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Restraints Preventing a Successful Young Farmer Population in Maine: Obstacles to Land & Loans

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Restraints Preventing A Successful Young
Farmer Population In Maine:
Obstacles to Land & Loans

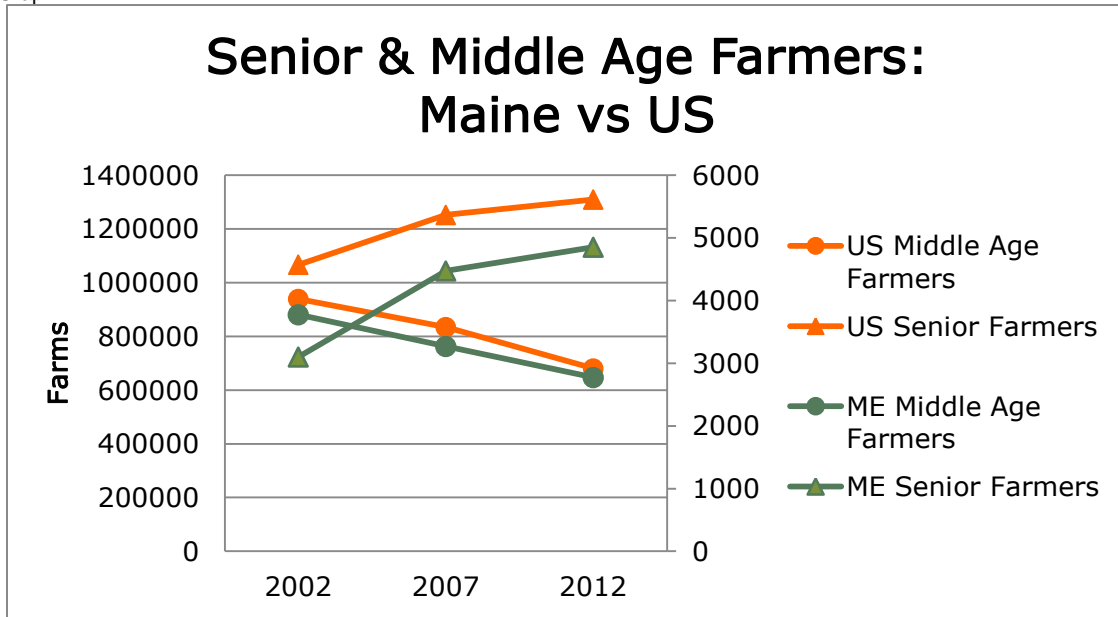
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Capstone paper for
Master of Community Planning and Development program
Muskie School of Public Service
University of Southern Maine

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Professor Mark Lapping, Capstone Advisor

Between 2002 and 2012 Maine's senior farmers experienced a consistent upward increase while those middle aged were in a consistent decline. (Graph 1) These trends are not unlike those seen across the country and as baby boomers reach retirement, should be expected.

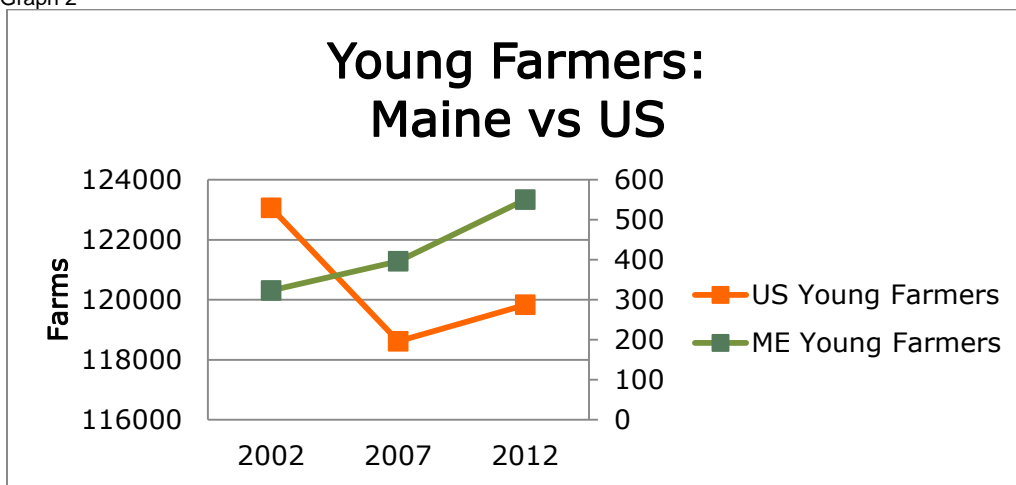
Graph 1



USDA Census Data

However, over this same period of time, Maine's number of young farmers diverged abruptly from the national trend. While the US had a 2.5% decline in its number of young farmers; Maine added over 70%. Although the US struggled to replace young farmers lost to middle age, Maine's young farmers saw a significant increase. (Graph 2) (Table 1)

Graph 2



USDA Census Data

Table 1

	2002 - 2012				2002 - 2007				2007 - 2012			
	Absolute Change		Rate of Change		Absolute Change		Rate of Change		Absolute Change		Rate of Change	
	US	ME	US	ME	US	ME	US	ME	US	ME	US	ME
Young Farmers	-3226	227	-2.6%	70.3%	-4446	73	-3.6%	22.6%	1220	154	1.0%	38.9%
Middle Age Farmers	-258828	-1001	-27.6%	-26.5%	-104751	-505	-11.2%	-13.4%	-154077	-496	-18.5%	-15.2%
Senior Farmers	242375	1751	22.7%	56.5%	185007	1372	17.3%	44.3%	57368	379	4.6%	8.5%

USDA Census Data

In order to gain a fuller understanding of the restraints young farmers in Maine struggle against, an analysis using available data and reports will be used to define what some of those challenges are. A more detailed analysis exploring the source and implications of those restraints will then be provided, followed by a review of some of the programs currently available to Maine’s young farmers to meet those challenges.

