



Jefferson County



**AGRICULTURAL
AND FARMLAND
PROTECTION PLAN**

Parts 2 & 3 of 3 – State of Agriculture & Background

**April
2016**



Contents

The State of Jefferson County’s Agricultural Economy.....	5
Farms.....	5
Farm Products.....	5
Other Farm Characteristics	7
Jefferson County Compared to Other Leading Dairy Counties and New York State	7
Agricultural Resources in Jefferson County.....	9
Agricultural Lands	9
Agricultural Districts.....	11
Parcels Receiving Agricultural Assessments	14
Soils	16
Natural Characteristics	19
Protected and Government Lands.....	21
Priority Farmlands and New York State Priority Farmland Criteria	24
Agriculture and Local Plans/Regulations	35
Why Review Zoning and Plans?	35
Summary of the Comprehensive Plan Review	36
Summary of the Zoning Review	38
Right to Farm Law in Jefferson County.....	41
Farmland Conversion Pressure.....	41
Appendix A. Agricultural Economy.....	51
Farms and Farmland	51
Farms by Size	52
Farms by Product	53
Livestock Inventories.....	55
Crops Harvested	55
Dairy Farms in Jefferson County	56
Farm Sales	60
Gross Farm Income.....	63
Farm Production Expenses.....	64
Fixed Assets.....	65
Farm Operators.....	66
Farm Labor	67

Agriculture-Related Industry.....	67
Appendix B. Resources and Programs That Support Agriculture	72

Tables

Table 1 - Farmed Parcels and Farmed Areas	11
Table 2 - Agricultural Districts.....	12
Table 3 - Agricultural Land Value Assessments	16
Table 4 - Major Soil Types	17
Table 5 - High Quality Farm Soils	19
Table 6 - Conservation and Public Access Lands.....	23
Table 7 - New York State and Jefferson County PDR Criteria	27
Table 8 - Adjusted Jefferson County PDR Criteria.....	30
Table 9 - Farm Friendliness of Comprehensive Plans	36
Table 10 - Farm Friendliness of Zoning Laws.....	38
Table 11 - Population and Housing Trends.....	47
Table 12 - Farms and Farm Acreage	51
Table 13 - Farms by Size.....	53
Table 14 - Farms by Product	54
Table 15 - Farms with Livestock.....	55
Table 16 - Farms with Crops	56
Table 17 - Milk Market Statistics	58
Table 18 - Agricultural Product Sales.....	61
Table 19 - Direct Sales of Agricultural Products	61
Table 20 - Farms by Gross Sales	62
Table 21 - Farm Production Expenses	65
Table 22 - Farm Property and Equipment Values.....	66
Table 23 - Farm Operator Characteristics	66
Table 24 - Farm Tenure.....	67
Table 25 - Hired Farm Labor	67
Table 26 - Agriculture Related Industries.....	68
Table 27 - Number of Farms	69
Table 28 - Land in Farms	69

Table 29 - Acres per Farm	69
Table 30 - Large Farms.....	69
Table 31 - Total Farm Sales	69
Table 32 - Average Farm Sales.....	70
Table 33 - Farms with \$500,000 or More in Sales.....	70
Table 34 - Farms with Dairy Cows.....	70
Table 35 - Total Number of Dairy Cows	71
Table 36 - Dairy Cows per Farm	71
Table 37 - Production Expenses per Farm	71

Maps

Map 1 - Farmland in Jefferson County	10
Map 2 - Agricultural Districts in Jefferson County.....	13
Map 3 - Location of farmed parcels that receive agricultural value assessments	15
Map 4 - Wetlands in Jefferson County.....	18
Map 5 - Protected lands in Jefferson County.....	22
Map 6 - Agricultural Lands Map	32
Map 7 - Priority Farmland Area Map	34
Map 8 - Population changes in Jefferson County 2000 to 2013	43
Map 9 - Comparison of farmland and water/sewer locations.	46
Map 10 - Lands converted from farming to other land uses between 2005 and 2013.....	48

Figures

Figure 1- Sales by Agricultural Product, 2012	5
Figure 2 - New York's Leading Dairy Counties	7
Figure 3 - Jefferson County 2008 Ranking Criteria Score Sheet	26
Figure 4: Cost of Community Service study results from other NYS towns	50
Figure 5 - Number of Farms in Jefferson County	51
Figure 6 - Average Farm Size	52
Figure 7 - Farms by Principal Product	53
Figure 8 - Farms with Dairy Cows	57

Figure 9 - Dairy Cows per Farm..... 57
Figure 10- Dairy Cows per Farm, Comparison 58
Figure 11 - Dairy Cow Inventory and Milk Yield 59
Figure 12 - Sales by Agricultural Product 60
Figure 13 - Value of Agricultural Products Sold 63
Figure 14 - Average Gross Farm Income..... 64

The State of Jefferson County's Agricultural Economy

A detailed analysis of Jefferson County farms, farmland, and agricultural economic characteristics is provided in the Appendix A. This information reflects data from the U.S. Census of Agriculture from 2002 to 2012. The following provides a brief summary of recent trends.

Farms

- The 2012 Census of Agriculture reported 876 farms in Jefferson County, a decline of nearly 15% from the number in 2002. Most of the decline, however, occurred between 2002 and 2007.
- Land in farms in Jefferson County totaled 290,811 acres in 2012, an 11% increase from 262,331 acres in 2007. Approximately 36% of the County's total land area is in farming.
- The average farm in Jefferson County in 2012 was 332 acres, an increase from 296 acres in 2007. The New York State average was 202 acres, up from 197 five years earlier. Farms in Jefferson County tend to be larger than those in Lewis and St. Lawrence Counties.

Farm Products

- Jefferson County ranks 4th among NYS counties in Milk Production according to the USDA National Agricultural Statistics Service.
- Jefferson County farms generated \$183.6 million in sales in 2012, with the livestock sector accounting for about 75% of the total. The leading agricultural commodities were dairy products (\$121.5 million), grain and soybeans (\$24.8 million), hay and silage (\$17.8 million), and beef cattle (\$11.7 million).
- Classified by their principal product, *four out of every five* farms in Jefferson County in 2012 grew mixed crops, produced milk, raised beef cattle, or raised other (or a combination of) livestock.

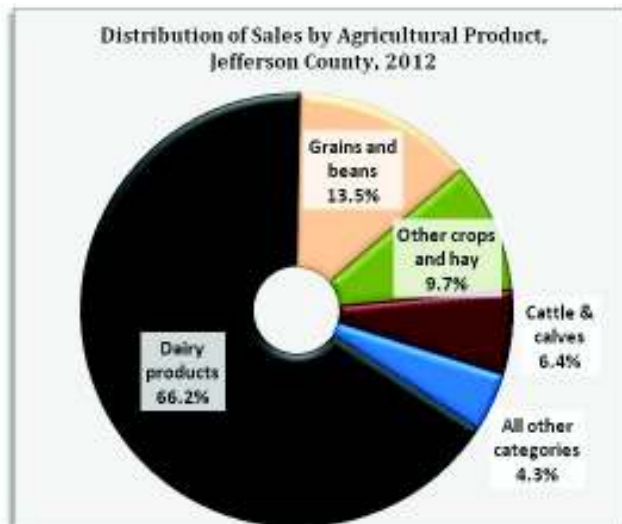


Figure 1- Sales by Agricultural Product, 2012

- Compared to 2002, the County has more farms raising beef cattle, growing fruits and vegetables, and breeding, hatching, and raising poultry for meat or egg production.

However, the number of farms growing fruits and vegetables remains small, comprising less than 4% of all farm operations in Jefferson County.

- The most common crop in the County is forage, which is grown on 595 farms covering 103,320 acres. In 2012, Jefferson County was ranked third of all counties in the state in forage, based on the number of acres grown.
- In Jefferson County, as well as in other top dairy counties in the state, the number of dairy farms has continued to decline, while the average number of cows per farm has steadily increased.
- Between 2007 and 2012, Jefferson County's rank with respect to the sales of cattle and calves declined from 8th to 14th in New York State, although sales were stable. This was due to increased cattle sales in other counties. Its rank increased from 15th to 13th in the value of grain and soybeans, however, as sales in this category more than tripled.
- In constant 2012 dollars (i.e., in values adjusted to account for inflation), total farm sales increased by 66%. Sales of livestock and their products rose by 38%, sales of crops by more than 300%. The latter can be attributed to increased production of corn for grain and soybeans.
- In 2007 and 2012, Jefferson County ranked ninth in the state in the total sales of agricultural products and fourth - after Wyoming, Cayuga, and St. Lawrence Counties - in the value of milk and dairy products sold.
- The presence of several major dairy processors in and around Jefferson County is a significant competitive advantage for the dairy industry. The demand for milk is strong and there are multiple opportunities for farmers to sell their milk locally, reducing hauling costs.
- According to the Agricultural Census, 30 farms in Jefferson County were certified organic through the USDA National Organic Program, while 3 farms reported they were transitioning into organic production. Many of these are organic milk producers. Organic product sales in the County totaled nearly \$5 million, the 5th highest in New York State.
- An increasing number of Jefferson County farmers are selling their products directly to consumers through such venues as farm stands and farmers markets. At less than \$1 million a year, the value of direct-to-consumer sales is quite small relative to *total* farm sales in the County, but it is a growing sector.

As an industry, agriculture has a relatively high economic impact because farmers purchase supplies and services from many other businesses. According to a statewide study conducted by Cornell Professor Todd Schmidt, for every dollar spent in agricultural output, an additional 43 cents is generated for non-agricultural industries.

Other Farm Characteristics

- Jefferson County farms owned more than \$477 million worth of land and buildings in 2012.
- According to the Agricultural Census, 245 farms had on-farm hired labor in addition to their principal operators. These farms accounted for 1,024 employees with \$16.6 million in annual payroll.

Jefferson County Compared to Other Leading Dairy Counties and New York State

The following data from the Agricultural Census compares Jefferson County with neighboring Lewis and St. Lawrence Counties and with New York State as a whole. It also benchmarks Jefferson County (which ranked 4th in the state in milk and dairy product sales in 2012) against other leading dairy counties in the state, as listed in the box at right, in a number of key areas.

Some of the highlights below show how Jefferson County compares to New York State as a whole and these other leading dairy counties. See Appendix A for corresponding data tables.

Jefferson County:

- Had one the lowest average production expenses per farm. Jefferson County had slightly higher average production costs compared to all of New York State farms, but much lower than the other big dairy counties. Further, the percent increase in average production costs was much lower in Jefferson County than other locations.
- Lost a slightly higher percentage of farms between 2002 and 2012.
- All locations analyzed lost farmland between 2002 and 2007 with Jefferson County having the highest percentage lost. However, Jefferson gained more farmland than the other locations between 2007 and 2012. Over the entire time frame of 2002 to 2012, Jefferson County lost 12% of farmland compared to 6% for New York State overall.
- Had farms with higher average acreages.
- Had the highest percentage of farms having 500 or more acres - over two times as many large farms as New York State overall.

Figure 2 - New York's Leading Dairy Counties



- Had higher farm sales than Lewis County, but just slightly less than St. Lawrence County.
- Had higher increases in total sales between 2002 and 2012 than New York State overall.
- Had highest increase in the average sales per farm compared to all other locations.
- Had the highest percentage of farms with over \$500,000 in sales.
- Had the highest loss in the number of dairy farms with cows. The total number of farms that had dairy cows (not that is not the same as a 'dairy farm') declined in all counties listed between 2002 and 2012. The total number of dairy cows declined in Jefferson and St. Lawrence counties. However, the average number of dairy cows per farm increased uniformly.

Agricultural Resources in Jefferson County

Agricultural Lands

Agricultural land can be found to some degree in every town in Jefferson County. The highest concentration of farmed parcels is found in the towns of Adams, Cape Vincent, Champion, Clayton, Ellisburg, Henderson, Hounsfield, Lyme, Philadelphia, Rodman, and Rutland, all have 40% or more of their land area in agricultural use. The towns of Worth and Wilna have the least amount of farmland, both with less than 5%.

However, the Town of Worth consist of large amounts of forest land (7,732 acres), and Wilna includes a large portion of the Fort Drum military reservation which precludes that area from farming. The graphic above shows the distribution of parcels identified as having some form of agricultural activity on them.

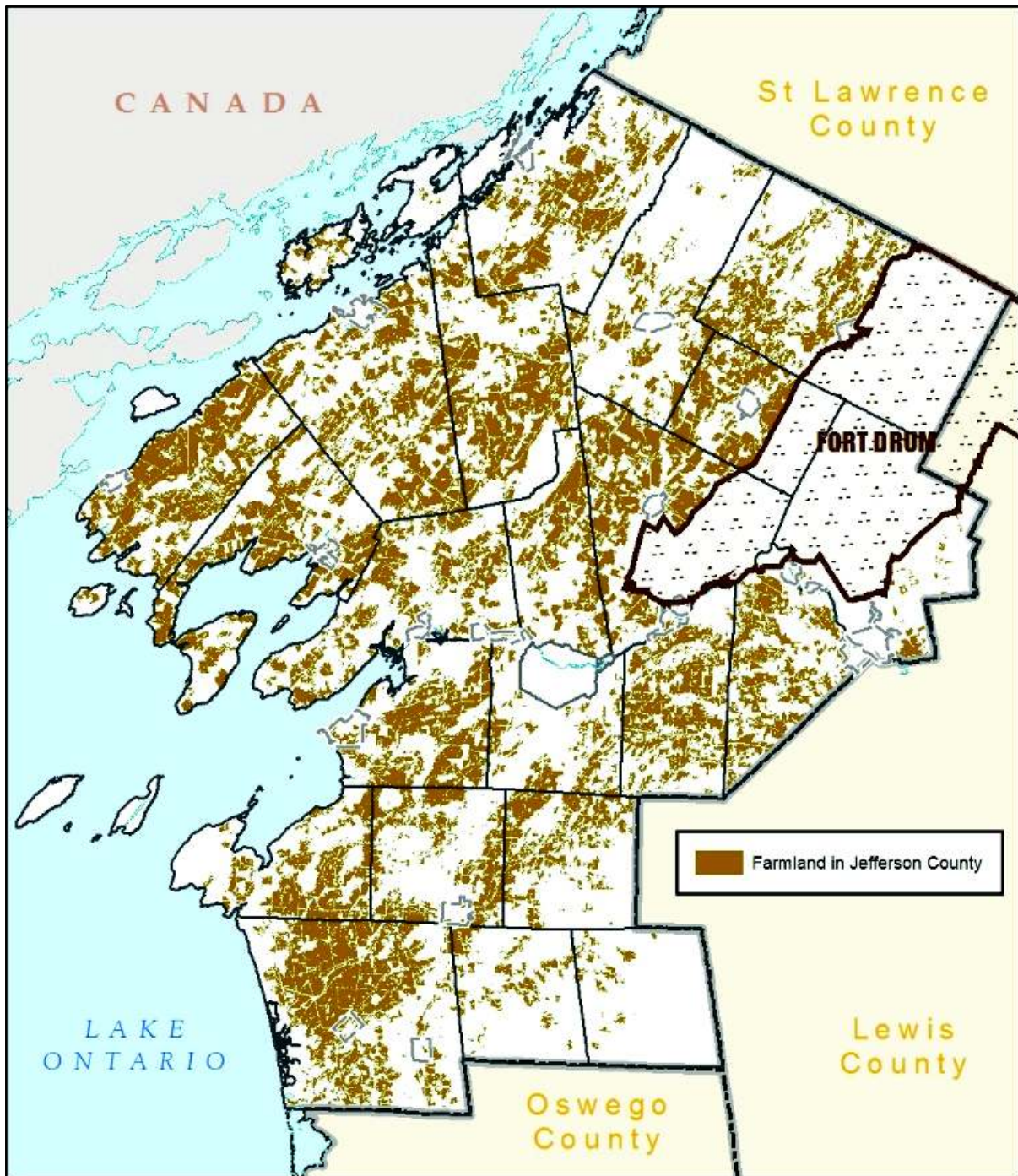
There is a strong correlation between the towns with high percentages of land in farming, and high quality farmland soils. All of the towns mentioned above with at least 40% farmland coverage also have at least 60% coverage of Prime Farmland soils and Soils of Statewide Importance. There are four towns with greater than 60% coverage of these high quality soils that have less farmland. The Town of LeRay contains significant portions of the Fort Drum Military base, which limits the area available for farming. The Town of Watertown has seen a loss of farmland due to development extending out from the City of Watertown. The towns of Brownville and Lorraine have less farmland than other towns with similar amounts of farm soils. In the Town of Lorraine this is due to 7,864 acres of forest land and 2,000 acres of wetlands.

In order to inventory the farmland in Jefferson County, a comprehensive list of farmed parcels was developed using the County's tax parcel database and other sources. This inventory began with all parcels with a property class code in the 100 range (agriculture) or with a code of 241 (Residential parcels with an associated agricultural use). It is important to recognize that many acres of farm land are owned by rural landowners and are rented/leased to farms. These parcels often serve multiple uses. Therefore, in addition to the property class code, all parcels receiving an agricultural land value assessment were added to the inventory, as well as most parcels within one of the three agricultural districts.

The resulting Agricultural Land Map (Map 1) constitutes a nearly complete inventory of farmed parcels in Jefferson County. This will form the basis for additional analysis for this plan, and the identification of the county's priority agricultural area map.

Table 1 describes the farmed parcels found in each of the towns in Jefferson County, and an estimate of the actively farmed areas within these parcels, measured through GIS analysis using the National Land Cover Dataset (NLCD) produced by the USDA. For the purposes of this

chart, forested areas on agricultural, vacant, and larger residential lands within one of the three Agricultural Districts was included as farmland.



