- Underwood in PI
- LaJoie Refrigeration
- Best example would be a series of smaller storage locations with central aggregator/shipper in central region.

Our research did result in locating existing buildings that have the potential to support aggregation and storage in the region. For example, Hebert Trucking and Transportation of St. David has available a 22,500 sf storage building that could easily serve as a nodal aggregation storage facility to serve the needs of much of the produce generated from the St. John Valley.

Per a recent report entitled the “Sunrise County Food Infrastructure Initiative”, the following conclusions and recommendations were generated because of their work.

- while there exists individual storage for many producers, there is a lack of centralized storage locations (dry, frozen and cool). For example, with the presence of Wyman’s and Cherryfield Food in Washington County, there is a huge amount of cold storage—large plants exist in Cherryfield, and Machias, while two smaller facilities can be found in Alexander and Jonesport. The amount of cold storage these two concerns hold isn’t out in the public domain, nor is it available to rent.
- There is limited distribution in the Washington County region
- The report further recommends that the region “Foster the development of a professionally run regional food hub with aggregation, long term cool and cold storage, and distribution access in a central location.”

Distribution Outlook and Enhancement

Concerns about transportation and distribution logistics, identified in the grower survey and characterized in many interviews, are of importance to Great Region producers. Geography and long distances are a constant barrier for any farmer or food producer.

Growers along the U.S. Route 1 corridor in Aroostook County, near I-95 in both Aroostook and Piscataquis, along Route 6 in Piscataquis County and Route 9 and U.S. Route 1 in Washington County have the greatest potential to move product to Bangor and south to the Portland Market.

Of greatest benefit would be the establishment of regional food hubs and greater aggregation of products. In Aroostook three hubs, servicing the St. John Valley, Central Aroostook and Southern Aroostook. In Piscataquis County, Dover-Foxcroft stands out as a location for a potential food hub. Previous work in Washington County[8] called for the development of one food hub with aggregation, cool and cold storage, distribution and value adding activities, although a location was not designated. The expansion and development of aggregation and distribution nodes were identified for Eastport, Harrington, Milbridge, Wesley, Grand Lake Stream, Waite, Calais, Woodland and Princeton.

Additional aggregation and/or distribution nodes in Aroostook County could be established, in Houlton, Presque Isle, Fort Kent or Madawaska.

Nature's Circle Farm[9], a 300-acre farm just outside of Houlton, has been actively involved in creating a food hub in Southern Aroostook and serves as an aggregator for at least five growers, some Amish, in the region. This model could be expanded or replicated in the Great Region.

Adopting an aggregator model would alleviate some of the challenges growers in the Great Region face. Primarily a lack of vehicles and distributors, like the Crown of Maine Organic Cooperative[10]; deadheading problems, where shipments go to market and there is no commodity or product to return to the region; and market awareness. Rail access, although improved in northern Maine[11], does not appear to be a viable option due to the perishable nature of most foods.

Engagement with the Pro Maine 21 economic development group in Bangor lead to inclusion of aggregator language included in a recent White Paper[12]. A food hub/aggregator based in Bangor could service the entire Great Region, leading to distribution to more lucrative markets in Portland and Boston.

Economic development officials in Washington County have advocated for a streamlined wholesale on-line ordering system with associated delivery routes. This would facilitate a small to large distribution

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[8] Sunrise Food Infrastructure Initiative Local Markets Viability Project, 2014.
[9] http://www.naturescirclefarm.com/
[10] http://www.crownofmainecoop.com/
[11] http://bangordailynews.com/2015/10/26/business/maine-lands-20-million-federal-grant-to-support-rail-upgrades/
[12] Pro Maine 21 White Paper still in draft, not yet published

plan, providing niche growers and producers to get their products to markets more efficiently, thus more cost effectively.

General Recommendations/Sustainability Plan

1. Encourage further development of networks involving all along the food production value chain in the Great Region. Continue to engage the Aroostook Partnership's Diversified Agriculture Working Group, Sunrise County Economic Council's Washington County contacts and form more connections in Piscataquis County.
2. Promote Food Hubs and Distribution Nodes in the Great Region, by providing technical assistance to grant applicants. Utilize Small Business Administration Small Business Development Center staff to assist growers, and those looking to expand into delivery.
3. Continue to facilitate meetings between local institutions, wholesalers, growers and others to grow markets and opportunities.
4. Expand Microloan programs, possibly utilizing Community Development Financial Institution[13] (CDFI) funds, for producers to expand business and assist distributors in the purchase of cool and cold storage units.
5. Promote the local foods movement and institutional buying opportunities through collaboration with the Maine Farm and Sea Cooperative, Maine Farmland Trust and institutional buyers like Cary Medical Center in Caribou, University of Maine at Machias, Presque Isle and Fort Kent and school districts.
6. Solicit grant opportunities to better train potential growers on sound business practices, including creating a business plan, marketing, QuickBooks, Farm Service Agency and USDA services, etc.[14]
7. Assist Washington County effort to assist in the expansion of an online ordering arrangement from strictly retails into a wholesale system with expanded delivery routes and just compensation rates for producers. Replicate system to work in all northern Maine.
8. Continue representation with the Maine Food Strategy.[15]
9. Engage social and traditional media to inform producers about opportunities to grow markets and increase distribution channels.

[13] NMDC awarded Emerging CDFI technical assistance grant, Sept. 2016

[14] NMDC is currently awaiting word on a USDA's Farm Service Agency (FSA) grant application to provide these services in Aroostook and Washington counties.

[15] www.mainefoodstrategy.org AP President serves on the Food Strategy Economic Working Group