Young Farmers vs. Beginning Farmers

Data & reports that have been published on the subject have a tendency to use the terms “young”, “new”, “beginning”, “start-up” and “small” in reference to this single surge in young farmers and while the overlap is significant, it’s important, for the subject matter, to understand the differences. (Table 2) A young farmer is defined as a farmer 34 years old or younger while a beginning farmer has 9 years or less of actual farm experience. These definitions conform to available United States Department of Agriculture (USDA) census data and Farm Service Agency (FSA) program guidelines. Exceptions to these definitions will be noted as source material requires. In addition, middle age farmers are farmers aged 35 to 54, senior farmers represent those 55 and older and experienced farmers represent those with 10 years or more of farm operating experience.

Maine’s Young & Beginning Farmers*

Table 2

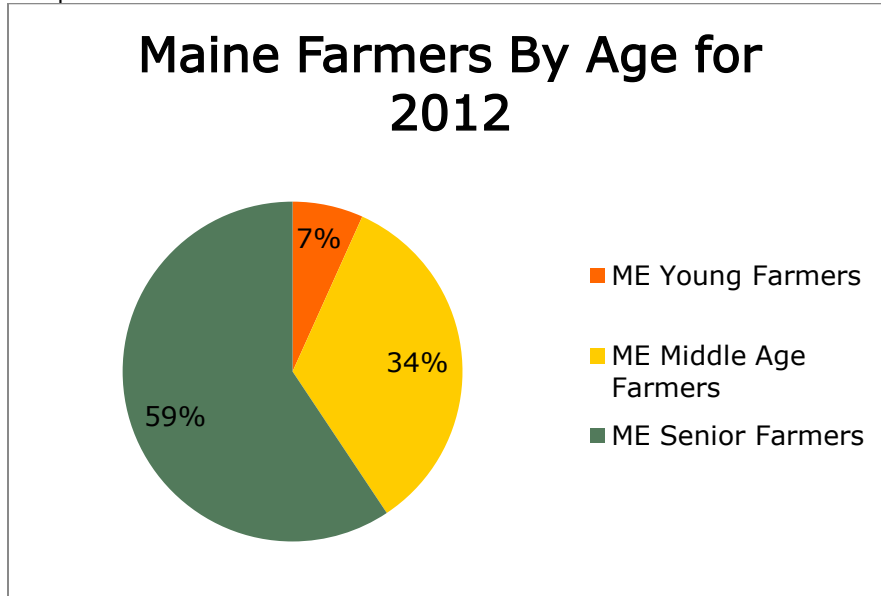
	Young Farmers	Middle Age Farmers	Senior Farmers	Total
Beginning	268	387	266	921
Experienced	62	869	2112	3043
Total	330	1256	2378	3964

USDA Census Data

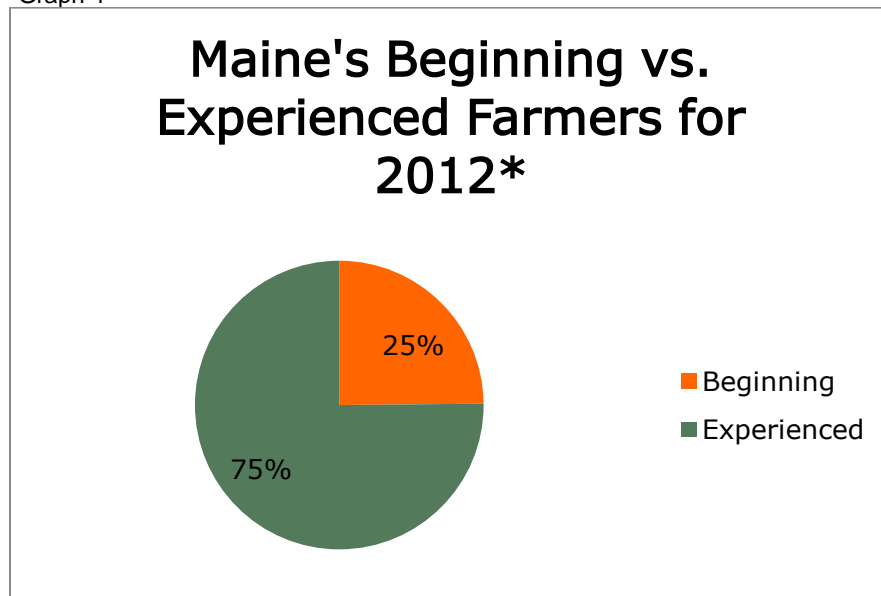
*Does Not Include Other Occupations

As of 2012, Maine's young farmers represented approximately 7% of all farmers in Maine (Graph 3). Beginning Maine farmers represented about 25% of all Maine farmers for that year. (Graph 4)