Map 1 - Farmland in Jefferson County (Farmland shown includes open land on identified farmed parcels, and woodlands on parcels within an agricultural district)

Table 1 - Farmed Parcels and Farmed Areas

Farmed Parcels and Farmed Areas by Town				
Town	Number of Farmed Parcels	Total Farmed Acres (incl. wooded areas in Ag Districts)	Percent of Town in Farmland	Percent of Non-Fort Drum Land Area in Farmland
Adams	317	11,453	43%	
Alexandria	267	16,517	35%	
Antwerp	217	13,576	20%	37%
Brownville	202	13,033	34%	
Cape Vincent	294	19,173	53%	
Champion	249	13,654	49%	50%
Clayton	291	22,174	42%	
Ellisburg	554	29,065	53%	
Henderson	189	10,718	41%	
Hounsfield	213	13,272	42%	
Le Ray	203	14,851	32%	51%
Lorraine	81	4,712	19%	
Lyme	215	16,313	46%	
Orleans	239	17,584	39%	
Pamelia	145	8,186	37%	
Philadelphia	131	9,592	40%	60%
Rodman	182	10,842	40%	
Rutland	264	14,807	51%	
Theresa	144	8,347	20%	
Watertown	148	22,934	24%	
Wilna	39	1,337	3%	7%
Worth	25	1,120	4%	
Whole County	4,609	275,876	35%	

Area calculations do NOT include the area of towns within Lake Ontario, the St. Lawrence River, and other large bodies of water.

Agricultural Districts

The purpose of the New York State Agricultural District Program is to protect current and future farmland from nonagricultural development. This is a voluntary program to help reduce competition for limited land resources and help prevent local laws which would inhibit farming and raise farm taxes. Predominantly viable agricultural land is eligible to be included in the Agricultural District Program.

Jefferson County has over 230,000 acres of land in three agricultural districts (see Table 2 and Map 2).

Agricultural District 1-southeast, is found south of the Black River and East of Interstate Route 81. It is predominately in the towns of Rodman, Rutland, and Champion, with additional parcels in Adams, Hounsfield, Watertown, Lorraine, and Worth. It includes 1,071 parcels covering 48,677 acres.

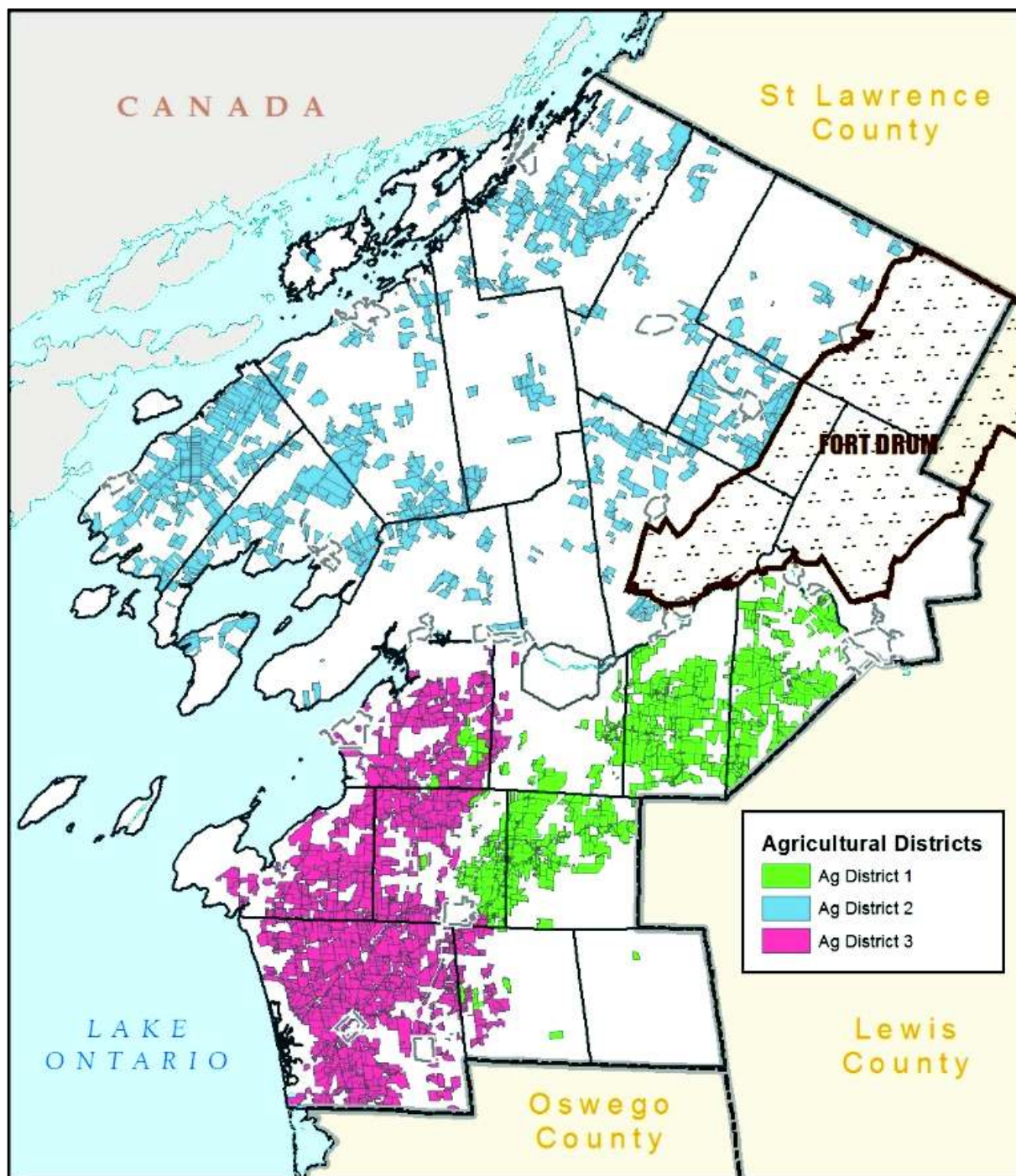
Agricultural District 2-north, is found entirely north of the Black River and City of Watertown. It includes 1,409 parcels covering 112,653 acres.

Agricultural District 3-southeast, is found south of the Black River and West of Interstate Route 81. It is predominately in the towns of Ellisburg, Henderson, Hounsfield, and Adams, with additional parcels in Lorraine and Watertown. It includes 1,447 parcels covering 74,560 acres.

The following table describes these three districts in more detail. The data used is from the latest district reviews; district #1 in 2013, district #2 in 2016, and district #3 in 2010. (The number of parcels and acreage in an ag district changes over time).

Table 2 - Agricultural Districts

Characteristics of Jefferson County Agricultural Districts					
Agricultural District	Total Acres	Acres in Farms	Acres Cropped	Acres owned by farmers	Acres rented by farmers
#1 Southeast	48,677	34,670	15,383	27,963	6,707
#2 North	80,648	50,055	28,028	45,030	5,025
#3 Southwest	74,566	41,945	23,399	30,617	11,328



Map 2 – Agricultural Districts in Jefferson County

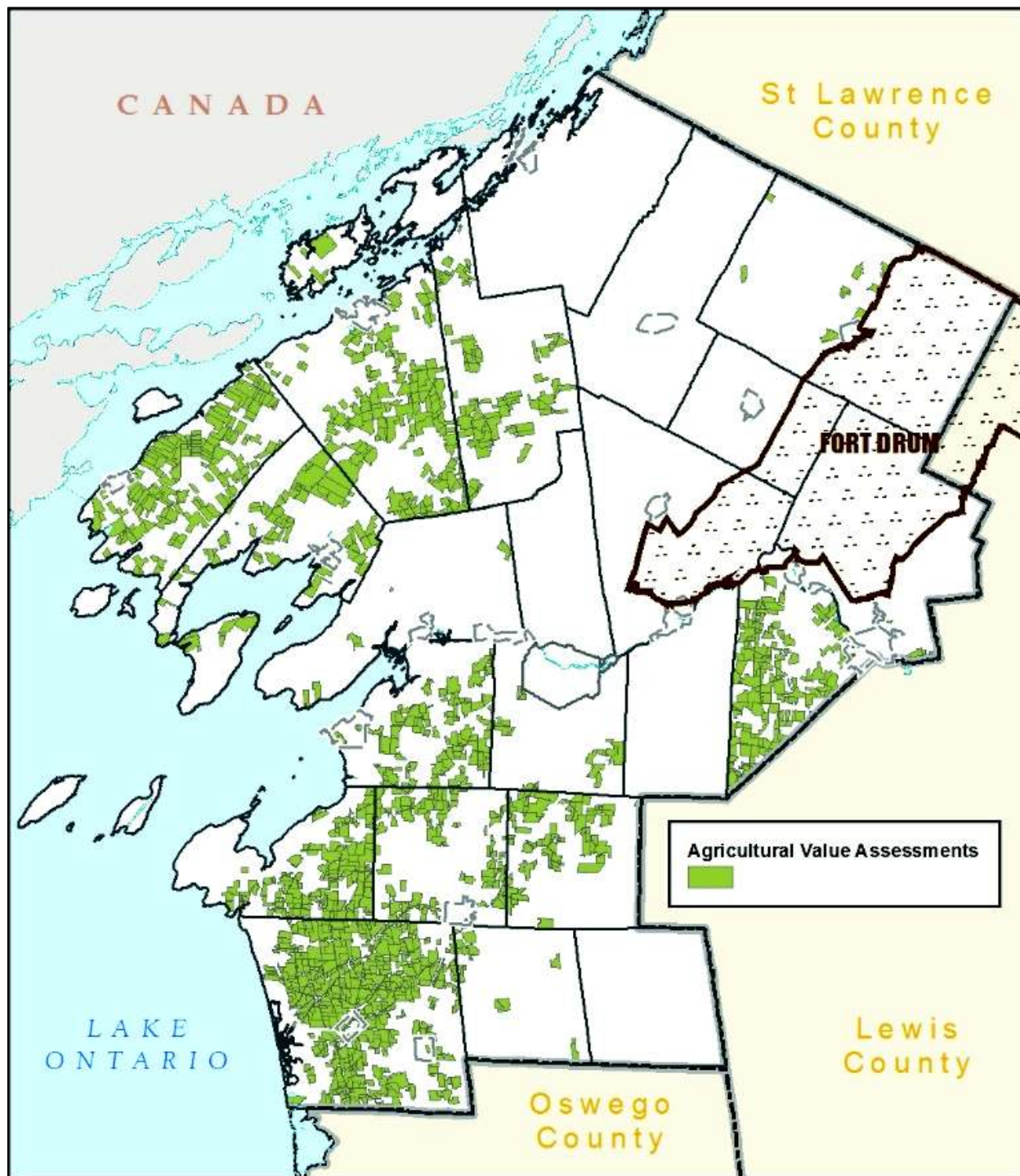
Parcels Receiving Agricultural Assessments

Farmers and farmland owners can take advantage of reduced tax assessments through the New York Agricultural Assessment Program. Generally, farmland that receives a reduced assessment must be actively farmed and show a commitment on the part of the farmer and/or landowner to continue farming.

There are 1,193 parcels in Jefferson County currently enrolled in the Agricultural Land Value Assessment program (Table 3). This is about 26% of all of the farmed parcels in the county. The Agricultural Value Assessment Map (Map 3) illustrates the parcels identified as farmland that either receive or do not receive agricultural value assessments.

Not all farmland qualifies to participate in the Agricultural Value Assessment Program. However, it appears there may be some eligible farmland that is not taking advantage of the lower tax rates offered. There are entire towns in the county that, despite having significant amounts of farmland, have no parcels enrolled in the assessment program. (The towns of Alexandria, LeRay, Pamela, Philadelphia, Rutland, and Theresa, all have between 19 and 49% land coverage as farmland, but not a single parcel enrolled in the Ag Assessment program.)

The towns of Antwerp and Brownville also have significant areas of farmland, but Ag Assessment participation rates of only 3-5%. The reason for this is probably due to the small difference between the assessed market value of farmland and the agricultural value assessment in these towns. The effort required to join the Agriculture Assessment program is not worth the small amount of property tax savings the farmer would receive. The County Real Property Department believes another reason for the discrepancy is due to the revaluation process. Those towns with recent property revaluations have higher participation rates. There will likely be an increase in Agricultural Value Assessment participation after these towns go through the revaluation process due to a larger property tax savings for the farmers.



Map 3 - Location of farmed parcels that receive agricultural value assessments

Table 3 - Agricultural Land Value Assessments

Agricultural Land Value Assessment program participation rates by town:		
Town	Number of parcels enrolled in Ag Assessment program	Percent of Ag parcels enrolled in Ag Assessment program
Adams	90	28%
Alexandria	0	0%
Antwerp	11	5%
Brownville	6	3%
Cape Vincent	145	50%
Champion	115	47%
Clayton	116	40%
Ellisburg	326	59%
Henderson	106	56%
Hounsfield	75	36%
LeRay	0	0%
Lorraine	12	15%
Lyme	61	29%
Orleans	58	24%
Pamelia	0	0%
Philadelphia	0	0%
Rodman	54	30%
Rutland	0	0%
Theresa	0	0%
Watertown	11	8%
Wilna	7	19%
Worth	0	0%
County Total	1193	26%

Soils

Successful agriculture depends on quality soils. High quality soils require less fertilizer and nutrients for growing crops. Farms with higher quality agricultural soils typically have lower costs and higher production rates. Prime Farmland Soils and Soils of Statewide Importance are defined by the USDA and New York State. These are considered the most productive soils for farming.

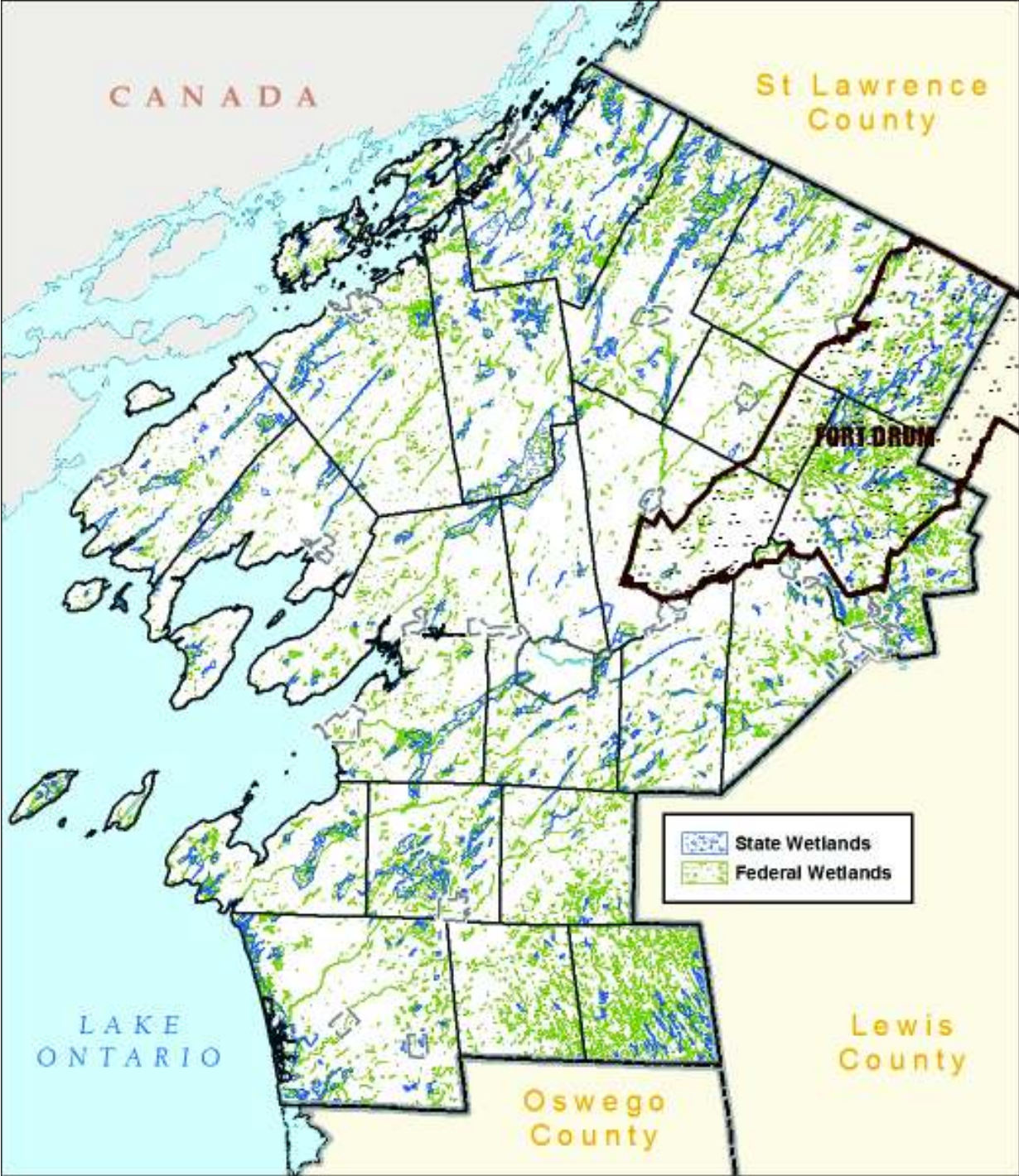
The highest concentration of contiguous prime farmland in Jefferson County is found to the South of the Black River and the City of Watertown. The ten towns in this area contain 60% of the prime farmland soils found within Jefferson County (Table 10).

The twelve towns north of the Black River contain over 65% of all the Soils of Statewide Importance, and soils classified as “Prime Farmland If Drained” in the County. The highest concentrations of soils classified as “Prime farmland if Drained” occur in the northern towns of Antwerp and Philadelphia. This is an indication that there are probably drainage problems on farmland in this area. The Wetlands Map (Map 4) also shows high concentrations of both State and Federal wetlands in the southern towns of Worth, Lorraine, and Adams. While Worth and Lorraine do not currently have as high a concentration of farmland as some other towns, they do have significant amounts of Prime and State Important Farmland soils. These wet areas may limit the possibility of expansion of farming into these towns.

Table 4 - Major Soil Types

Major Soil Types in Jefferson County			
Soil Class	Soil Characteristic	% of County Soils	Crops Soils Are Suited to Produce
I	Soils developed from clay and silt loams with medium lime soil and very high potash suppliers. Drainage from somewhat poor to very poorly drained. Some areas shallow, others with rock outcrops.	45%	Hay crops (limited to grasses), cultivated crops (limited to summer annual grains and forages).
III	Glacial till silt loams and sandy loams. Low lime soils with medium to low potash supply. Well to moderately well-drained. Moderately deep, some with underlying hardpans.	20%	All cultivated crops, legume, grass, and hays.
IV	Silts and silty clays with pockets of outwash sands and gravels with medium lime and medium potash supply. Generally, moderately drained and moderately deep with a few areas of wet or shallow soils.	15%	All cultivated crops, legume, grass, and hays.
V	Outwash sands and gravels, very acid, low lime, very low potash supply, somewhat excessively drained and droughty to very poorly drained and wet. Most of these soil types are found in Fort Drum.	10%	Not suited to cultivated crops, limited grass and hay production
O	Glacial till acid soils, low potash supply, rocky and highly variable drainage	10%	Cultivated crops limited to selected fields. Hay crops limited to selected fields

Major soil types, from 2002 Jefferson County Agricultural and Farmland Protection Plan



Map 4 - Wetlands in Jefferson County

Table 5 - High Quality Farm Soils

High Quality farm soils - percentage of land area by town: (these percentages do not take into account urban development that has occurred on farm soils)					
Town	Land Acres (non-water)	Percent Prime Farmland	Percent Prime Farmland if Drained	Percent Soils of Statewide Importance	Total Percent All Farm Soils
Adams	26,933	31%	11%	23%	65%
Alexandria	46,543	8%	9%	27%	45%
Antwerp	68,692	9%	18%	11%	38%
Brownville	37,902	9%	7%	46%	62%
Cape Vincent	36,004	11%	11%	47%	69%
Champion	28,123	29%	9%	26%	64%
Clayton	52,894	12%	8%	42%	62%
Ellisburg	54,339	35%	10%	26%	72%
Henderson	26,358	25%	12%	18%	55%
Hounsfield	31,303	19%	21%	28%	68%
LeRay	46,990	22%	12%	30%	65%
Lorraine	24,826	23%	6%	33%	63%
Lyme	35,756	2%	2%	62%	67%
Orleans	45,555	10%	12%	39%	61%
Pamelia	22,266	12%	10%	44%	66%
Philadelphia	23,894	29%	33%	16%	78%
Rodman	26,955	31%	11%	32%	74%
Rutland	28,831	36%	6%	26%	68%
Theresa	41,418	9%	11%	20%	40%
Watertown	22,880	24%	13%	30%	68%
Wilna	50,140	10%	7%	22%	39%
Worth	27,428	25%	0%	31%	56%
County Totals	806,029	18%	11%	30%	59%

Natural Characteristics

Location: Jefferson County is located in the northern part of New York State, at the east end of Lake Ontario, in what is referred to as the “North Country”. It has a total area of 1,253 square miles or 801,878 acres (Census of Agriculture).

Picturesque shoreline extends more than 150 miles along the St. Lawrence River, Lake Ontario and their offshore Islands. The St. Lawrence River and Lake Ontario make up the St. Lawrence Seaway, which connects the Great Lakes to the Atlantic Ocean.

There is a significant amount of public land in Jefferson County. The Fort Drum Military Base consists of approximately 107,000 acres of land. The New York State Department of Environmental Conservation manages nearly 16,000 acres of forest and almost 39,000 acres of

wildlife area, coastal lands and wetlands. The NYS Department of Parks and Recreation operates 13 NYS Parks in the County.

Water Resources: Jefferson County, except for some isolated areas, has adequate potable water resources. The ground water for individual use is obtained principally from wells drilled in bedrock. Surficial deposits are generally too thin to support a water table. Shallow dug wells supply some water, but usually run dry when the water table is low. In some instances, domestic water supplies are obtained from springs. Several artesian wells in the Watertown area provide an excellent source of high quality drinking water.

Water is scarce in the areas where thin clay and silt deposits overlie limestone bedrock. These areas are mainly in the towns of Cape Vincent, Lyme, Brownville, Hounsfield, Henderson, Watertown, Rutland, and Pamela. Jefferson County has numerous streams and lakes. They include the Black River, Lake Ontario, the St. Lawrence River, and the Indian River.

Lake Ontario and the St. Lawrence River receive all of the drainage waters from Jefferson County. The Black River enters the County at Carthage, flowing westward through the City of Watertown and emptying into Lake Ontario at Black River Bay in Dexter. In the southern part of the County, Lake Ontario receives drainage from a number of small streams. The largest of these are Sandy Creek, South Sandy Creek, Mill Creek, Skinner Creek, and Stony Creek.

Physiology and Geology: Jefferson County lies within three physiographic regions in the northern part of New York. They are the St. Lawrence River Basin, in the northwestern part of the County along the St. Lawrence River; the Erie-Ontario Plain, in the southwestern part of the County, east of Lake Ontario; and the Tug Hill Plateau, in the southeastern part of the County.

The St. Lawrence Valley and the Erie- Ontario Plain comprise most of the total land area in the County. Together, they are called the “lowlands”. The topography varies from nearly level to rolling and broken, commonly with steep rock ledges. Elevations range from 246 feet mean sea level (m.s.l.), near Lake Ontario and the St. Lawrence River to 650 feet m.s.l.. on the beach of glacial Lake Iroquois, south of Watertown.

The uplands are the Tug Hill Plateau. The elevations range from 650 to 700 feet m.s.l. just south of Black River near West Carthage and Champion to 1,700 feet m.s.l. east of Worth Center. The topography is rolling to hilly. Some features include gorges or gulfs where streams have cut deep narrow channels 100 to 250 feet deep in the underlying shale leaving almost perpendicular cliffs or sidewalls.

Some conspicuous features of the lowlands are the “Clay Plains”; prairie like areas of clayey soils which are almost level, and the “Pine Plains”; an area of extensive, sand delta in the Black River Valley, which is the location of part of the Fort Drum Military Reservation. In Plessis, where flat areas and ledges of almost bare sandstone are exposed, marks in the rocks

indicate a northeast - southwest movement of the glaciers. In the town of Henderson near Lake Ontario, extensive flat areas and ledges of almost bare limestone occur. Glacial till serves as one of the parent materials for the County. The glacial till varies in composition, but is generally characterized by sharp-edged stone, gravel, sand, silt, and clay. As the glaciers melted from south to north, they filled low-lying areas with water. These areas became inundated with silt and clay soils. Glacial streams carried huge amounts of sand into these glacial lakes, forming areas like Pine Plains.

Protected and Government Lands

The “Conservation Easement and Government Owned Land” Map (Map 5) shows the lands in Jefferson County that are preserved for natural resource protection purposes, or for public use, through ownership or conservation easement by a not-for-profit organization, Jefferson County, New York State agency, or Federal government agency. The majority of preserved lands are government-owned lands.

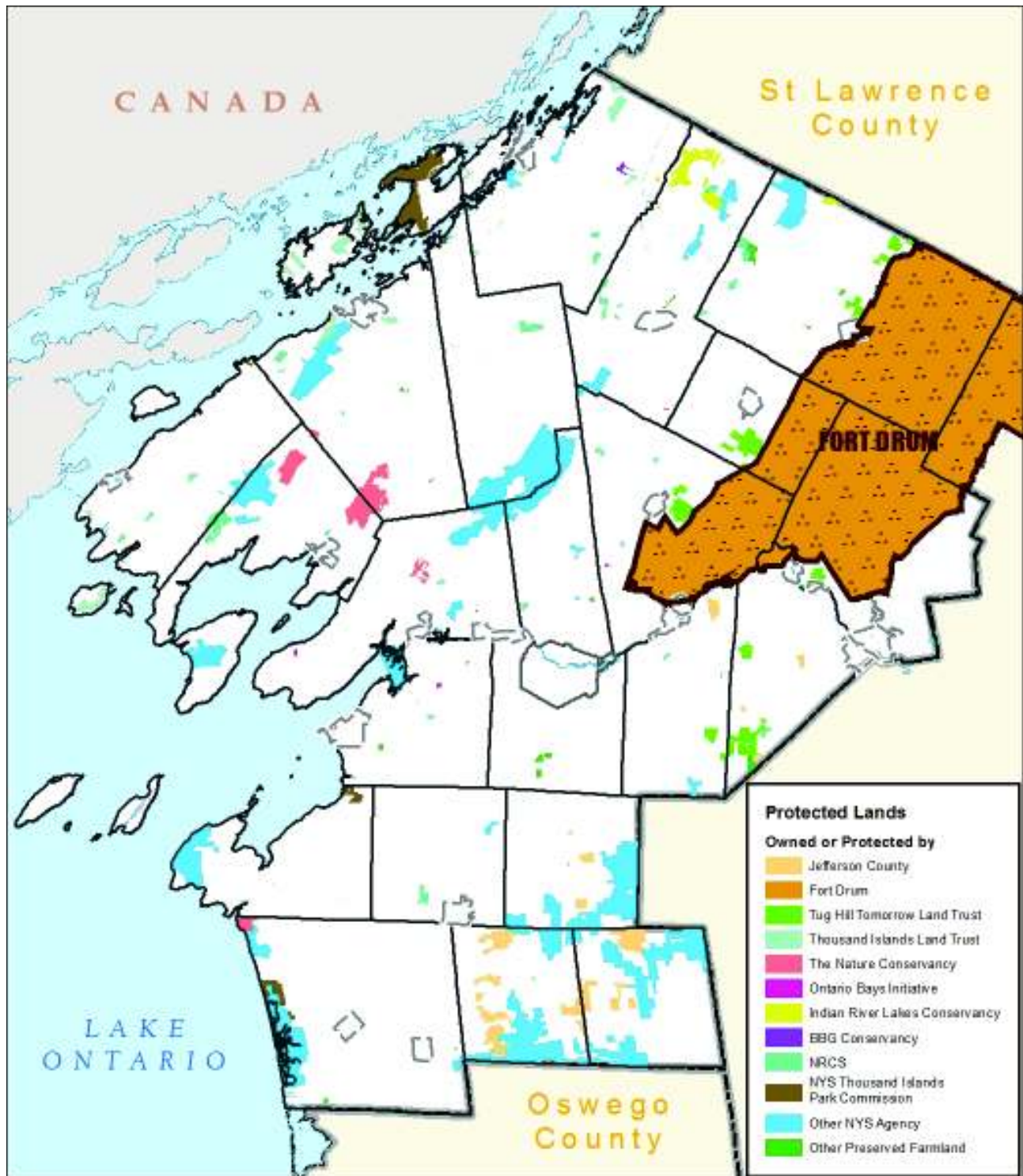
There are currently seven land trusts that work in the County to preserve lands (Table 6 and Map 5). These include:

- BBG Conservancy, Inc.
- Ducks Unlimited
- Indian River Lakes Conservancy
- The Nature Conservancy
- Ontario Bays Initiative
- Thousands Islands Land Trust
- Tug Hill Tomorrow Land Trust

The largest land trust working in Jefferson County on agricultural land preservation is the Tug Hill Tomorrow Land Trust (THTLT). Like all land trusts in the County, THTLT is a non-profit, non-governmental organization working to protect the Tug Hill area’s working farm and forest lands, its wild lands, and its natural and cultural heritage, for the benefit of present and future generations. Together with Ducks Unlimited, THTLT has been a significant partner in carrying out the Army Compatible Use Buffer (ACUB) at Fort Drum. The scope of THTLT is oriented to the ACUB program although it works throughout a four-county region.

Since 2009, the ACUB program has been working to establish buffer areas of farmland and natural lands around Fort Drum to limit the effects of encroachment on the base so as to maximize areas inside the installation that can be used for training and support. ACUB is listed as one of 137 priority open space conservation projects in the 2014 New York State Open Space Plan.

Working with the U. S. Army through the Army Compatible Use Buffer (ACUB) program, and using grants from New York State, 20 easements are part of the ACUB program covering 4,705 acres of land. Most of the land included in the easements is working land of small, family farms.



Map 5 - Protected lands in Jefferson County

The largest conservation land owner in Jefferson County is New York State, with nearly 45,000 acres dedicated to natural resource protection, wildlife preservation, public access, and recreational activities. Jefferson County owns 5,472 acres of forest land in the southeastern portion of the county.

The 107,000-acre Fort Drum military base is by far, the largest area of contiguous undeveloped land in Jefferson County. While not considered primarily conservation land, the base has been recognized for its efforts to preserve some of the unique natural and wildlife resources found within its borders and is the largest Fish & Wildlife Management Act (FWMA) Cooperator Area in New York State. To ensure sound natural resources management, an Integrated Natural Resources Management Plan (INRMP) was developed in partnership with NYS DEC and the U.S. Fish and Wildlife Service, and implemented in 2001.

Table 6 - Conservation and Public Access Lands

Conservation and Public Access lands in Jefferson County			
Organization	Own or Easement	Acres of Land	Description
Tug Hill Tomorrow Land Trust	Conservation Easements	4,697 acres	48 parcels primarily farmland, adjacent to, or near Fort Drum
Thousand Islands Land Trust	Own	2,954 acres	95 parcels within the towns bordering the Saint Lawrence River
The Nature Conservancy	Own	3,568	27 parcels in Lyme, Clayton, Brownville, and Ellisburg
Ontario Bays Initiative	Own	77 acres	5 parcels in Brownville, LeRay, and Hounsfield
Indian River Lakes Conservancy	Own	1,706 acres	14 parcels near the lakes and rivers in Theresa, Antwerp, and Alexandria
B. B. G Conservancy	Own	85.6 acres	1 parcel in Alexandria
Natural Resource Conservation Service	Permanent and term easements	3,054 acres	Wetlands Reserve Program, throughout the county, but predominantly in the Northern towns
NYS Thousand Islands Park Commission	Own	3,782 acres	17 parcels along the St. Lawrence River, Lake Ontario, and bays
Other NYS Agencies	Owned by OPRHP, DEC, and other state agencies	41,070 acres	116 parcels throughout the county, including campgrounds, fishing access, State forests, recreational facilities, and wildlife preserve lands
Jefferson County	Own	5,472 acres	Forest land in the 5 towns south and east of the City of Watertown

Priority Farmlands and New York State Priority Farmland Criteria

Development of this county agricultural and farmland protection plan is guided through New York State’s Circular 1500. This document outlines the major components to be included in such a plan. One of those requirements is for the County to evaluate and identify critical farmlands proposed to be protected.¹ Identification of priority farmlands is of further importance because landowners wishing to participate in the New York State Farmland Protection Program must now show how their property is consistent with the location of any land or areas proposed to be protected in a county’s or a municipality’s agricultural and farmland protection plan.

The New York State Farmland Protection Implementation Project is governed by the most recent, Request for Proposals for State Assistance for Farmland Protection Implementation Projects. This is the source of funding for State-sponsored purchase of development rights (PDR) and term easement monies. This funding source now requires a strong connection to be proven between any farmland proposed to be protected using state funds with farmland identified as priority agricultural areas in the county’s Agricultural and Farmland Protection Plan.

The current Round 13 RFP states: “To be eligible for funding under this RFP, the location of each proposed project must, at a minimum, be consistent with the location of any land or areas proposed to be protected in a county’s or a municipality’s agricultural and farmland protection plan.” Further, on the Conservation Easement Proposal Rating Sheet, one of the criteria to be measured is: “Illustrate (in a mapped or other visual form) where the subject property is located within a portion of one or more local jurisdictional areas designated as a priority for protection.”

Identification of important farmlands is important not only to support landowners in Jefferson County interested in participating in the State PDR program, but it is essential information upon which many important projects and planning decisions can be made.

Jefferson County conducted a thorough process to define priority farmlands, and to map these areas to aid in future planning.

Step 1: Identify Current farmland

A comprehensive geographic database of farmed parcels was assembled from a variety of sources. Beginning with tax parcels with agricultural property class codes, additional farmland was identified through landowners’ use of agricultural land value assessments, and their property’s location in agricultural districts. Additional verification was performed using

¹ The state has elevated the importance of county-level priority farmland identification because NYSDAM provides funding to farmland protection projects that are consistent with local agricultural and farmland protection plans.

recent aerial photo interpretation. The results of this process are shown on the Agricultural Lands Map (see Map 6).

Step 2: Evaluate the 2008 Jefferson County PDR program framework criteria

In 2008, Jefferson County developed a Purchase of Development Rights program framework that included a system for prioritizing farmland for protection. The original effort, led by the Agricultural and Farmland Protection Board, and a working group of stakeholders from numerous government agencies, not for profit organizations, and private individuals, determined that the following criteria were those that defined priority farmlands in Jefferson County.

- Quality of Soils
- Percent of farm available for agricultural production
- Level of demonstrated farm management
- Public road frontage
- Proximity to public water
- Proximity to public sewer
- Proximity to a public drinking water source
- Stream and water frontage
- Other significant natural resources (wetlands and public parks)
- Presence of buffers around significant natural resources
- Surrounding protected farmland
- Surrounding non-protected farmland
- Presence in an Ag District
- Number of acres to be protected
- Number of times applied for the PDR program

This working group felt these criteria were not equal in weight however, as some were deemed to be more important than others in determining where priority farmlands are. Therefore, each criteria was given a ranking. Application of these criteria and their rankings result in some farmed parcels scoring higher and thus in the context of a PDR program, should be given preference when multiple applications are received for PDR funds.