Graph 3



Graph 4

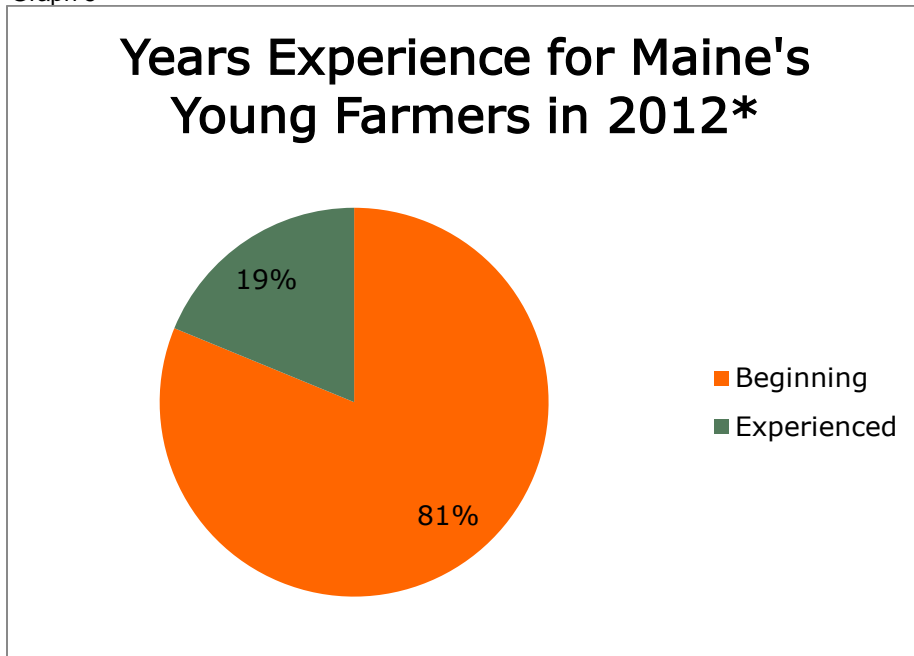


USDA Census Data

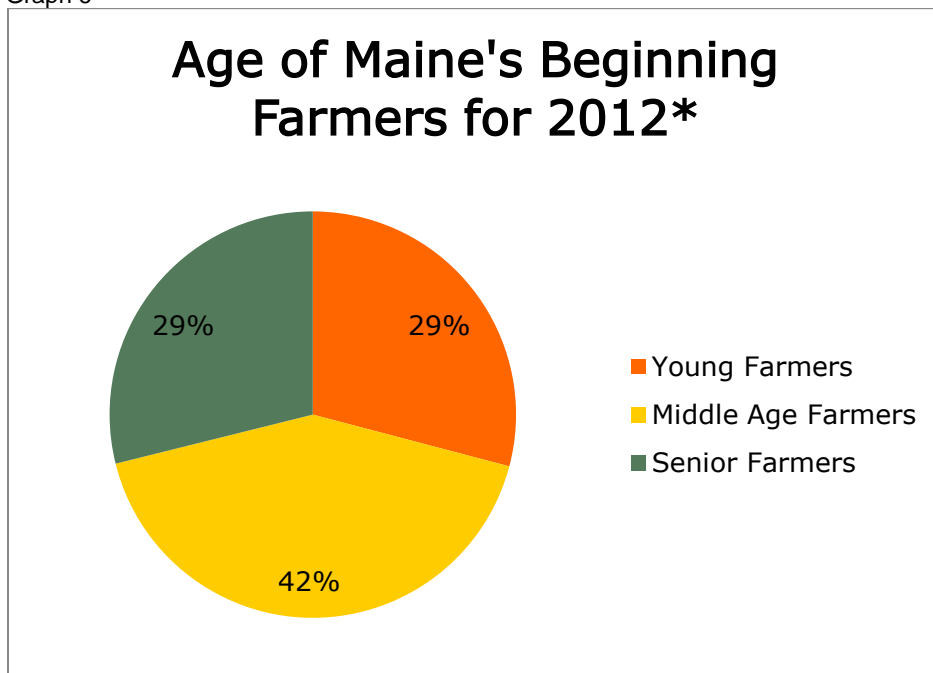
*Does not include Other Occupations

It's estimated that 81% of Maine's beginning farmers are young farmers (Graph 5) and that 29% of young farmers are beginning farmers. (Graph 6)

Graph 5



Graph 6



USDA Census Data

*Does not include Other Occupations

Statistical data clearly identifying what young farmers struggle against attempting to establish their business in Maine does not exist. This lack of data extends through to the

national level as well. A survey released in 2011 by the National Young Farmers Coalition (NYFC) attempts to address the national deficiency in data. Respondents were told to choose, from a predetermined list, the biggest obstacles facing young (<30 yrs old) and beginning farmers and were allowed to pick more than one option. They found that access to capital, credit and land were the biggest restraints for young & beginning farmers (Table 3). Farmers in the Northeast were even more likely to identify capital & land as the most significant challenges. As recommended by the NYFC report, the significant overlap between capital and credit is such, that consolidation into a single issue, focused on the overall financial stability of young farmers, is required. (Shute, 2011)

Biggest Challenges Faced by Young and Beginning Farmers

Table 3

	Total Farmers	Northeast Farmers	Farmers under 30
Lack of Capital	78%	83%	80%
Land Access	68%	72%	72%
Health care	47%	50%	47%
Access to credit	40%	39%	38%

(Shute, 2011)

Data regarding access to health care, a problem with significant monetary consequences, has been dated with the passage of the Affordable Care Act. Further complicating the issue is that Maine has been unwilling to expand its Medicaid program. And while it should be assumed that young, financially stressed farmers, like all low income Maine residents, continue to struggle with health care, the subject itself requires investigation beyond the scope of this report.

The Restraints: Loans

Most individuals that pursue agriculture do so from an aspiration to farm, not run a business. As such, many lack any business administrative skills, let alone the ability to develop and implement a business plan. (Moukad, 2010)

Many of these agricultural entrepreneurs are experimenting with new business models in unproven markets making quantification for lenders difficult. Exasperating the issue is a lenders inability to consider projections, instead relying on cash flow levels, a documented profit history, enough capital/collateral to cover any potential loss and an acceptable credit score, immediately ruling out a significant number of both young and beginning farmers. (*Are Northeast Small Farmers in a Financing Fix, 2008*)(*FarmStart Seed Capital: Celebrating Five Years, 2010*)

Private lenders knowledgeable of the agricultural sector are non-existent in New England and loans that do not fit the regulations are denied quickly. They know very little about the growing retail and niche markets and, as of 2008, questioned their capacity to sustain an economic downturn. Also, the ability for seemingly reasonable regulation to decimate viable small business is of great concern to lenders as well. (Moukad, 2010)(*Are Northeast Small Farmers in a Financing Fix, 2008*)

Furthermore, the cash orientated nature of selling directly to your consumer which, in addition to security and record keeping concerns, tends to result in underreporting on income taxes, and thus inaccurate income levels on loan applications. (Moukad, 2010)