JEFFERSON COUNTY FARMLAND PROTECTION PROGRAM
2008 Ranking Criteria: Score Sheet

RANKING CRITERIA	Measurable	Thresholds	Weight	MAX Weight
FARMLAND VIABILITY (SUBJECT PROPERTY)	Quality of Soils	Based on RPS Agricultural Assessed Value of Soil Associations	1-40	40
	% Total Farm Available for Ag Production	Greater than 90%	10	10
		75-90%	5	
		<75%	0	
Level of Demonstrated Farm Management	Owner participates in farm management programs, BMPs	5	5	
	Owner has not invested in farm, does not participate in programs	0		
DEVELOPMENT PRESSURE	Public Road Frontage	Greater than 20 LF/acre	10	10
		15 – 20 L.F/acre	7	
		Between 10-15 L.F/acre	5	
		< 10 L.F/acre	0	
	Proximity to Public Water	Located within ¼ mile	10	10
		Located between ¼ - ½ mile	7	
		Located between ½ - 1 mile	5	
		Located > 1 mile	0	
	Proximity to Public Sewer	Located within ¼ mile	5	5
		Located between ¼ - ½ mile	3	
Located between ½ - 1 mile		2		
Located > 1 mile		0		
ENVIRONMENTAL IMPACT	Proximity to Public Drinking Water Source	Located within watershed of public drinking water source	10	10
	Stream and Water Frontage	> 5000 L.F stream frontage, > 200 L.F. lake frontage	5	5
	Other Significant Natural Resources	< 5000 L.F. stream frontage; wetlands (5+ acres); proximity to public parkland	5	5
	Buffers Significant Natural Resource	e.g. Maintenance of vegetative buffer strips or setbacks; buffers parkland; etc.	5	5
FARMLAND VIABILITY (EXTERNAL FACTORS)	Buffers Protected Farmland	Within ½ mile of protected farmland	20	20
		Within 2 miles of protected farmland	15	
		Within 5 miles of protected farmland	10	
	Percentage of farmland within 2-mile radius	Greater than 75%	30	30
		50 – 75% pts	5-30 pts	
Located within an Ag District	Farm is located within a certified agricultural district	5	5	
ACREAGE IMPACT	Number of acres to be protected	Greater than 500	10	10
		200-500	7	
		Between 50-200	5	
		Less than 50 acres	0	
PROPERTY OWNER COMMITMENT	Number of times applied to program	More than once	5	5
		First time	0	0

Figure 3 - Jefferson County 2008 Ranking Criteria Score Sheet

The County PDR criteria were compared to the requirements in New York State [Ag and Markets Circular 1500](#), and the [Conservation Easement Proposal Rating Sheet](#). These documents include general criteria for measuring and assessing the importance of farmland. This comparison, shown in Table 7 below, provides an evaluation of the County PDR criteria to determine whether they are comprehensive, covering all of the elements described in Circular 1500 and the Proposal Rating Sheet, or if adjustments should be made. These general criteria include the following measurable elements for each farmland parcel:

- Value to the agricultural economy of the county
- Level of conversion pressure
- Consequences of possible conversion

- Open space value
- Serve as a buffer for a significant natural public resource containing important ecosystems or habitat characteristics
- Long-term potential for the agricultural land to remain in viable agricultural production
- Level of commitment for farmland protection demonstrated by the local project partners
- Cost of the proposal in relation to the acreage to be protected

Table 7 - New York State and Jefferson County PDR Criteria

Comparison of State and Jefferson County PDR Criteria	
State Criteria Category	Jefferson County 2008 PDR Framework Measurable Criteria
Value to the agricultural economy of the county	Quality of Soils % Total Farm Available for Ag Production
Level of conversion pressure	Public Road Frontage Proximity to Public Water Proximity to Public Sewer
Consequences of possible conversion	Buffers Protected Farmland Percentage of farmland within 2-mile radius Located within an Ag District
Open space value	Other Significant Natural Resources (The following criteria could fit here, too, but I would recommend adding something like: Percentage of preserved open space within a 2-mile radius)
Serve as a buffer for a significant natural public resource containing important ecosystem or habitat characteristics	Proximity to Public Drinking Water Source Stream and Water Frontage Buffers Significant Natural Resource
Long-term potential for the agricultural land to remain in viable agricultural production	Level of Demonstrated Farm Management
Level of commitment for farmland protection demonstrated by the local project partners	Number of times applied to the program
Cost of the proposal in relation to the acreage to be protected	Number of acres to be protected

Step 3: Make adjustments to the list of criteria, and the weights given to each criteria

Based on the comparison between the State and County criteria as well as through evaluation of the 2008 PDR Criteria, adjustments were made to the list of criteria and ranking scores. Specifically:

- Quality of Soils - Based on RPS Ag Assessed Value of Soil Associations
 - The method to measure this should be defined more specifically. The score should be based on the percentage of 1a-5a soils on the parcel. If the parcel is 100% covered by these soils, it should get a score of 40. If it is 50% covered by these soils, it should get a score of 20.
- % Total Farm Available for Ag Production
 - The amount of open land available for planting of crops should be used.
- Level of Demonstrated Farm Management
 - Although the data to use this criterion for mapping is not available, it is an important criterion to include in a PDR program. It should include participation by the farmer in one or more farm management or technical assistance programs.
 - Although the mineral soils group was used as a measure of farmland value, the committee also felt soils quality relates directly to the long term viability of a farm. Therefore, an additional measurement using Prime Farmland and Soils of Statewide Importance should be added to the list of criteria.
- Public Road Frontage
 - Road frontage is a popular method to measure development pressure, however, all roads are not created equal. It was decided that State and County roads provide easier access to land, and therefore result in higher levels of development pressure. Local road frontage should not be included in this criteria.
- Proximity to Public Water
 - This is a good measure of conversion pressure, and the weight for this criteria should be increased.
- Proximity to Public Sewer
 - This is a good measure of conversion pressure, and the weight for this criteria should be increased.
- Proximity to Public Drinking Water Source - Located within watershed of public drinking water source
 - Public Drinking Water source should be defined in this context as a municipal water supply. The watersheds should be defined as any areas surrounding these water supplies identified by the municipality as needing protection.
- Stream and Water Frontage
 - A good measurement for providing a natural resource buffer.
- Other Significant Natural Resources
 - Measuring wetlands needed some clarification. The criteria used should be - If the parcel contains 5 acres or more of wetland.

- Buffers Significant Natural Resource - relating to open space value
 - Buffers parkland, etc. should be more specifically defined as - The percentage of preserved or public open space within a 2-mile radius.
 - Parkland should include all preserved lands, including County owned forest lands, properties owned or preserved by a land trust, and lands enrolled in the Conservation Reserve Program.
- Buffers Significant Natural Resource - relating to resource protection
 - Maintaining vegetative buffers is a good environmental practice, and parcels using them should be scored higher than those without. However, the data is not available to map them. Although they are included as a score for PDR evaluation, they are not included as a criterion for mapping the farmland priority areas.
- Buffers Protected Farmland
 - This is a good measurement, but the 5-mile radius is a bit large. It should be reduced to a ½ mile radius.
- Percentage of farmland within 2-mile radius
 - This is a good measurement. But the weight should be reduced in relation to development pressure.
- Located within an Ag District
 - This is a good and obvious measure.
- Number of acres to be protected
 - This is a good and obvious measure. The larger the parcel, or the larger the total area of a farm operation, the bigger the benefit is in relation to the effort and expense of protection.
- Level of commitment - Number of times applied to program
 - It was decided that this is not the best measurement to use, and doesn't reflect the measurement of commitment described in the Ag and Markets documents.
 - The Round 13 Proposal Rating Sheet evaluates "Evidence of local support..." and asks for documentation within policy documents of other local partners. This score should include criteria that measure the commitment of the municipality and any sponsoring organizations toward farmland preservation. Elements such as: if the municipality has a Right to Farm Law, the parcel has been identified for preservation in any other plans, or the parcel is in a farm friendly zoning district.

Step 4: Delineate and map the agricultural priority areas

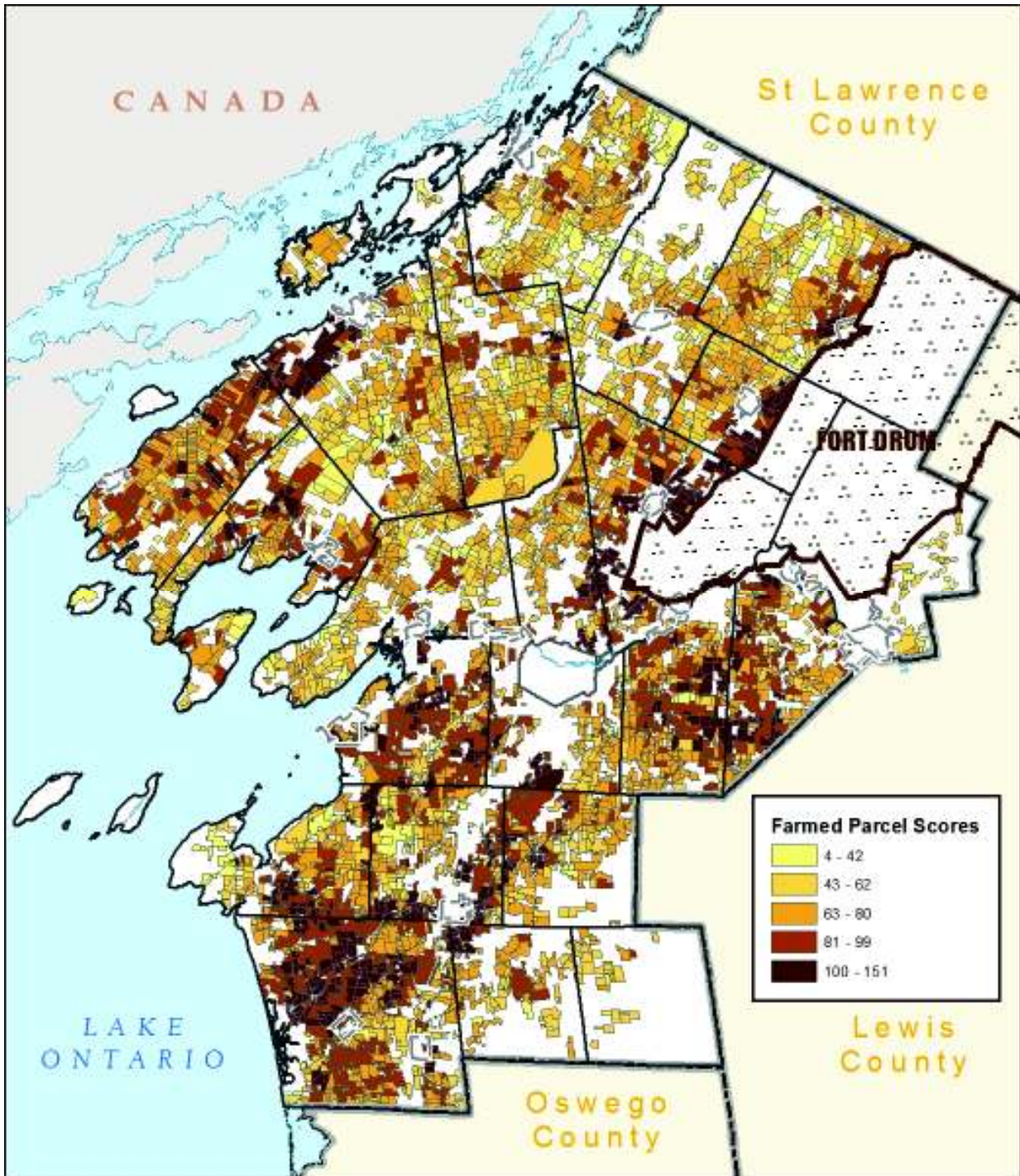
The final list of criteria and scores are applied to the identified farmland parcels, added together, and the parcels mapped with their score. Table 8 describes the new scores after the adjustments agreed upon by the committee.

Table 8 - Adjusted Jefferson County PDR Criteria

Adjusted Jefferson County PDR Criteria			
Category	Criteria	Measurement	Score Range
Value to the agricultural economy of the county	Quality of Soils	Based on the percentage of mineral soils groups 1a-5a on the parcel	1-40 (100% coverage = 40, 50% coverage = 20, etc.)
	% Total Farm Available for Ag Production	Based on the percentage of open land available for crops	75-90% = 5 >90% = 10
Level of conversion pressure	Public Road Frontage	Based on the linear feet of State or County Road Frontage per acre	>20 linear feet/acre = 10 15-20 feet/acre = 7 10-15 feet/acre = 5
	Proximity to Public Water	Based on distance from a municipal water district or water main	< ¼ mile = 10 ¼ - ½ mile = 7 ½ - 1 mile = 5
	Proximity to Public Sewer	Based on distance from a municipal water district or water main	< ¼ mile = 10 ¼ - ½ mile = 7 ½ - 1 mile = 5
Consequences of possible conversion	Buffers Protected Farmland	Any adjacent protected farmland	Any protected farmland within ½ mile = 20
	Buffers other farmland	Based on percentage of farmland within a 2-mile area	0-10 (100% surrounding = 10, 50% surrounding = 5, etc.)
	Located within an Ag District	Farm is located in a certified agricultural district	Yes = 5
Open space value	Percentage of Public Parkland and other preserved open space within a 2-mile radius	Based on percentage of Parkland and preserved open space within a 2-mile area	0-10 (100% surrounding = 10, 50% surrounding = 5, etc.)

Adjusted Jefferson County PDR Criteria			
Category	Criteria	Measurement	Score Range
Serve as a buffer for a significant natural public resource containing important ecosystem or habitat characteristics	Proximity to Public Drinking Water Source	Based on distance from a municipal water supply and any adjacent protection area	Located within a municipal drinking water protection area = 10
	Stream or water frontage	Based on linear feet of stream bank or open water edge	> 5,000 feet of stream frontage or 200 feet of water = 5
	Maintenance of vegetative buffers	Based on existence of such buffers along stream banks, water, and wetlands	Yes = 5
	Wetlands	Based on amount of wetland on the parcel	5 acres or more of any wetland = 5
Long-term potential for the agricultural land to remain in viable agricultural production	Level of Demonstrated Farm Management	Participation in one or more County sponsored technical assistance or farm management programs	Yes = 5
	Percentage of Prime Farmland and Soils of Statewide Importance (NOT including Prime Farmland if drained)	Based on the percentage of Prime Farmland or Soils of Statewide Importance found on the parcel	1-40 (100% coverage = 40, 50% coverage = 20, etc.)
Level of commitment for farmland protection demonstrated by the local project partners	Municipality has adopted a Right to Farm Law	The municipality has a RTF Law	Yes = 5
	The parcel is in a farm-friendly zoning district	The parcel is in a farm-friendly zoning district	Yes = 5
	The parcel has been identified for, or is in an area identified for, preservation in another farm or open space plan	The parcel or area has been identified in another State or local plan	Yes = 5
Cost of the proposal in relation to the acreage to be protected	Number of acres to be protected	Based on the size of the parcel, or total area to be protected	> 500 acres = 10 200-500 acres = 7 50-200 acres = 5

Using these adjusted criteria and the farmed parcels identified in this plan, each farmed parcel was given a score, and mapped. The results of this evaluation are shown in the following map.

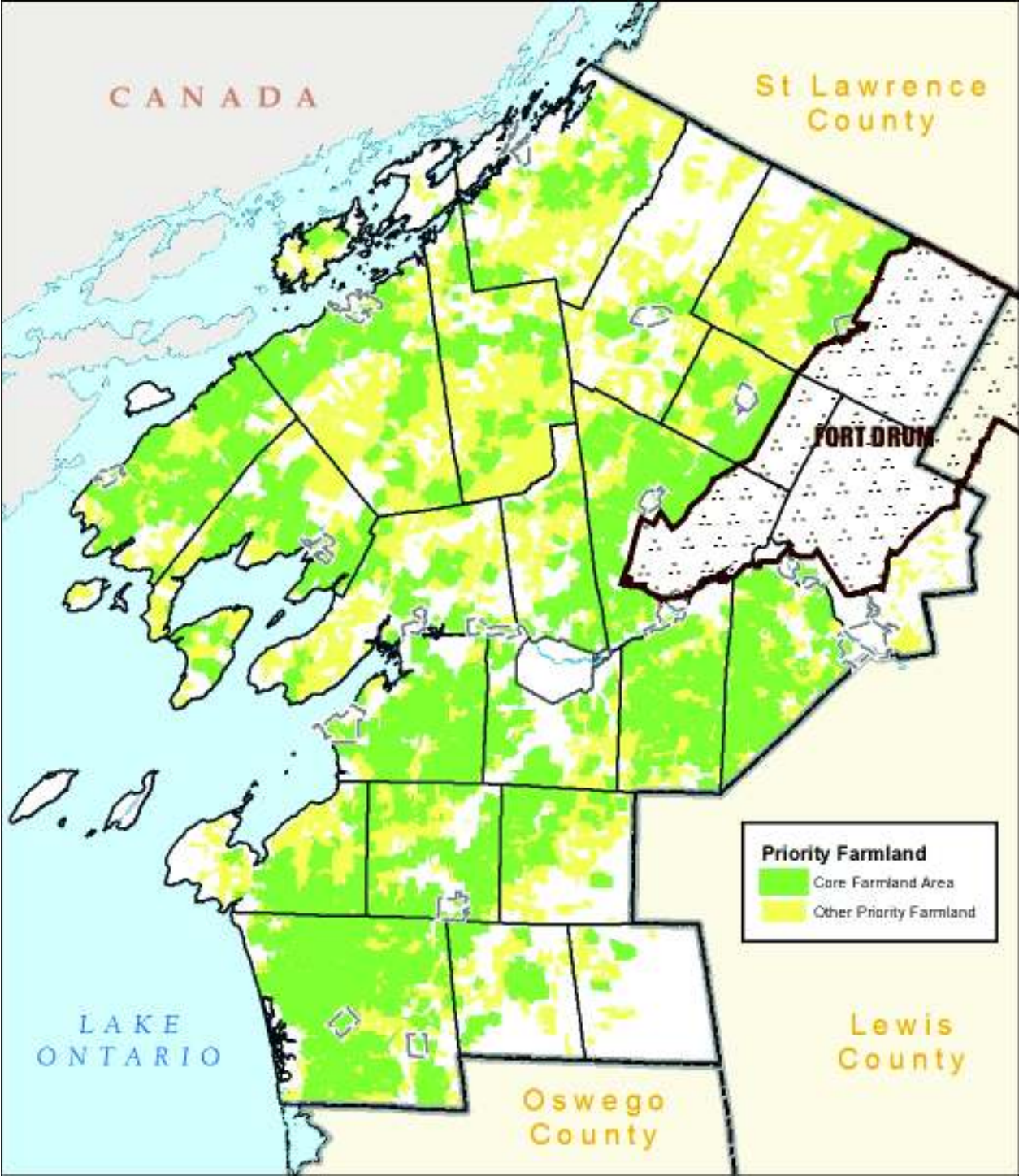


Map 6 - Agricultural Lands Map

While all of the farmland identified in this plan should be considered a priority, as far as preservation efforts are concerned, there is a select, core area that is of special concern. The following map shows the Priority Farmland Area described in this plan, and a special Core Area that the committee considers critical to the continued economic vitality of the agricultural industry in Jefferson County. These core areas, symbolized in green on the following map, deserve extra attention beyond preservation efforts, especially when local or regional projects will have a significant impact on their continuation as farmland.

The farmed parcel inventory and some of the data used to calculate individual scores will change from year to year. Given the fluid nature of this data, we feel it is important to note that:

The Priority Agricultural Areas Map should not be interpreted to mean other areas not included do not have viable farmland that deserves protection. Due to the dynamic nature of some of the data used to produce this map, it will change over time. For example, farmed parcels can be added to the agricultural districts during the annual enrollment period, and the 8-year review. As farmland conversion and farmland preservation occurs, development pressure will increase in some areas, while decreasing in others. This map and the scores applied to the individual farm parcels should be updated as new information becomes available.



Map 7 - Priority Farmland Area Map (Core areas in green and other farmland areas in yellow)

Agriculture and Local Plans/Regulations

Why Review Zoning and Plans?

A comprehensive plan is the foundation for local land use regulation and is important because it also establishes the policies, vision, and strategies desired by a community. Land use regulations, including zoning, flow from the plan to meet those community objectives.

Both can affect agriculture in many ways. Zoning can create opportunities or place barriers to farming practices. One of the goals of the Agricultural and Farmland Protection Plan is to identify barriers to agricultural viability including those related to land use regulations and make recommendations concerning farm friendly zoning.

Certain regulations can place challenges and barriers towards establishing or expanding a farm operation. Zoning laws sometimes regulate where farms can operate and at what intensity farmland could be developed for other, non-farm uses. Zoning identifies whether a farm use is permitted as of right, needs no further planning board review, or if it requires a more involved review process such as a site plan or special use permit approval. Some zoning laws go beyond these requirements and regulate setbacks, or height. Others establish minimum acres required in order to be considered a farm or regulate the number of animals a farmer could have.

In some areas, choices made by local communities in their zoning can affect land values, make farm expansion or start-ups difficult, cause fragmentation of viable farmland, and hasten conversion to other uses. When local laws restrict agriculture, a sense of impermanence for farming can develop which in turn, can foster disinvestment in farm operations, and ultimately lead to sale of the land for development. This effect, coupled with non-farm growth pressures such as residential and commercial development, can make selling land for non-farm development appealing. As such, it is an important aspect of agriculture and farmland protection to understand the regulatory climate in the County.

A review of local comprehensive plans and zoning laws was done by the County Planning Department to gauge the level of support given to agriculture at the local town-level and to identify opportunities where regulations could be improved to promote farming land uses. This review included 22 towns including those that have land both in and out of New York State Agricultural Districts.

The results of this review are translated into specific recommendations about changes that can be made locally to improve the farm-friendliness of plans and zoning laws. These recommendations are also informed by guidance offered by the New York State Department of Agriculture and Markets through their “Guidelines of Review of Local Zoning and Planning Laws” and “Local Laws and Agricultural Districts: Guidance for Local Governments and Farmers.

The results are summarized below (Table 9 and 10) to give an overall picture of ‘farm-friendliness’ of municipalities in the County. Each table includes the farm-friendly criteria used in the review.

Summary of the Comprehensive Plan Review

Table 9 - Farm Friendliness of Comprehensive Plans

Comprehensive Plan Farm-Friendly Criteria	Yes - Total # Towns USING this Farm Friendly Practice Wholly or Partly	No = Total # Towns NOT using this Farm Friendly Practice or Does Not Address it	% of all Towns USING This Farm Friendly Practice
Does the plan have a section on agriculture?	10	4	66.67
Does the plan include maps of agricultural lands, important farmland soils, agricultural districts, etc.?	9	5	60.00
Does it explore the role of agriculture in the community? I.e. did a survey include questions about agriculture? Was there anything in workshops about it?	4	10	26.67
Does the vision statement or goals address agriculture in any way? Is there any visible demonstration of the value of agriculture to the community in the plan?	14	0	93.33
Does the plan consider agriculture as an important resource in Town?	14	0	93.33
Does the plan recognize or reference a local or County Agricultural and farmland protection plan?	0	14	0.00
Does the plan include any data on farms and farmland? Acreage? Income or occupations from farming or other demographic data?	7	7	46.67
Does the plan establish policies towards farmland and farming?	8	6	53.33
Does it identify the value of farmland and farms to the community?	7	7	46.67
Does it offer any recommended actions related to farming or farmland or ways to preserve or enhance farming?	7	7	46.67
Does the plan establish a policy and/or future actions for the agricultural use of open space that may be created in a conservation subdivision or clustering?	5	9	33.33
Does the plan discuss NYS agricultural districts and how the town can be supportive of that?	7	7	46.67
Does it consider farmland a natural resource and encourage easements or other protections of that land? Is there a policy discussed for PDR, LDR or TDR?	5	9	33.33
Is agriculture a consideration of where growth does or does not take place?	7	7	46.67
TOTALS	104	92	

Note - Seven towns in the County either did not have a comprehensive plan, or plans were developed prior to 1980 and were not available to County planning staff for review.

For the most part, those towns that were included in the review do have comprehensive plans that address agriculture in some way. This is shown primarily by the fact that 93% of the towns have plans establishing a long-term vision that includes agriculture and that identify agriculture as an important resource to the community. About 2/3 of the town plans have a section devoted to agriculture and includes agriculturally related maps. About 1/2 establish policies towards farms and farmland. A general comparison of 'scores' in the table above shows that overall, slightly more farm-friendly planning practices are incorporated locally than not, but the results are mixed.

The farm-friendly criteria most often excluded from local planning where less than 1/3 of the towns use the practice are:

- Exploration of the role of agriculture in the community through public input such as through the survey or workshop.
- Recognition or reference of the County Agricultural and farmland protection plan.
- Consideration of farmland as a natural resource and encouragement of use of easements or other protections of those land. Establishment of policies such as PDR, LDR or TDR.
- Establishment of a policy and/or future actions for the agricultural use of open space that may be created in a conservation subdivision or clustering?

The other criteria in the table above that have less than 50% of the Towns using them relate to more detailed planning for farmland protection and incorporation of specific recommendations to protect farmlands and promote agriculture.

Overall, long-range planning via comprehensive plans in Jefferson County shows much support for agriculture and this is an excellent starting place. However, agriculture is treated differently in different locations. Some towns don't emphasize agriculture very much but place value on farms for their contribution to desired rural character. The plans generally lack detail on what strategies, programs, and policies are desired to reach the goals established in the vision statements.

Summary of the Zoning Review

Table 10 - Farm Friendliness of Zoning Laws

Zoning Farm-Friendly Criteria	Yes - Total # Towns USING this Farm Friendly Practice Wholly or Partly	No = Total # Towns NOT using this Farm Friendly Practice or Does Not Address it	% of all Towns USING This Farm Friendly Practice
Does the regulation's purpose statement include a discussion of agriculture, or promoting or preserving agriculture specifically?	11	11	50.0
Does zoning allow agriculture as a permitted use by right in any district?	20	1	90.9
Zoning does not prohibit agriculture in any district other than hamlet centers or commercial areas?	15	7	68.2
Zoning does require special use permits for agriculture or ag-related uses in any district?	14	8	63.6
No higher density or commercial growth are allowed in core farm areas or where a NYS Ag District exists?	17	4	77.3
Does the zoning establish a local agricultural zoning district, ag overlay district, or special use district for agriculture?	18	3	81.8
Does the zoning allow farms to have more than one business or offer flexibility to accommodate the needs of agricultural businesses?	12	9	54.5
Are buffer zones between farmland and residential uses required for new construction or subdivision?	7	15	31.8
Are innovative development patterns that preserve farmland encouraged, allowed, or mandated (conservation subdivision, clustering, TDR)?	9	13	40.9
Are off-site or on-site signs allowed to attract and direct people to farm stands?	19	3	86.4
Are farm stands, farm retail markets, agri-tourist businesses, breweries, etc. allowed?	19	3	86.4
Are farm processing facilities such as community kitchens, slaughterhouse, etc. allowed?	15	7	68.2
Are farm stands limited to selling just products from that one farm?	11	11	50.0
Farm stands do not need a site plan review or special use permit.	18	3	81.8
Does zoning allow for accessory uses such as greenhouses, barns, garages, equipment storage etc. permitted as of right?	18	3	81.8

Zoning Farm-Friendly Criteria	Yes - Total # Towns USING this Farm Friendly Practice Wholly or Partly	No = Total # Towns NOT using this Farm Friendly Practice or Does Not Address it	% of all Towns USING This Farm Friendly Practice
Do application requirements include asking for submittal of information or maps about farming that might be taking place on or near the project parcel? Whether it is in an ag district? What farming activities take place on or near the site? Whether prime farmland soils are present?	2	20	9.1
Do standards exist that require the PB or ZBA to evaluate impacts of a project on agriculture?	1	20	4.5
Do any design standards exist to direct building envelopes to areas on a parcel that would still allow farming to occur on remaining open spaces?	0	22	0.0
Does the regulation define agriculture, agricultural structure, farm worker housing, agri-tourism, agri-business?	13	7	59.1
Are farm-related definitions broad and flexible and not confined to a certain number of acres or income earned?	20	0	90.9
Are non-traditional or retail based farm businesses allowed in a district or ag zoned district. For example, can a farmer set up a brewery on site and sell products onsite?	11	9	50.0
Is an agricultural data statement as per AML 25-aa required as part of an application for site plan, subdivision, special use or other zoning?	7	15	31.8
Does the community require placement of an ag disclosure statement on plans or plats when development takes place in a NY certified ag district?	0	22	0.0
No ag-related uses required to get a special use permit or go through site plan review?	11	9	50.0
Does the regulation define and allow for farm worker housing? Are mobile homes allowed as farm worker housing?	4	18	18.2
Are silos and other farm structures exempt from height requirements?	9	4	40.9
Are personal wind mills and solar panels allowed for farms? With permits or permitted as of right?	3	19	13.6
Zoning does not regulate farms by acreage or number of animals	17	2	77.3
TOTALS	321	268	

Of the 22 towns, eight incorporated a majority of the farm-friendly practices. Most incorporated some of the practices, however. A disconnect between adopted plans and laws is shown: The towns that have the most supportive comprehensive plans do not have the same level of support in their zoning law.

Table 10 illustrates the farm-friendly practices that were incorporated into local zoning laws most frequently in the majority of towns are:

- Many agricultural operations are allowed in most places as a permitted by right use (no planning board review needed).
- Towns do not direct more growth or higher density in core agricultural areas.
- Local agricultural districts or special ag-related districts are established to address farming.
- Off-site signs allowed in many places to advertise farm uses.
- Farm stands and farm retail uses are allowed, often without requiring site plan or special use permits.
- Zoning allows for agricultural-related accessory uses.
- Definitions of agriculture are broad and flexible so many different types of agriculture can be included.
- Towns do not usually regulate farms by acreage or number of animals.

Table 10 also illustrates those practices that were not incorporated very frequently. These include:

- Use of buffer areas between non-agricultural uses and farms.
- Use of techniques such as conservation subdivisions, transfer of development rights, or other innovative land use practices that allow development as well as preservation of open space.
- Requiring development applications to include information about on-site and adjacent agricultural activities.
- Specific requirement that the reviewing board evaluate impacts of a development proposal on agriculture. This is especially important for both SEQR and when a proposal is within a NYS Agricultural District.
- Lack of design standards directing buildings to be placed in a manner that protects or allows farming to take place.
- Lack of incorporation of use of the NYS required Agricultural Data Statement.
- Lack of using the agricultural disclosure notice when a project is in a NYS Agricultural District to inform future landowners that agricultural activities are taking place nearby.

- Lack of defining farm worker housing and offering a wide variety of housing options for farm workers such as mobile homes.
- Lack of addressing farm use of wind mills and solar panels.

The remaining farm-friendly practices showed mixed implementation by towns - where about half the towns use them and half do not.

From these results, a variety of general zoning and planning related recommendations are made to improve the farm friendliness of towns in Jefferson County (See Recommendation Section).

Right to Farm Law in Jefferson County

Jefferson County has adopted a local law recognizing the right to farm. It includes a legislative findings and intent that recognizes agriculture as an important industry in the County that contributes to the economy, maintains open space, enhances the quality of life, promotes environmental quality, and places minimal demands on services provided by local governments. It also recognizes that when non-agricultural land uses extend into agricultural areas, agricultural operations may become threatened due to high land values and nuisance law suits. The law is designed to help maintain and enhance the agricultural industry of the County, to permit the continuation of acceptable agricultural practices, to protect the existence and continued operation of farms, to encourage the initiation and expansion of agricultural businesses, and to promote new ways to resolve disputes concerning agricultural practices and farm operations. It accomplishes this by limiting the circumstances under which farming may be deemed to be a nuisance and to allow agricultural practices inherent to and necessary for the business of farming to proceed and be undertaken free of unreasonable and unwarranted interference or restriction. It also establishes a voluntary mediation program and includes notification of real estate buyers and neighbors through use of a disclosure notice.

Farmland Conversion Pressure

Given the critical role agriculture plays in the economy and quality of life in Jefferson County, loss of farmland is of great concern. Farmland can be lost when it is converted to urban uses, abandoned, or converted to protected, but non-farmed open spaces. In Jefferson County, conversion to urban and suburban uses (commercial and residential) is the primary concern. There is little evidence that much farmland has been recently abandoned. Farmland conversions for other open space uses are not common although there is concern that farmland converted to restrictive wildlife habitat preserve lands under federal programs may become an issue in the future.

However, a significant issue in Jefferson County involves concerns about increasing land prices and competition for farmland. That competition is both between farmers for farmland, and with others for conversion to residential or commercial use. Farmers, especially dairy

farmers, are increasingly concerned about the availability of land to expand operations and manage manure. Competition for land between both farmers and non-farmers, and increasing land costs are other concerns.

Conversion pressure on farmland can be measured in several direct and indirect ways:

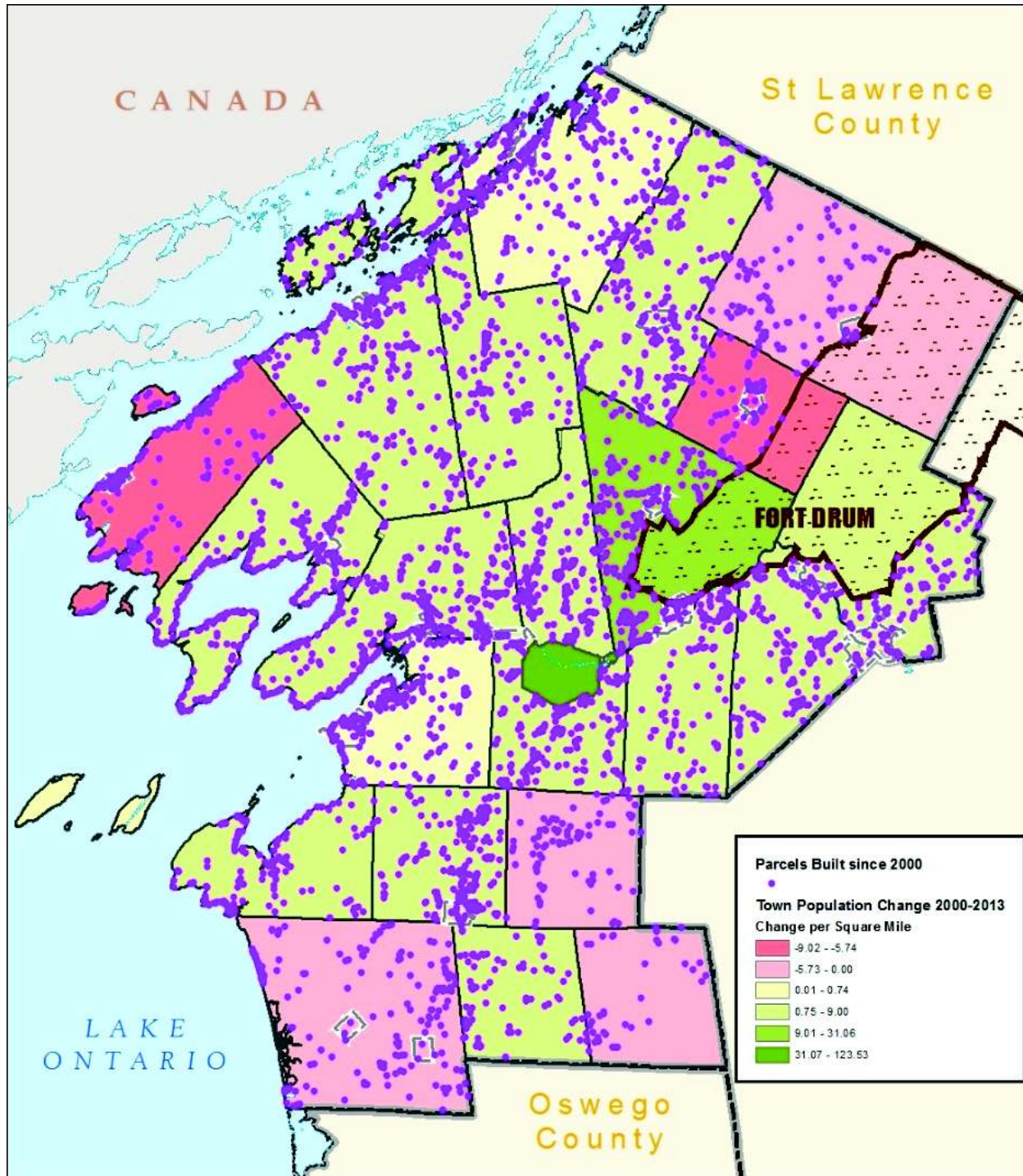
- Population Change - Where and how much is taking place?
- Housing Changes - Where and how much additional housing is being built?
- Infrastructure (Water, Sewer, Roads) Changes - Where is infrastructure located in relation to population and housing growth and farmland?
- Farmland Costs - are land prices increasing so that it becomes more profitable to sell land to non-farm users?
- Critical Mass of Farmland - where is the critical mass of priority farmland in Jefferson County and are these areas under conversion pressure?