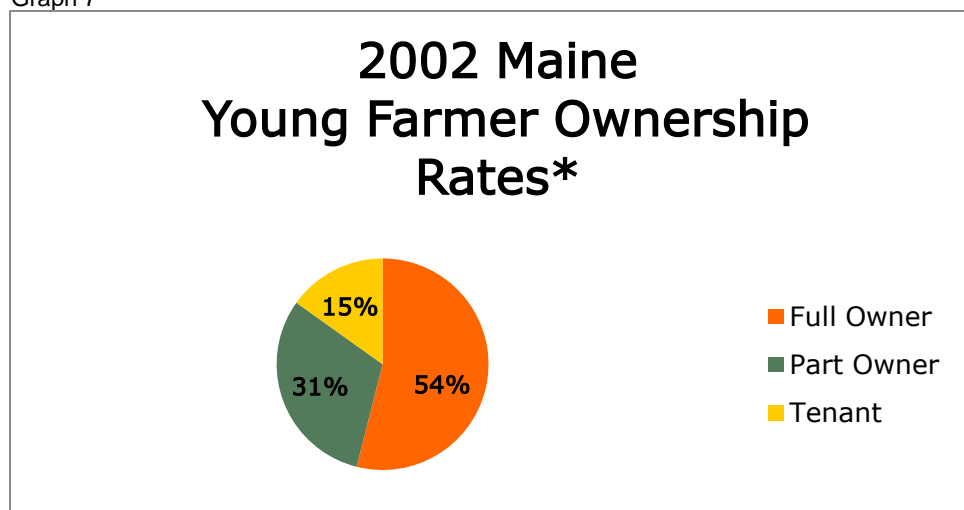
Because of an inability to secure even small loans, start up costs are often purchased with credit cards, which can result in further financial instability. However, for those without an established credit history and satisfactory credit score, even this option of last resort is out of limits. (Moukad, 2010)(*FarmStart Seed Capital: Celebrating Five Years, 2010*)

In essence, the diversified agricultural business pursued by many young and beginning farmers produces modest amounts of multiple products and, ideally, a steady long term cash flow. Most lenders, assuming they're willing to provide agricultural financing, prefer a higher return potential and are regulated toward established farm operations with the assets to cover any loss. (Moukad, 2010)(*Are Northeast Small Farmers in a Financing Fix, 2008*)

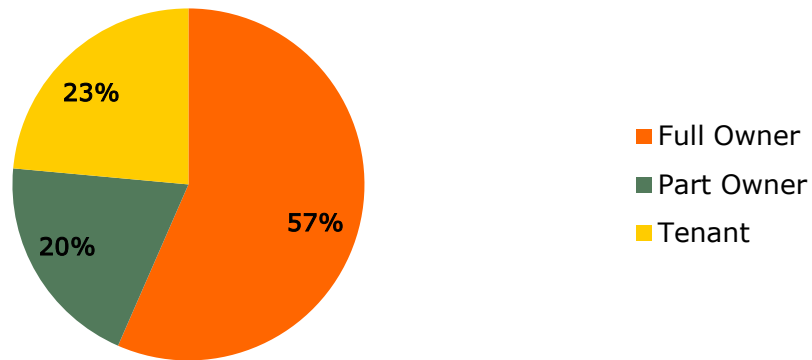
The Restraints: Land

At eighty-four percent of all US agricultural assets, farm real estate is a significant piece of a young farmer's ability to sustain and expand their new business. Reports on the national level have identified a high probability that young farmers are renting and farmers raised on a farm are more likely to own farmland as an adult than those new to farming, drawing the conclusion that young, beginning farmers are unable to acquire their own land. This obvious connection may no longer be accurate, at least in not in Maine. (Nickerson, 2012) (Shute, 2011)

Graph 7



2012 Young Farmer Ownership Rates*



USDA Census Data

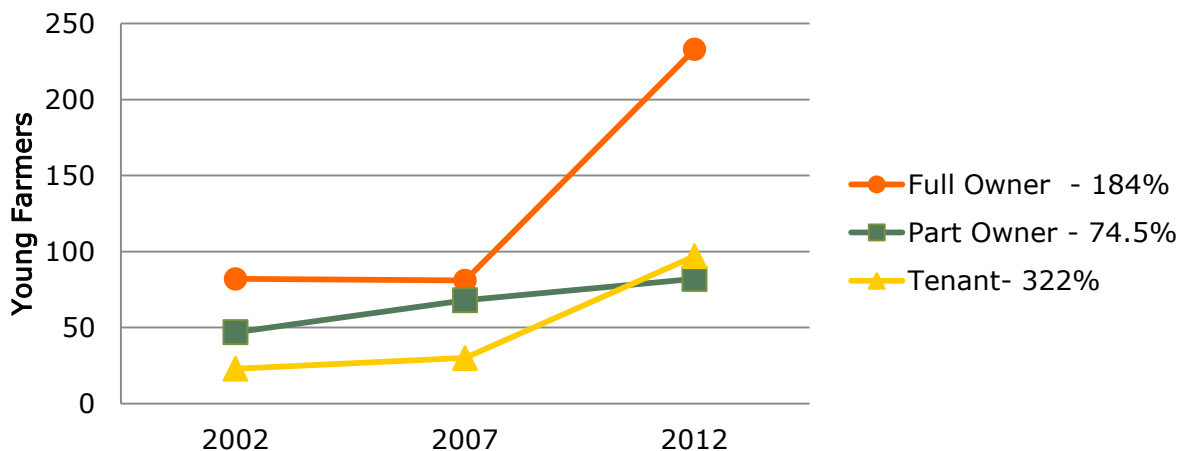
*Does Not Include Other Occupations

As of 2012, fifty-seven percent of Maine's young farmers owned land, up from 54% in 2002. (Graph 7)(Graph 8)

Also, while the number of full owners jumped dramatically, the rate at which they climbed was not nearly as fast as Maine's young tenant farmers. (Graph 9)