Population changes

Since 2000, the County as a whole grew four percent in population, from 111,738 to 116,229 - about 4,500 people. The US Census population estimate for 2013 for the County was 118, 073 people - or about a 5.6% population increase since 2000. For an upstate New York County, that is a relatively high rate of increase.

At the town level, some towns lost population, some showed a very small change, and others had significant increases as shown in Map 8 and as follows:

- The highest population increases were in the towns of LeRay, Theresa, Brownville, Adams, Clayton, Lyme, Orleans, and Pamela. LeRay had the highest population increase. (See Map 8 below). These seven towns account for about 77% of the total county-wide population increases. LeRay, which contains most of the on-base housing on the Fort Drum military base, had a population of 21,782 in 2010 and an estimated population of 22,116 in 2013. This is seven times the average population of all the other towns in Jefferson County, and nearly as high as the City of Watertown.
- Some towns had a stable population or saw a small decrease (some of which may be in the margin of error) and included Cape Vincent, Philadelphia, Ellisburg, Antwerp, Alexandria, Rodman, Ellisburg, and Worth.
- The remaining towns had small to moderate levels of growth.



Map 8 - Population changes in Jefferson County 2000 to 2013 and identification of newly built parcels

Population changes can have a direct or indirect impact on farms and farmland. As population increases, the pressure for converting land for housing and commercial businesses increases. Population increases can also negatively affect farms by increasing traffic, creating farm/non-farm conflicts, raising property values, and inducing other kinds of growth such as water and

sewer infrastructure. In Jefferson County, increasing population levels are most likely related to the expansion of Fort Drum and much of the population growth is concentrated around and to the west of Fort Drum.

Housing Changes

- Each town has seen increased numbers of housing units. Map 8 shows the changes in population by location of parcels built on since 2000. Between 2000 and 2010, the number of housing units in the County increased by 3,860 units (7%). This level of housing growth outpaces population growth.
- All locations added housing units - even in those locations where the population was stable or decreased in that same time period.
- The highest increase in the total number of housing units were in LeRay, followed by Hounsfield, Clayton, Theresa and Brownville. LeRay's increase of 31% likely includes some on-post housing within Fort Drum, which would not directly impact farmland conversion.
- LeRay had the highest percent increase - about 31%. Lorraine, Hounsfield, Pamela and Theresa all had 15% or more increase in housing units.
- In 2000, Jefferson County had about 14,002 vacant housing units (about 25.9% of all houses), of which 71% were classified as seasonal dwellings. In 2010, there were slightly more vacant dwellings (14,515), of which almost 76% were considered seasonal dwellings. Over 90% of all vacant housing units were considered seasonal dwellings in Alexandria, Cape Vincent, Henderson, Lyme, Orleans, Worth, and Theresa. Brownville, Clayton, Ellisburg, Henderson, Lorraine, Lyme, Orleans, Theresa, and Worth. In these communities it is likely that a large share of the new housing development is for seasonal use. This can be compared to Pamela, with 12.4% of vacant units being seasonal, Philadelphia (8.3%), Rutland (11.1%) and Wilna (8.9%). In those communities, housing starts were more oriented towards year-round residences.

Infrastructure Changes

Growth in both population and housing, and in infrastructure tend to go hand in hand. Non-farm growth usually demands more water, sewer and road infrastructure - all of which will exert pressure to convert farmland to non-farm uses. When these infrastructures are built with excess capacity, they further serve as growth inducing facilities. Thus, future growth tends to follow the facilities that are available to service it.

Public decisions on the size, character and location of major public facilities become a major determinant of future patterns of urban development. When these facilities are built in agricultural areas, long-term viability of farmland can be at risk as a result. This is because the very high initial cost of providing such facilities often forces the urbanization of the area in order to provide the underlying economic value to pay for the facilities. This is especially true given current practices to pay for infrastructure through assessment districts or other value-capture mechanisms rather than general public revenues.

Map 9 shows the location of infrastructure in Jefferson County. The infrastructure in Jefferson County is not currently targeted to high density areas (hamlets, villages, city), but is more widespread and follows major road corridors such as Route 11 and large portions of the corridor from Watertown to Fort Drum. Interstate 81 interchanges offer highway access - which can benefit farmers but also serve as a growth inducing infrastructure for agricultural processing industries and non-agricultural development. Similarly, railroad sidings are currently used by agricultural industries for commodity transport. Like Interstate 81, this can be both positive and negative for agriculture. Given these potential growth inducers, it is not unexpected that the highest levels of growth are also those locations in the County with the most infrastructure including water, sewer, natural gas, railroad, and highway access.

Analysis of Map 9, along with the results of the farmland prioritization shows that many of the core farmland areas also have water and/or sewer infrastructure and higher population growth. Some towns, such as Antwerp and Philadelphia have village areas with sewer. Others core farmland areas such as Ellisburg and Adams have more extensive water districts coincident to highways. The overlap seen between core farmland areas and presence of water and/or sewer infrastructure means that these important areas could be facing additional development pressure in the future.

Farmland Costs

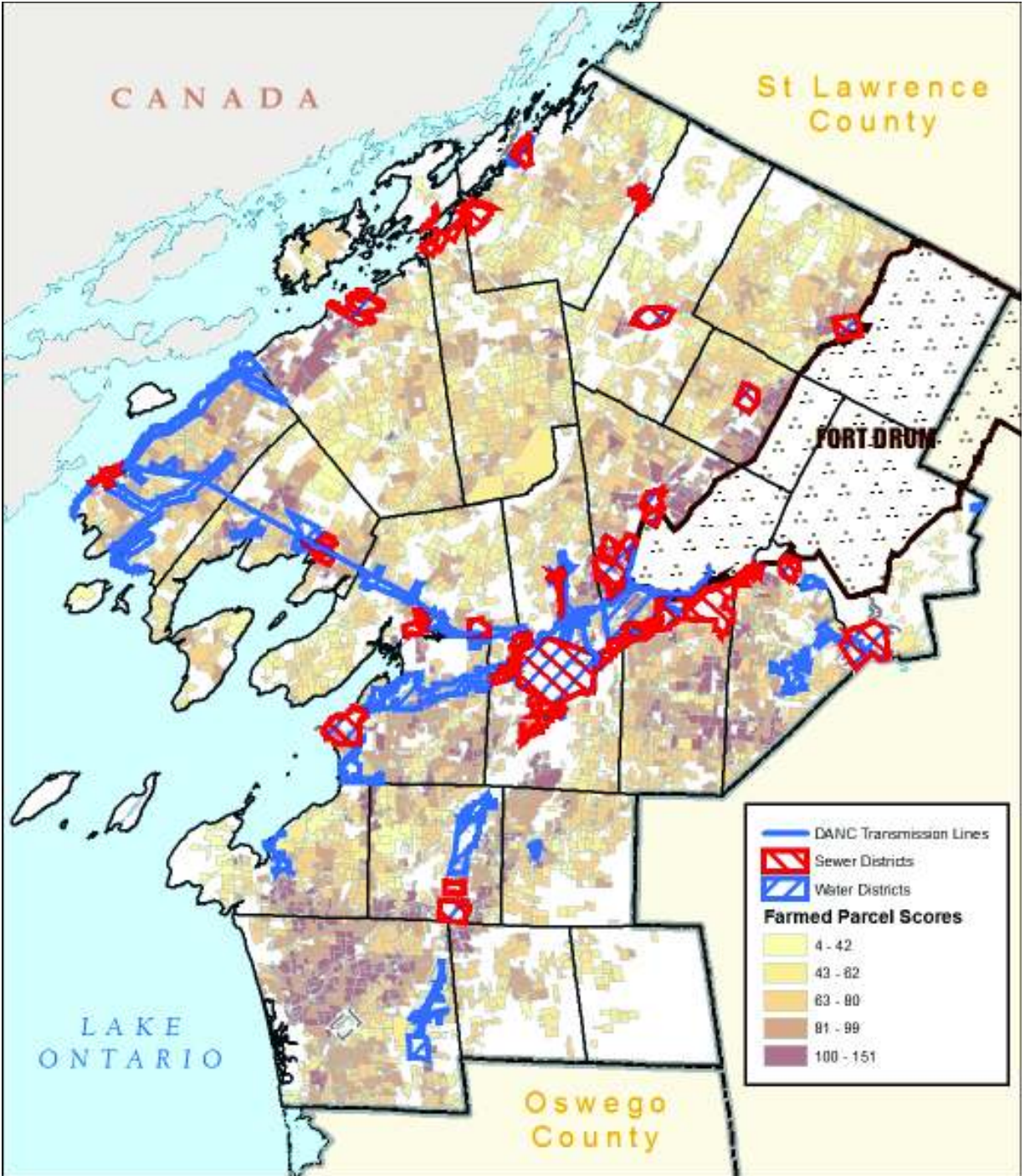
New York State has seen increases in farmland costs with land values rising about 8% each year between 1997 and 2014. Values have increased on a statewide average from \$1020 per acre in 1997 to \$2,600 per acre in 2012.²

In Jefferson County, land prices have been increasing as competition for land has risen and as the price of commodity crops has increased. Dairy farmers often compete with those farming cash-crops for land. In some places in the County, land prices have doubled over the past decade - partly influenced by out-of-area farmers purchasing land for cash crops.

Information from farmers indicates that land in the southern half of the County that sold for \$1000 to \$1500 per acre now sells for \$2000 to \$3000. Similarly, land in the northern half of the County which was less desirable for farmland has doubled in price. A recent look at farmland on the market in early 2015 showed farmland prices ranging from \$1500 per acre in Brownville to \$4900 in LeRay. Most land values for properties currently on the market for farming were between \$1500 and \$2000 per acre.

Because of these trends, more marginal farmland in the northern half of the County has been purchased for farmland. Tight competition for farmland has encouraged remaining farmers to acquire farmland while they still can. Despite higher land prices in Jefferson County, land remains more affordable for farming than other locations in New York State.

² From the 2013 and the 2014 New York Economic Outlook Handbook. Cornell University Agribusiness Economic Outlook Conference.



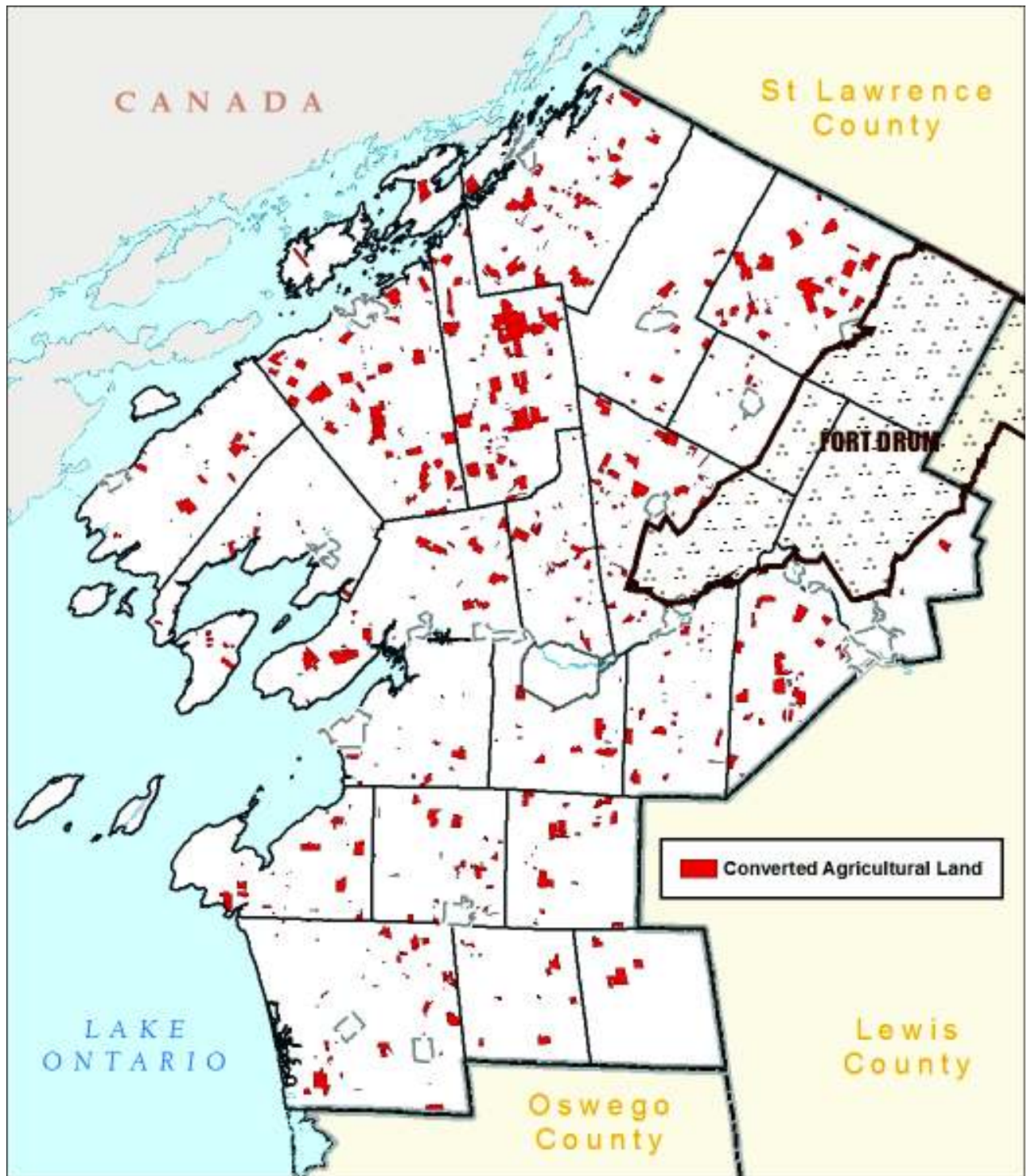
Map 9 - Comparison of farmland and water/sewer locations. (Blue are water districts, red are sewer districts)

Converted Farmlands

The Agricultural Land Conversion Map (Map 10) shows lands within Jefferson County that have been converted from agriculture to non-farm uses as measured by changes in property class assessment. Consistent with the data for population and housing growth, this map illustrates that farmland conversion is taking place throughout Jefferson County. As shown on the map, much of the conversion has taken place on lands formerly contained within New York State certified agricultural districts.

Table 11 - Population and Housing Trends

Population and Housing Trends by Town, Jefferson County												
Town	Population						Population Density (Persons/square mile)	Housing Units				
	2000 Census	2010 Census	2013 ACS Estimate	2000 to 2010 % Change	2000 to 2010 Change	2000 to 2013 Change		2000 Census	2010 Census	% Change	2000 to 2010 Change	
LeRay	19,836	21,782	22,116	10%	1946	2280	297	5,245	6,871	31%	1,626	
Theresa	2,414	2,905	2,935	20%	491	521	45	1,646	1,863	13%	217	
Brownville	5,843	6,263	6,376	7%	420	533	106	2,857	3,048	7%	191	
Adams	4,782	5,143	5,122	8%	361	340	122	2,019	2,126	5%	107	
Clayton	4,817	5,153	5,230	7%	336	413	62	3,337	3,561	7%	224	
Orleans	2,465	2,789	2,822	13%	324	357	39	2,084	2,191	5%	107	
City of Watertown	26,705	27,023	27,823	1%	318	1118	3003	12,450	12,562	1%	112	
Pamelia	2,897	3,160	3,198	9%	263	301	91	1,144	1,288	13%	144	
Wilna	6,235	6,427	6,497	3%	192	262	82	2,658	2,620	-1%	-38	
Lyme	2,015	2,185	2,318	8%	170	303	39	2,183	2,317	6%	134	
Hounsfield	3,323	3,466	3,359	4%	143	36	71	1,839	2,113	15%	274	
Champion	4,361	4,494	4,581	3%	133	220	102	1,906	1,967	3%	61	
Lorraine	930	1,037	1,094	12%	107	164	27	400	461	15%	61	
Rutland	2,959	3,060	3,101	3%	101	142	68	1,178	1,280	9%	102	
Antwerp	1,793	1,846	1,730	3%	53	-63	17	717	772	8%	55	
Rodman	1,147	1,176	1,114	3%	29	-33	28	455	476	5%	21	
Worth	234	231	188	-1%	-3	-46	5	259	247	-5%	-12	
Watertown	4,482	4,470	4,556	-0.30%	-12	74	125	1,502	1,657	10%	155	
Henderson	1,377	1,360	1,595	-1%	-17	218	33	1,557	1,657	6%	100	
Alexandria	4,097	4,061	4,131	-1%	-36	34	56	3,247	3,419	5%	172	
Ellisburg	3,541	3,474	3,513	-2%	-67	-28	41	1,781	1,902	7%	121	
Philadelphia	2,140	1,947	1,926	-9%	-193	-214	52	823	820	-0.40%	-3	
Cape Vincent	3,345	2,777	2,838	-17%	-568	-507	49	2,783	2,712	-3%	-71	
County	111,738	116,229	118,073	4%	4491	6335	92	54,070	57,930	7%	3,860	



Map 10 - Lands converted from farming to other land uses between 2005 and 2013

Cost of Community Service Studies

Communities often evaluate the impact of growth on local municipal budgets. Many municipalities believe that residential development benefits the fiscal health of the community and that it will lower property taxes. Others view farmland as a land use that should be developed to a higher and best use as residences or commercial property. However, a variety of fiscal impact studies done throughout New York State have shown that residential development is a net fiscal loss and that maintaining land in farming is fiscally beneficial.

A Cost of Community Service Study (COCS) is a form of fiscal impact analysis that helps communities measure the contribution of agricultural lands to the local tax base. Farmlands may generate less tax revenue compared to residential, commercial, or industrial properties, but they also require little infrastructure or public services.³ Multiple studies done throughout the State show farmlands actually generate more public revenue than they receive back in public services. COCS not only show that there is a high cost of residential development, but that agricultural land uses offer fiscal benefits similar for commercial and industrial land uses. “In nearly every community studied, farmland has generated a fiscal surplus to help offset the shortfall created by residential demand for public services. This is true even when the land is assessed at its current, agricultural use.”⁴ The median cost per dollar of revenue raised to provide public services is \$0.29 for commercial and industrial land uses, \$0.35 for farmland and open lands, and \$1.16 for residential land uses.

The following chart illustrates some of the COCS studies done in the Hudson Valley of New York State. These numbers show that for every \$1 collected in taxes by a municipality from a particular type of land use, it costs either a larger or smaller amount to provide public services back to that same land use. For example, in Amenia, for every \$1 collected in taxes it costs the Town \$1.23 to provide municipal services back to residential uses. But for farmland, the cost was only 17 cents.

There have been no COCS done in Jefferson County to compare. While the exact dollar figures change from location to location, studies both within New York State as well as other locations in the United States show a great amount of consistency in the general results: agricultural land uses are important to the fiscal health of a community.

³ Adapted from the American Farmland Trust, Farmland Information Center Fact Sheet on Cost of Community Service Studies, August 2010.

⁴ American Farmland Trust, Farmland Information Center Fact Sheet on Cost of Community Service Studies, August 2010.

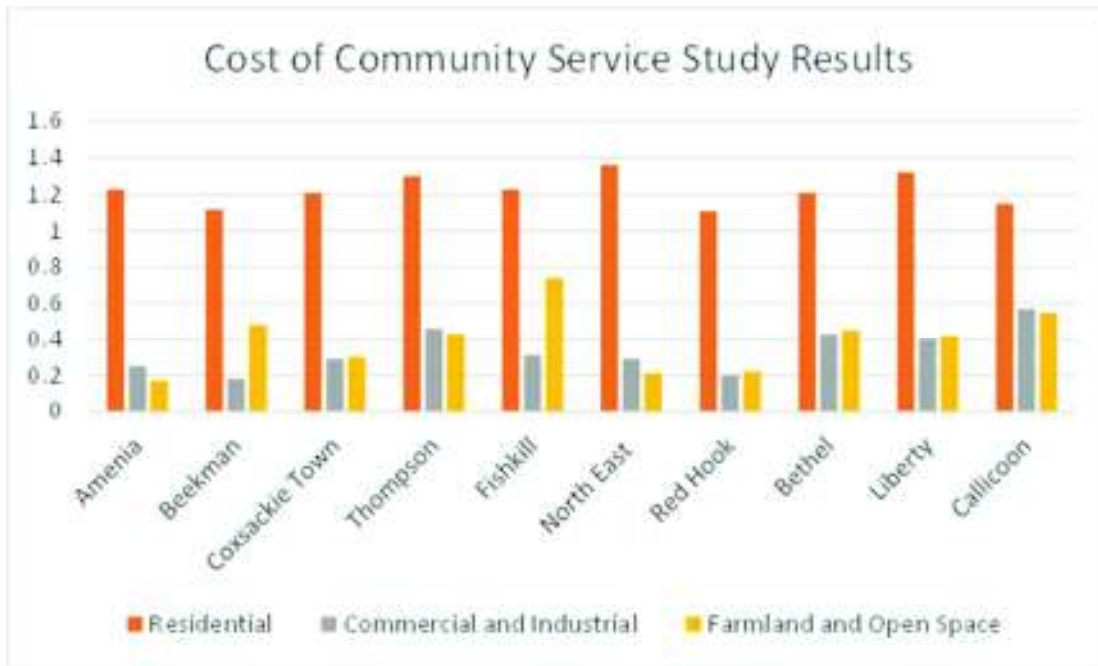


Figure 4: Cost of Community Service study results from other NYS towns

Conclusions of Conversion Pressure Analysis

The discussion presented above shows increasing pressure and increasing risk of conversion of farmlands to non-farm uses. Critical contributing factors include farmer to farmer competition for land, dispersed non-farm development that fragments farmland and increases risks for adverse farm/non-farm interactions, increased housing development, Fort Drum-related growth, and public infrastructure along major routes that could be growth inducing.

The implications of this include rising land prices, use of more marginal soils for farmland and farm operations, increased adverse farm/non-farm interactions, fragmentation of critical farm areas, and additional housing and commercial pressure along the major highways in the County. Strong planning at the local level that recognizes these changing patterns can address some of these conversion issues, but education, good landowner relations efforts, and limited expansions of water and sewer into critical farmlands are all tools that could be used in Jefferson County.

Appendix A. Agricultural Economy

Farms and Farmland

According to the most recent Census of Agriculture, there were 876 farms in Jefferson County in 2012, a marginal decline from the number in 2007. Over the last 10 years, the number of farms in Jefferson County decreased by 14.8%, a net reduction of 152 farms. (As a point of comparison, between 2002 and 2012, the number of farms declined by 12.1% in Lewis County, by 10.2% in St. Lawrence County, and by 4.6% statewide.) For purposes of the Census, the USDA defines a farm as an entity with sales (or potential sales) of \$1,000 or more in agricultural products in the census year.⁵

Land in farms in Jefferson County totaled 290,811 acres in 2012, an 11% increase from 262,331 acres in 2007. Approximately 36% of the County's total land area is in farming. The proportion was as high as 50% in the late 1960s. It should be noted that a decline in the amount of land devoted to agriculture does not necessarily mean that the land has been converted to residential, commercial, or other more intensive uses; rather, it simply indicates that the land is no longer in active production.

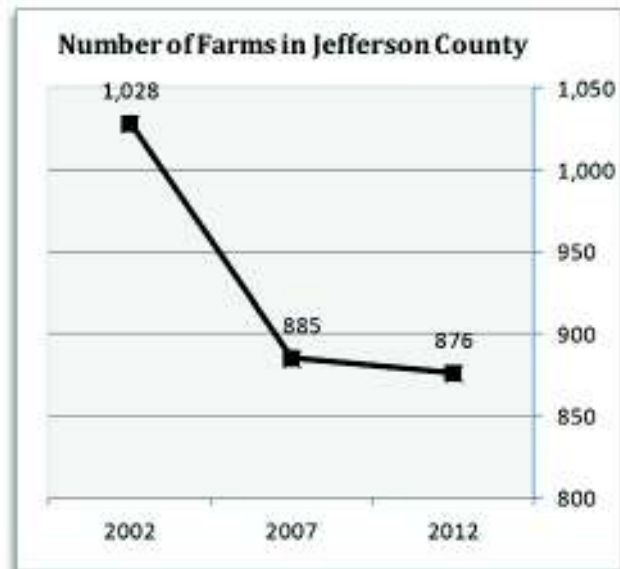


Figure 5 - Number of Farms in Jefferson County

Table 12 - Farms and Farm Acreage

Farms and Farm Acreage in Jefferson County, 2002 - 2012				
	2002	2007	2012	% change, 2002-2012
Number of farms	1,028	885	876	-14.8%
Total acreage in farms	330,561	262,331	290,811	-12.0%
% of land area in agricultural production	40.6%	32.3%	35.8%	-
Cropland (acres)	218,727	166,233	173,519	-20.7%
Harvested cropland	181,484	147,726	158,317	-12.8%

Source: Census of Agriculture, 2002, 2007, and 2012.

⁵ Conducted every five years, the Census of Agriculture is a leading source of information on farm operations at the state and county levels. It is, however, based on data collected from farmers themselves, and participation by Amish farmers is believed to be limited. This may impact the extent to which the analysis reflects Amish farm activity in Jefferson County.

Total cropland in Jefferson County in 2012 was 173,519 acres, comprising approximately 60% of all farmland acreage. Despite some fluctuations, the amount of cropland has been declining.

Farms by Size

The average farm in Jefferson County in 2012 was 332 acres, an increase from 296 acres in 2007. The New York State average was 202 acres, up from 197 five years earlier. Jefferson County farms are relatively diverse in terms of size, however: 20.6% of the farms in the County in 2012 had fewer than 50 acres, while 20.1% were in the 100- to 179-acre range. Approximately 17% of the farms had at least 500 acres.

Between 2002 and 2012, the total number of farms in Jefferson County declined by nearly 15%. Most of the farms lost from the inventory were in the 260- to 499-acre range. It is not clear whether these farms sold off some of their acreage and became smaller or ceased operations altogether. The limited growth among the largest farms in Jefferson County - those with 1,000 acres or more - suggests these mid-size farms did not increase in size.

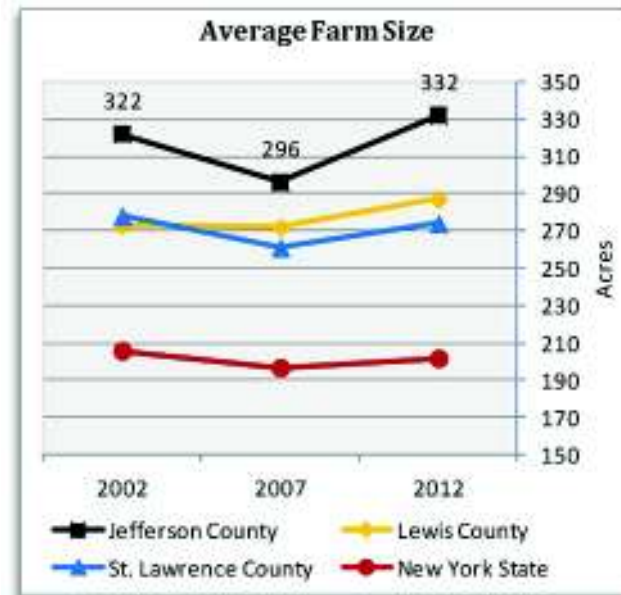


Figure 6 - Average Farm Size

The County has added more small farms, however. The number of farms with less than 100 acres increased 12% from 2002 and 2012. Most of the growth was among farms of 10 to 49 acres.

Table 13 - Farms by Size

Farms by Size in Jefferson County								
Acreage	2002		2007		2012		% Change, 2002-12	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1-9	34	3.3%	42	4.7%	42	4.8%	8	23.5%
10-49	117	11.4%	146	16.5%	138	15.8%	21	17.9%
50-99	106	10.3%	105	11.9%	108	12.3%	2	1.9%
100-179	210	20.4%	176	19.9%	176	20.1%	-34	-16.2%
180-259	115	11.2%	114	12.9%	127	14.5%	12	10.4%
260-499	261	25.4%	172	19.4%	134	15.3%	-127	-48.7%
500-999	133	12.9%	85	9.6%	93	10.6%	-40	-30.1%
1,000 or more	52	5.1%	45	5.1%	58	6.6%	6	11.5%
TOTAL FARMS	1,028	100.0%	885	100.0%	876	100.0%	-152	-14.8%

Source: U.S. Census of Agriculture, 2002, 2007, and 2012.

Farms by Product

The figure below shows the classification of farms in Jefferson County by principal product. *Principal product* refers to the crop or animal accounting for at least 50% of the farm’s agricultural production; farms that produce a combination of crops or animals, with no single category accounting for most of its agricultural production, are listed under “Other Crops” or “Other Animals.”

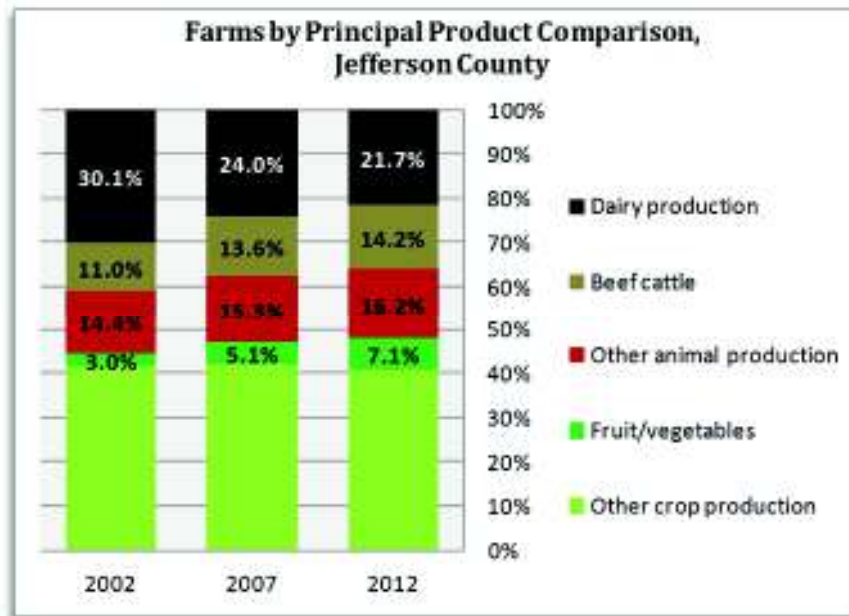


Figure 7 - Farms by Principal Product

Table 14 - Farms by Product

Farms by Principal Product (NAICS Classification) in Jefferson County								
	2002		2007		2012		% Change, 2002-12	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Other crops	335	32.6%	325	36.7%	286	32.6%	-49	-14.6%
Dairy cattle and milk production	309	30.1%	212	24.0%	190	21.7%	-119	-38.5%
Beef cattle ranching and farming	113	11.0%	120	13.6%	124	14.2%	11	9.7%
Other animals	78	7.6%	85	9.6%	97	11.1%	19	24.4%
Oilseed and grain farming	53	5.2%	22	2.5%	42	4.8%	-11	-20.8%
Vegetable and melon farming	18	1.8%	31	3.5%	33	3.8%	15	83.3%
Greenhouse, nursery, and floriculture production	40	3.9%	25	2.8%	31	3.5%	-9	-22.5%
Fruit and tree nut farming	12	1.2%	14	1.6%	29	3.3%	17	141.7%
Poultry and egg production	3	0.3%	22	2.5%	19	2.2%	16	533.3%
Sheep and goat farming	32	3.1%	16	1.8%	12	1.4%	-20	-62.5%
Hog and pig farming	8	0.8%	11	1.2%	8	0.9%	0	0.0%
Cattle feedlots	27	2.6%	2	0.2%	5	0.6%	-22	-81.5%
Total	1,028	100.0%	885	100.0%	876	100.0%	-152	-14.8%

Source: U.S. Census of Agriculture, 2002, 2007, and 2012.

As the table indicates, one-third of the farms in Jefferson County in 2012 grew mixed crops, 22% were engaged in milk production, and 14% raised beef cattle; 11% raised other (or a combination of) livestock. Together, these four categories alone accounted for *four out of every five* farms in Jefferson County.

Compared to 2002, Jefferson County has more farms raising beef cattle, growing fruits and vegetables, and breeding, hatching, and raising poultry for meat or egg production. With the exception of farms raising beef cattle, the number of farms in these categories remains relatively small. Nevertheless, beef cattle, vegetable, fruit, and poultry and egg farms accounted for virtually all of the growth in the number of farms between 2002 and 2012. The result has been an increasing share of farms in categories *other* than dairy, as reflected in the chart below.

Livestock Inventories

Livestock raised in Jefferson County includes milk and beef cows, chickens, pigs, sheep, horses, ducks and geese, and goats, as well as bee colonies. Many farms have livestock whether or not those animals represent their principal product.⁶ As shown in the table below, 205 farms in the County had dairy cows and 192 had beef cattle in 2012, although the number of milk and beef cows has declined. The County's 2002 Agricultural and Farmland Protection Plan theorized that the lack of local processing and packaging facilities restricted growth in beef production despite the availability of land resources for grazing. In 2012, Jefferson County was ranked sixth in New York State in the inventory of cattle and calves and seventh in bee colonies.

Table 15 - Farms with Livestock

Farms with Livestock Inventory in Jefferson County								
Livestock	2002		2007		2012		% Change, 2002-12	
	Farms	Number	Farms	Number	Farms	Number	Farms	Number
Milk cows	325	32,736	231	30,065	205	28,430	-36.9%	-13.2%
Beef cattle	195	3,427	165	3,165	192	2,935	-1.5%	-14.4%
Layers*	48	NA	67	NA	126	NA	162.5%	NA
Hogs and pigs	39	569	56	448	46	658	17.9%	15.6%
Sheep and lambs	60	1,219	39	1,212	29	1,743	-51.7%	43.0%
Horses and ponies	207	1,318	221	1,490	212	1,575	2.4%	19.5%
Colonies of bees	15	4,428	16	1,410	17	1,540	13.3%	-65.2%
Ducks and geese	21	220	25	181	36	361	71.4%	64.1%
Goats	33	NA	51	505	45	367	36.4%	NA

Source: U.S. Census of Agriculture, 2002, 2007, and 2012.

* Layers refers to poultry raised for egg production.

Crops Harvested

Crops grown in Jefferson County include hay and forage, grain and beans, vegetables, and fruit. In 2012, the most common crop in the County in terms of acreage was forage, which includes dry hay, haylage, grass silage, and greenchop. Hay production is strong because of the prevalence of dairy and livestock farms in the County. In 2012, Jefferson County was ranked third in New York State in forage, based on the number of acres grown, and fifth in corn for silage.

Fruits and vegetables make up only a small component of the crops harvested in Jefferson County. Although the number of farms growing these crops has increased, just 315 acres support vegetable production, while 301 acres are in fruit orchards. The latter includes the production of grapes for local wineries. Jefferson County's first winery opened in 2004 and five others have since been added; three more wineries are in development.

⁶ This explains why the numbers of farms may be different in various tables included in this Plan.