Graph 9

2002 - 2012 Maine Young Farmer Ownership Trends*



USDA Census Data

*Does Not include Other Occupations

Furthermore, between 2013 and 2014 the price per acre of farm real estate (all land + buildings) actually dropped in Maine from \$2,100 to \$2,080 per acre of farm real estate. The US value per acre stood at \$2,950 in 2014. However, macro influences such as mortgage rates, farm subsidy policies, non-farmer ownership and commodity prices, makes relevant comparisons to state specific, or even regional, farm real estate values difficult. (Land Values 2014 Summary, 2014)(Shute, 2011)(Nickerson, 2012)

Because of the ineffectiveness in using not just US farm real estate values, but US pasture and cropland values as well, it would be more valuable to consider averaged regional rates and trends for comparative analysis of a single state, like Maine. However, Maine has the lowest value per acre of any state in the Northeast. In fact, of the 12 Northeast states, all but 3 have farm real estate values that are more than double Maine's \$2,080 per acre. Four of those states, two of which are in New England, are valued at over \$10,000 per acre. (Land Values 2014 Summary, 2014)

Further complicating the matter is that the USDA does not provide a value per acre for Maine's cropland or pasture, as is standard for most US states. Instead, an average rate per acre is provided for predetermined sub-regions within the Northeast. For pasture, Maine is averaged with all of New England, producing a pasture value average of \$5,790 per acre. Maine's cropland is averaged with all of New England as well as Delaware and is listed at \$7,020 per acre. Because the provided price per acre for pasture and cropland in Maine are both approximately three times the price per acre for farm real estate, which includes pasture and cropland totals, Maine's average prices per acre for cropland and pasture is effectively unknown. (Land Values 2014 Summary, 2014)

Another consequence of Maine not having pasture or cropland per acre values is the inability to calculate a rent-to-value ratio. Used to determine the time an asset, like land, will pay for itself, the rent-to-value ratio is calculated by dividing cash rents per acre by the land value per acre. In addition to not having useful variables for pasture or cropland, USDA-NASS is unable to provide a pasture cash rent per acre value for Maine or any of its 16 counties. (Nickerson, 2012)(NASS-USDA, 2013)

Parcel-Specific Influences

With no data available to provide an average for how much an acre of Maine’s agricultural land is worth, value is drawn almost entirely from parcel-specific influences. Understanding what type of localized influences is affecting the value of farmland for young farmers, will depend on where they have settled in Maine.

Table 4

1997 - 2012 Young Farmer Rate Change per County	
Piscataquis	580.0%
Sagadahoc	533.3%
Waldo	375.0%
Franklin	312.5%
Androscoggin	110.0%
Lincoln	60.0%
Cumberland	54.5%
Penobscot	48.4%
Hancock	35.7%
Oxford	20.0%
Washington	8.0%
Kennebec	-2.8%
York	-23.7%
Knox	-30.0%
Aroostook	-35.6%
Somerset	-49.2%

USDA Census Data

A significant number of Maine’s growing young farmer populations have settled in one of five counties. Piscataquis, Sagadahoc, Waldo, Franklin & Androscoggin County all increased over 100% in its total number of young farmers. (Table 4) Removing these 5 counties from the state’s young farmer total causes Maine’s total young farmer population to drop 11%. Combined, these 5 counties climbed almost 300% between 1997 and 2012. (Table 5)

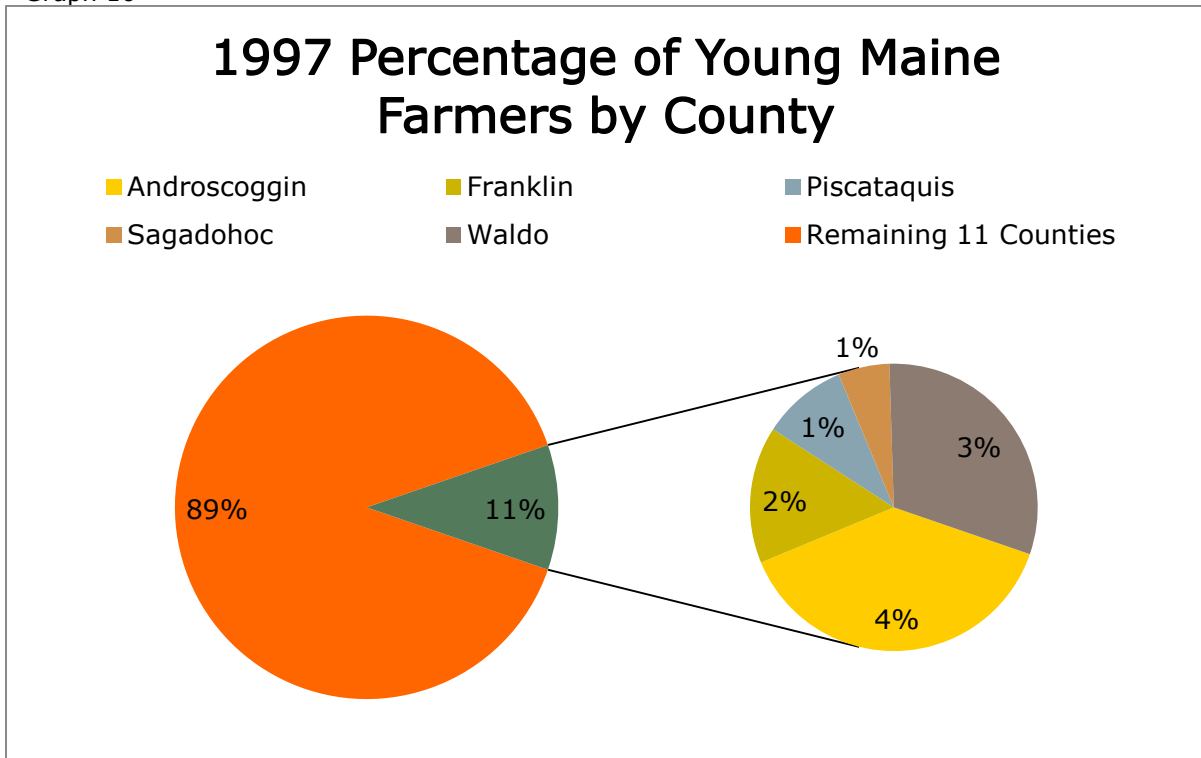
Table 5

1997 - 2012	
	Rate Change
Top 5 Counties	292.3%
The Other 11	-11.1%
Total	24.7%

USDA Census Data

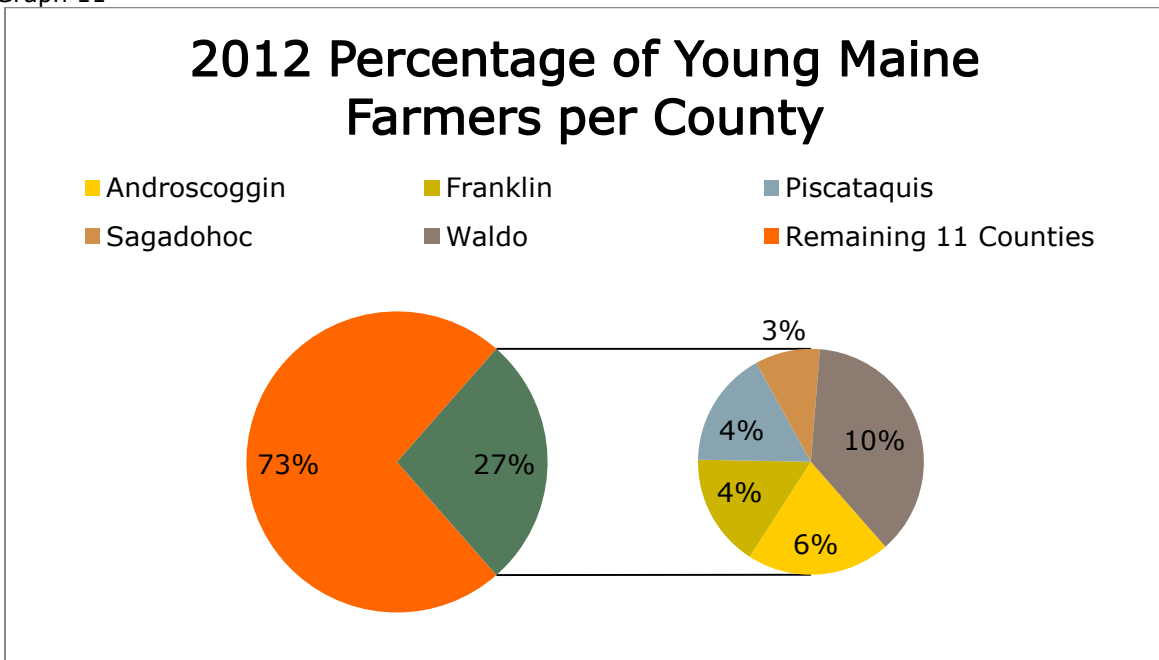
In 1997 11% of Maine's young farmers were within these 5 counties. (Graph 10) By 2012, 30% of Maine's young farmer population lived within those same 5 counties. (Graph 11)

Graph 10



USDA Census Data

Graph 11



USDA Census Data

There are a number of agricultural and non-agricultural factors that can influence the price of farmland within these five counties. Soil quality, proximity to population centers, an established agricultural sector, zoning & regulation development pressure and more all play a role in estimating farmland value throughout Maine. (*The Brookings Institution Metropolitan Policy Program, 2015*)(*Nickerson, 2012*)

Large portions of Androscoggin, Sagadahoc & Southern Franklin counties have excellent agricultural soil. Much of this land lies along the Androscoggin River Valley and has a rich agricultural history. While there are over a dozen farmers' markets, including two winter markets, this area is centered on an expanding metropolitan region and two different labor market areas. There are also a number of transportation corridors as well. In addition to two interstates, US routes 1, 2 and 202 along with ME routes 4, 9 and 26 all cross through this region of Maine. The area has been under a significant amount of development pressure and some of the worst urban sprawl within the state. (*Websoilsurvey.nrcs.usda.gov, 2015*)(*The Brookings Institution Metropolitan Policy Program, 2015*)(*Getrealmaine.com, 2015*)(*Maine Atlas & Gazetteer, 2007*)

Northern Franklin county along with the majority of Piscataquis county is near, if not completely, useless for agricultural purposes. In addition to steep slopes, soil is rocky with boulders present. The region is sparsely populated with approximately 30% of its housing stock considered second homes while a majority of this land is defined as unorganized territory. (*Websoilsurvey.nrcs.usda.gov, 2015*)(*The Brookings Institution Metropolitan Policy Program, 2015*)(*Maine Atlas & Gazetteer, 2007*)

While there are large sections with the southern tip of Piscataquis county that are not suitable for agricultural use, but there is also a significant amount of rich loamy soil perfect for agricultural purposes. This relatively small area is located within the Dover-Foxcroft Labor Market Area. The only two farmers' markets are each located within Dover-Foxcroft on different days and while the area has not seen as much development pressure, it has seen significant loss of rural land. (*Websoilsurvey.nrcs.usda.gov, 2015*; *The Brookings Institution Metropolitan Policy Program, 2015*)

Waldo County has a mix of soils that are both unsuitable for farmland along with soils of high agricultural quality. Approximately 1/3 of Waldo's high quality farmland sits along the coast and is under high development pressure due to a growing population and a demand for second homes. Parts of the county with agriculturally preferred soils have not been under as much development pressure, but have still seen significant tracts of land converted to non-rural purposes. In addition to five active farmers' markets, Waldo County is also home to the Maine Organic Farmers and Gardeners Association (MOFGA). Active for several decades, MOFGA promotes agriculture using organic and sustainable methods. Active throughout the state, MOFGA is seen, at least anecdotally, as the reason Waldo County experienced such a dramatic jump in its number of young farmers. (*Websoilsurvey.nrcs.usda.gov, 2015*)(*The Brookings Institution Metropolitan Policy Program, 2015*) (Mofga.org Timeline 2015)

There are also several influences that apply relatively equally across each county. Every county is served by a co-operative extension and most towns and cities that have experienced a significant loss of farmland due to development pressures have since adopted agriculturally

friendly regulations and zoning in an effort to protect & promote what farmland remains. (Extension.umaine.edu, 2015)

In addition to MOFGA, there are several active agriculturally focused groups and organizations working to protect farmland, lobby for agricultural interests, assist with marketing and promote value-added products. The state also has 27 different agricultural fairs throughout the state every summer; with several dating their origins back over 100 years, while some are nearing 200 years. (Mofga.org, 2015.Timeline)(Mofga.org, 2015. Partnerships) (Actonfair.net, 2015) (Farmingtonfairmaine.com, 2015) (Houltonfair.com, 2015)

Further complicating a parcels specific value is proximity to amenities. Picturesque mountain and ocean views, water access, trail networks, ski mountains and other outdoor recreational activities affect the value of farmland throughout Maine. (Nickerson, 2012)

Young Farmer Programs in Maine

With such an elaborate tapestry of financial restraints along with an inability to quantify farmland value, let alone whether a parcel would be considered affordable or not, several organizations have begun positioning themselves to better meet the needs of young Maine farmers. However, because this is a recent trend, many are still learning what young farmers need to be successful, along with a preferred method for implementation. Three groups that have accepted this challenge are Maine Farmland Trust, USDA's Farm Service Agency, and Farm Credit East.

Maine Farmlink, a service provided by Maine Farmland Trust (MFT), helps beginning and landless farmers connect with farmers willing to sell or rent out their land. Opportunity to consider less traditional lease agreements is encouraged. Another program, Buy/Protect/Sell, allows MFT to purchase vulnerable farmland, place a conservation easement on the property and then sell it at its agricultural value. (Mainefarmlink.org, 2015) (Mainefarmlandtrust.org, 2015. Buy/Protect/Sell)

A pilot program launched by MFT in November of 2014 also aims at helping beginning farmers obtain land. The Land Access Loan Program provides qualified applicants a loan to purchase farm property or a down payment loan used to secure a commercial bank loan. Currently only available in Washington county, the program has had no applicants as of April 2015. However, MFT still intends to roll out the Land Access Loan Program statewide in 2016. (Mainefarmlandtrust.org, 2015. Land Access Loan Program)(Buswell)

The 2014 Farm Bill provided hundreds of millions of dollars to the Farm Service Agency (FSA) for beginning farmers. In addition to multiple business and market development grants, down payment assistance as well as access to federal crop insurance at a reduced rate (beginning farms for crop insurance is ≤ 5 years). (Claassen, 2015) (fsa.usda.gov, 2014. Farm Loans Overview)

Another important FSA program is their new Operational Microloan Program. Started as a pilot program in 2013, the latest Farm Bill made permanent this program and increased the maximum loan amount from \$35,000 to \$50,000. Geared specifically toward beginning, niche

and small farms, the microloan acts similarly to the standard Operational Loan Program except that a number of requirements have been loosened to encourage participation. FSA offices in Maine approved 82 microloans in the first two years of the program and an additional 15 from October of 2014 to April of 2015. *(Claassen) (fsa.usda.gov, 2014. Microloan Fact Sheet) (fsa.usda.gov, 2014.Farm Loans Overview) (Dufor)*

Farm Credit East (FCE) is a customer-owned cooperative and the largest agricultural lender in the Northeast. As a lender specializing in agriculture, the FCE also offers several programs providing financial education and technical services with regards to farming. In addition to several programs providing financial education and technical services with regards to farming, FCE also operates the FarmStart program. Designed to provide young and start up farmers financing for working capital, FarmStart has been operational for more than 5 years and has provided over 65 participants a total of \$2.5 million. *(FarmStart Seed Capital: Celebrating Five Years, 2010) (Cosgrove, 2015)*

Young and beginning farmers in Maine have only recently been able to apply for the FarmStart Program after Farm Credit of Maine merged with FCE in January of 2014. At this time FCE reports that their Southern Maine office in Auburn has not seen a significant increase in young farmers. However, the Northern Maine office in Presque Isle has experienced an increase in young farmers inquiring about the FarmStart program. *(FarmStart Seed Capital: Celebrating Five Years, 2010) (Cosgrove, 2015) (Mainebiz.biz, 2015)*

One final program worth mentioning is currently being tested by the USDA's Sustainable Agriculture Research & Education program (SARE) in conjunction with several Northeast farm incubator programs, including Cultivating Community in Portland, ME. The intent is to provide training to incubator staff on how to teach incubator participants the business skills required to eventually start their own farm business. SARE is still awaiting feedback from incubator staff and have yet to release a final report on the programs viability. *(Mysare.sare.org, 2015)*

Recommendations

- Future reports, studies and surveys from non-governmental organizations should conform their definitions of “young”, “beginning” and “small” with those used by the USDA
- Include a more detailed analysis of middle aged beginning farmers.
- Incorporate small farm data into analysis using farm income data and farm size per age.
- Investigation into specific challenges faced by Maine’s immigrant populations pursuing agriculture.
- Investigate further the parcel-specific influences using GIS mapping aimed at compiling and more closely analyzing potential parcel-specific influences.
- Develop a tool for evaluating farmland in Maine with the intent of producing regional/county farmland value estimates.
- Identify overlap within active young farmer programs along with potential opportunities for collaboration of services.

Bibliography

- Actonfair.net,. (2015). *Acton Fair*. Retrieved 5 May 2015, from <http://actonfair.net/>
- Are Northeast Small Farmers in a Financing Fix? Research Results on Financing Gaps and Program Opportunities*. (2008) (1st ed., pp. 2, 7-14, Apndx 1-2). Retrieved from <http://www.thecarrotproject.org/programs/reports>
- Claassen, R. (2015). *USDA ERS - Agricultural Act of 2014: Highlights and Implications: Beginning Farmers and Ranchers*. *Ers.usda.gov*. Retrieved 23 April 2015, from <http://www.ers.usda.gov/agricultural-act-of-2014-highlights-and-implications/beginning-farmers-and-ranchers.aspx>
- Cosgrove, T. (2015). Young Farmer Programs in Maine. Phone.
- Buswell, Erica. Land Access Loan Program. 2015. E-mail.
- Dufour, Deborah. Farm Service Agency Microloans. 2015. E-mail.
- Extension.umaine.edu,. (2015). *The University of Maine - County Offices*. Retrieved 5 May 2015, from <http://extension.umaine.edu/county-offices/>
- Farmingtonfairmaine.com,. (2015). *Farmington Fair* /. Retrieved 10 May 2015, from <http://farmingtonfairmaine.com/>
- FarmStart Seed Capital: Celebrating Five Years*. (2010) (1st ed., pp. pg 4-5). Enfield, CT. Retrieved from <http://www.farmlandinfo.org/farmstart-celebrating-five-years>
- Fsa.usda.gov,. (2014). *Microloan Fact Sheet November 2014*. Retrieved 8 March 2015, from http://www.fsa.usda.gov/FSA/newsReleases?area=newsroom&subject=landing&topic=pfs&newstype=pr&factsheet&type=detail&item=pf_20141107_farln_en_microln.html
- Fsa.usda.gov,. (2014). *Farm Loans Overview*. Retrieved 8 March 2015, from http://www.fsa.usda.gov/FSA/newsReleases?area=newsroom&subject=landing&topic=pfs&newstype=pr&factsheet&type=detail&item=pf_20150330_farln_en_loaninfo.html
- Fsa.usda.gov,. (2014). *Farm Loan Information Chart 2014*. Retrieved 8 March 2015, from http://www.fsa.usda.gov/FSA/newsReleases?area=newsroom&subject=landing&topic=pfs&newstype=pr&factsheet&type=detail&item=pf_20141107_farln_en_farlnchar.html
- Getrealmaine.com,. (2015). *Farmers' Market Directory*. Retrieved 5 May 2015, from <http://www.getrealmaine.com/index.cfm/fuseaction/farmersMarkets.directory/index.htm>
- Houltonfair.com,. (2015). *Houlton Maine Agricultural Fair*. Retrieved 5 May 2015, from <http://www.houltonfair.com/>

- Land Values 2014 Summary*. (2014) (1st ed., pp. 8, 10 & 14). Retrieved from <http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1446>
- Maine Atlas & Gazetteer*. (2007) (3rd ed., maps. 5-6, 11-12 & 19-20). Yarmouth, ME.
- Mainebiz.biz,. (2015). Farm Credit East merger seen as beneficial to Maine farmers, loggers, commercial fishermen. Retrieved from <http://www.mainebiz.biz/article/20140421/CURRENTEDITION/304179993/farm-credit-east-merger-seen-as-beneficial-to-maine-farmers-loggers-commercial-fishermen>
- Mainefairs.org,. (2015). *Maine Association of Agricultural Fairs - About Us*. Retrieved 5 May 2015, from <http://www.mainefairs.org/about.html>
- Mainefarmlandtrust.org,. (2015). *Buy/Protect/Sell | MAINE FARMLAND TRUST – Securing a Future for Farming*. Retrieved 17 April 2015, from <http://www.mainefarmlandtrust.org/program-areas/buyprotectsell/>
- Mainefarmlandtrust.org,. (2015). *Land Access Loan Program | MAINE FARMLAND TRUST – Securing a Future for Farming*. Retrieved 20 April 2015, from <http://www.mainefarmlandtrust.org/farmland-access/land-access-loan-program/>
- Mainefarmlink.org,. (2015). *| MAINE FARMLINK – a Maine Farmland Trust Program*. Retrieved 17 April 2015, from <http://www.mainefarmlink.org/>
- Mofga.org,. (2015). *Partnerships*. Retrieved 5 May 2015, from <http://www.mofga.org/Resources/Partnerships/tabid/268/Default.aspx>
- Mofga.org,. (2015). *Maine Organic Farmers and Gardeners Association > Home > About MOFGA > Abridged History > MOFGA Timeline*. Retrieved 5 May 2015, from <http://www.mofga.org/Default.aspx?tabid=512>
- Moukad, J. (2010). *Small Farms in a Changing Credit Landscape* (1st ed., pp. 3-14). The Carrot Project. Retrieved from <http://www.thecarrotproject.org/programs/reports>
- Mysare.sare.org,. (2015). *Improving The Viability Of Beginning Farm Enterprises By Strengthening Northeastern Farm Incubator Projects*. Retrieved 17 March 2015, from <http://mysare.sare.org/mySARE/ProjectReport.aspx?do=viewRept&pn=ENE14-132&y=2014&t=0>
- NASS-USDA,. (2013). *New England 2013 Cash Rents*. Retrieved 17 April 2015, from http://www.nass.usda.gov/Statistics_by_State/New_England_includes/Publications/Annual_Statistical_Bulletin/cashrents2013.pdf
- Nickerson, Cynthia, Mitchell Morehart, Todd Kuethe, Jayson Beckman Jennifer Ifft, and Ryan Williams. Trends in U.S. Farmland Value and Ownership. EIB-92. U.S. Dept. of Agriculture, Econ. Res. Serv. February 2012.

Shute, L. (2011). *Building A Future With Farmers* (1st ed., pp. 20-29). Tivoli, NY: National Young Farmers Coalition. Retrieved from <http://www.youngfarmers.org/newsroom/building-a-future-with-farmers-october-2011/>

The Brookings Institution Metropolitan Policy Program,. (2015). *Charting Maine's Future: An Action Plan For Promoting Sustainable Prosperity And Quality Places* (pp. 17-18, 44-49, 63 & 66). Brookings Institution.

Websoilsurvey.nrcs.usda.gov,. (2015). *Web Soil Survey*. Retrieved 5 May 2015, from <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>