Table 16 - Farms with Crops

Farms with Crops Harvested in Jefferson County								
	2002		2007		2012		% Change, 2002-12	
	Farms	Acres	Farms	Acres	Farms	Acres	Farms	Acres
Forage	781	141,878	642	103,127	595	103,320	-23.8%	-27.2%
Corn for silage	236	26,372	163	20,953	149	22,542	-36.9%	-14.5%
Corn for grain	100	10,693	104	17,566	136	19,590	36.0%	83.2%
Vegetables harvested for sale	33	254	49	330	60	315	81.8%	24.0%
Land in orchards	13	48	32	78	55	301	323.1%	527.1%
Soybeans for beans	29	2,397	23	3,059	48	7,012	65.5%	192.5%
Oats for grain	62	1,757	41	1,406	35	1,329	-43.5%	-24.4%
Wheat for grain	9	392	10	552	18	1,552	100.0%	295.9%
Barley for grain	16	637	11	649	10	335	-37.5%	-47.4%

Source: U.S. Census of Agriculture, 2002, 2007, and 2012.

Maple syrup is another important agricultural product in Jefferson County. In 2012, 41 local farms produced 5,493 gallons of maple syrup. This was an increase from 26 farms with 3,855 gallons in 2007; however, data from the 2002 Agricultural Census suggests that maple syrup production has fluctuated, perhaps due to weather conditions.

Dairy Farms in Jefferson County

Given the size and importance of the local dairy industry, it is worth taking a closer look at dairy farms and milk production in Jefferson County.

Jefferson County had 205 farms with 28,430 dairy cows in 2012. (At its peak in the modern era, 1969, the County had 1,072 dairies with 42,527 dairy cows.) While the number of dairy farms continues to decline, their *size* has steadily increased; as the chart below indicates, the average number of dairy cows per farm went from 101 in 2002 to 139 in 2012. Similar trends occurred in the state's other leading dairy counties as well as in Lewis and St. Lawrence Counties.

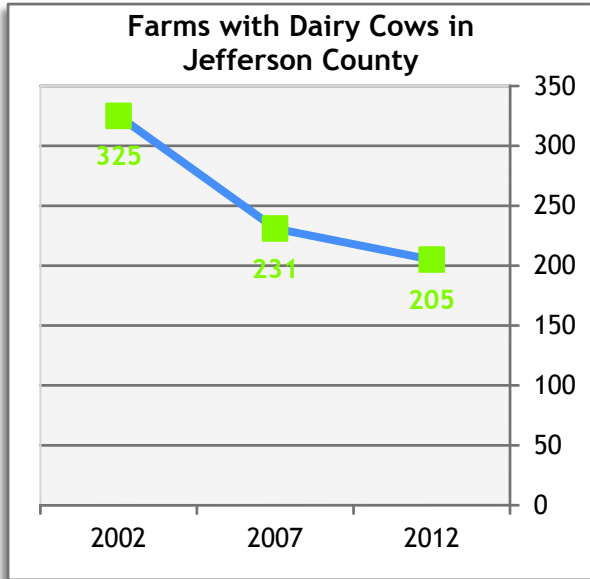


Figure 8 - Farms with Dairy Cows

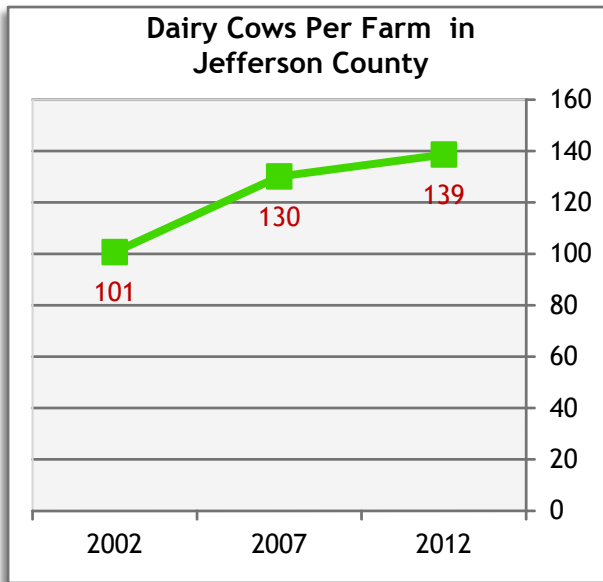


Figure 9 - Dairy Cows per Farm

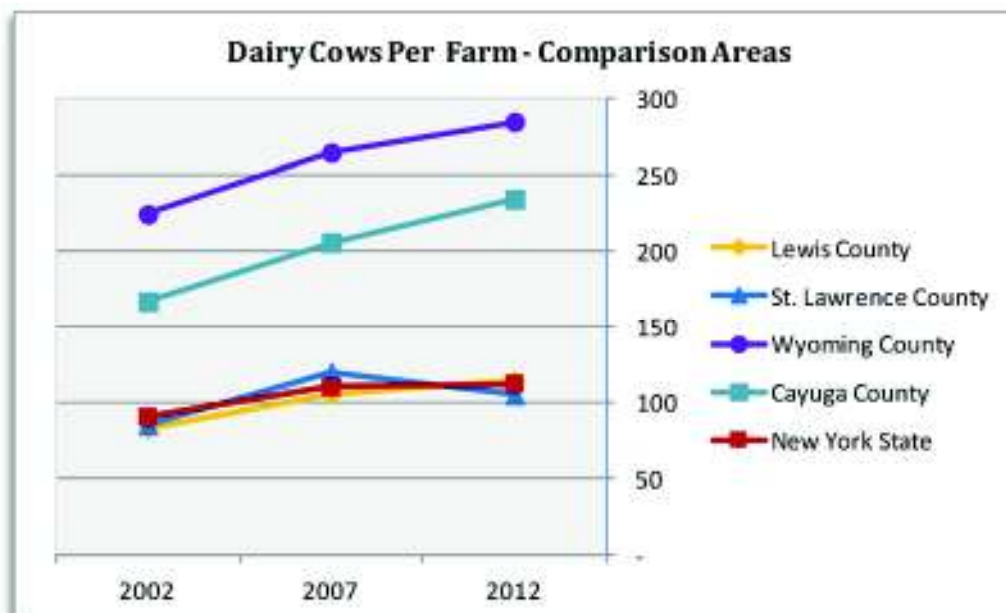


Figure 10- Dairy Cows per Farm, Comparison

As indicated by the data in the table below, milk production has also increased. In 2013, there were 184 dairy farms in Jefferson County selling 671.0 million pounds of milk for the year, compared to 328 dairy farms selling 582.1 million pounds of milk in 2002. Average milk production grew from 1,755,000 pounds per farm in 2002 to 3,667,000 pounds in 2013, as the annual milk yield per cow increased from 18,190 pounds to 22,746 pounds. The Federal Milk Marketing administrator indicated that for 2013, the total estimated value of milk sold by Jefferson County farms was \$134,470,404.

Table 17 - Milk Market Statistics

Milk Market Statistics for Jefferson County					
Year	Number of Farms	Volume of Milk (1,000 lbs.)	Average Milk Production Per Farm (1,000 lbs.)	Average Price Received Per Cwt.*	Est. Gross Value of Milk Sold (millions)
2002	328	582,084	1,775	\$12.64	\$73.6
2003	314	570,888	1,818	\$13.01	\$74.3
2004	265	492,614	1,859	\$16.50	\$81.3
2005	278	597,082	2,148	\$15.65	\$93.4
2006	265	598,152	2,257	\$13.54	\$81.0
2007	252	583,601	2,316	\$19.86	\$115.9
2008	229	556,117	2,428	\$18.62	\$103.5
2009	231	596,811	2,584	\$13.03	\$77.8

Milk Market Statistics for Jefferson County					
Year	Number of Farms	Volume of Milk (1,000 lbs.)	Average Milk Production Per Farm (1,000 lbs.)	Average Price Received Per Cwt.*	Est. Gross Value of Milk Sold (millions)
2010	218	613,502	2,814	\$16.89	\$103.6
2011	210	630,039	3,000	\$20.62	\$129.9
2012	187	653,849	3,497	\$18.63	\$121.8
2013	183	671,010	3,667	\$20.24	\$135.8

Source: Northeast Milk Marketing Area, Federal Order #1, The Market Administrator's Annual Statistical Bulletins, 2002 through 2013.

* Composite Annual Weighted Average Price.

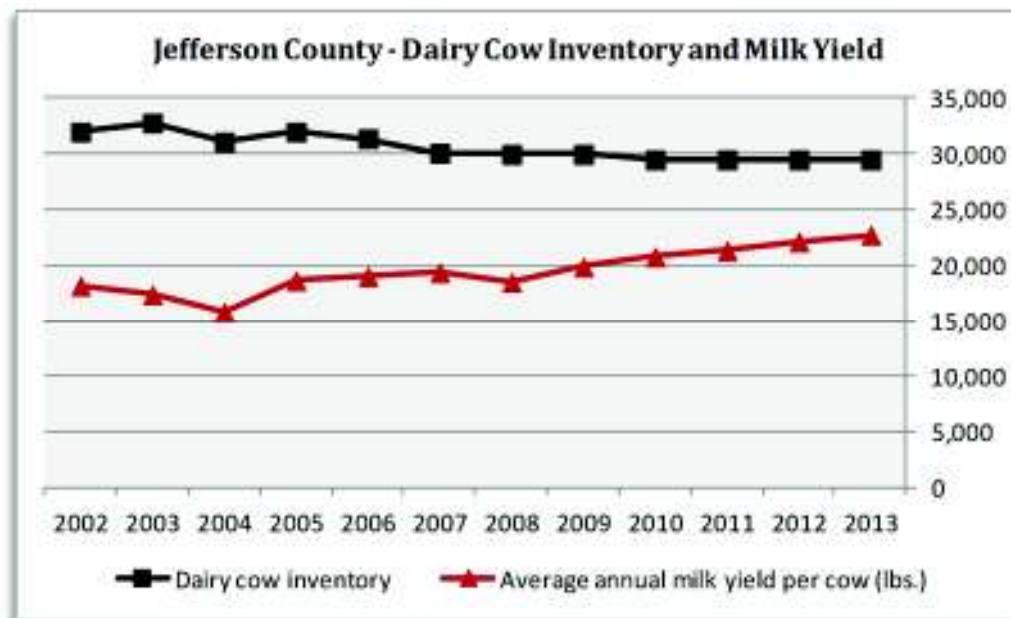


Figure 11 - Dairy Cow Inventory and Milk Yield

There are currently 2 major dairy processors in Jefferson County: Crowley Foods, Inc., a division of HP Hood, in LaFargeville, and Great Lakes Cheese of New York in Adams. Most dairies in the southern half of the County sell to Great Lakes Cheese, while those in the northern half sell their milk to Crowley. The Kraft Foods plant in Lowville, Lewis County, also uses local milk for cream cheese production. The presence of these companies offers a significant competitive advantage for the local dairy industry, as demand is strong and there are multiple opportunities for farmers to sell their milk locally, reducing hauling costs. Organic milk producers in Jefferson County sell their supplies to Horizon and Organic Valley.

Great Lakes Cheese, whose principal product is cheddar cheese, has been a big success for the County. The Ohio-based company purchased a former Borden plant in the 1980s to produce New York cheddar. The company expanded the plant in 2007, turning it into a

modern manufacturing facility that currently has about 130 employees. According to the plant manager, Great Lakes Cheese processes about 2.5 million gallons of milk per day, producing 87 million pounds of cheddar annually. An estimated 50-60% of the milk is from Jefferson County farms; the remainder is from other farms within a 70-mile radius of the plant.

Farm Sales

Jefferson County farms generated \$183.6 million in sales in 2012, with the livestock sector accounting for about 75% of the total. Sales from livestock production totaled \$138.3 million, while receipts from crops totaled \$45.3 million.

Milk production generated \$121.5 million, comprising two-thirds of total farm sales in 2012. Other leading agricultural commodities included grain and soybeans (\$24.8 million), hay and silage (\$17.8 million), and beef cattle (\$11.7 million).

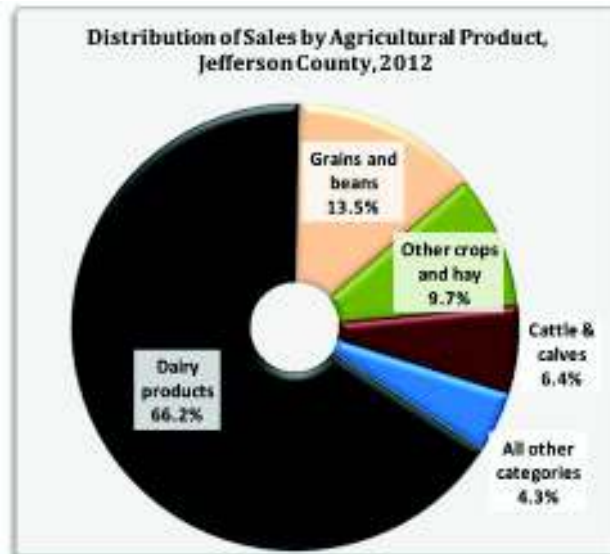


Figure 12 - Sales by Agricultural Product

In 2007 and 2012, Jefferson County ranked 9th in the state in the total sales of agricultural products, and 4th in dairy products sold. (The top 3 dairy counties in New York State are Wyoming, Cayuga, and St. Lawrence.) Jefferson County also ranked 2nd in sales of other crops and hay, after St. Lawrence County.

Table 18 - Agricultural Product Sales

Sales of Agricultural Products in Jefferson County					
	2007		2012		% Change in Sales, 2007-2012
	Sales (millions)	County Rank	Sales (millions)	County Rank	
Milk and dairy products	\$109.0	4	\$121.5	4	11.5%
Grains, oilseeds, dry beans/peas	\$6.6	15	\$24.8	13	274.9%
Other crops and hay	\$7.8	2	\$17.8	2	128.3%
Cattle and calves	\$11.7	8	\$11.7	14	0.2%
Vegetables/melons/potatoes	\$0.7	42	\$0.8	44	19.6%
Horses, ponies, mules, donkeys	\$0.2	41	\$0.3	39	50.9%
Honey from bees	NA	NA	\$0.2	NA	NA
Sheep, goats, wool, mohair	NA	NA	\$0.1	41	NA
Hogs and pigs	\$0.1	40	\$0.1	29	90.0%
Subtotal - Livestock & poultry	\$122.3	4	\$138.3	5	13.1%
Subtotal - Crops	\$17.0	24	\$45.3	18	166.4%
TOTAL SALES	\$139.2	9	\$183.6	9	31.8%

Source: U.S. Census of Agriculture, 2007 and 2012. Categories for which no data is available are not shown.

Between 2007 and 2012, Jefferson County's rank with respect to cattle and calves declined from 8th to 14th in the state, although sales were stable. This was due to increased cattle sales in other counties. Its rank increased from 15th to 13th in the value of grain and soybeans, however, as sales in this category more than tripled.

An increasing number of Jefferson County farmers are selling their products directly to consumers through such venues as farm stands and farmers markets. As indicated in the table below, 138 farms reported sales directly to consumers in 2012, up from 111 in 2007. At less than \$1 million a year, the value of direct-to-consumer sales is quite small relative to *total* farm sales in Jefferson County, but it is a growing sector.

Table 19 - Direct Sales of Agricultural Products

Direct Sales of Agricultural Products in Jefferson County				
	2002	2007	2012	Change, 2002-2012
# of farms selling products directly to individuals	108	111	138	27.8%
% of all farms	10.5%	12.5%	15.8%	-
Value of products sold directly to individuals	\$460,000	\$511,000	\$921,000	100.2%
% of total farm sales	0.5%	0.4%	0.5%	-

Source: U.S. Census of Agriculture, 2002, 2007 and 2012.

The Agricultural Census reports that in 2012, 42 Jefferson County farms, or 5.4%, marketed their products direct to retail outlets; 37 (4.2%) produced or sold value-added commodities, and 21 (2.4%) had an on-farm packing facility. Again according to the Census, only 5 farms in the County used community-supported agriculture, or CSAs, to distribute their products, suggesting a potential opportunity.

Thirty (30) farms were certified organic through the USDA National Organic Program, while three (3) farms reported they were transitioning into organic production. Organic product sales in Jefferson County totaled \$4,967,000, the 5th highest in the state. According to JCLDC, much of this can be attributed to organic dairy farms.

Like other counties in upstate New York, Jefferson County has many small farms with limited earnings from the sale of agricultural products. As the table below indicates, 48% of the farms grossed less than \$10,000 in 2012. This is slightly lower than that in New York State as a whole (50.8%)

To qualify for an agricultural assessment in New York State, farms must earn at least \$10,000 annually from the sale of farm products; thus from this data, it appears that less than half of the farms in Jefferson County are eligible to receive a partial tax exemption.

There has been a 5% increase in the number of farms in the County earning more than \$100,000 in gross sales. Most of the agricultural sales come from a relatively small number of farms. In 2012, farms with \$500,000 or more in sales accounted for less than 8% of all Jefferson County farms, but they produced fully three-quarters of the County's agricultural output.

Table 20 - Farms by Gross Sales

Farms by Gross Sales in Jefferson County					
Farm Size	2007		2012		% Change, 2007-2012
	Number	Percent	Number	Percent	
Less than \$2,500	298	33.7%	247	28.2%	-17.1%
\$2,500 to \$4,999	71	8.0%	64	7.3%	-9.9%
\$5,000 to \$9,999	63	7.1%	113	12.9%	79.4%
Subtotal - Less than \$10,000	432	48.8%	424	48.4%	-1.9%
\$10,000 to \$19,999	92	10.4%	90	10.3%	-2.2%
\$20,000 to \$24,999	21	2.4%	21	2.4%	0.0%
\$25,000 to \$49,999	73	8.2%	39	4.5%	-46.6%
\$50,000 to \$99,999	16	1.8%	32	3.7%	100.0%
Subtotal - \$10,000 to \$99,999	252	28.5%	241	27.5%	-4.4%
\$100,000 to \$249,999	78	8.8%	81	9.2%	3.8%
\$250,000 to \$499,999	63	7.1%	62	7.1%	-1.6%
\$500,000 or More	60	6.8%	68	7.8%	13.3%
Subtotal - \$100,000 or More	201	22.7%	211	24.1%	5.0%

Farms by Gross Sales in Jefferson County					
Farm Size	2007		2012		% Change, 2007-2012
	Number	Percent	Number	Percent	
ALL FARMS	885	100.0%	876	100.0%	-1.0%

Source: U.S. Census of Agriculture, 2007 and 2012.

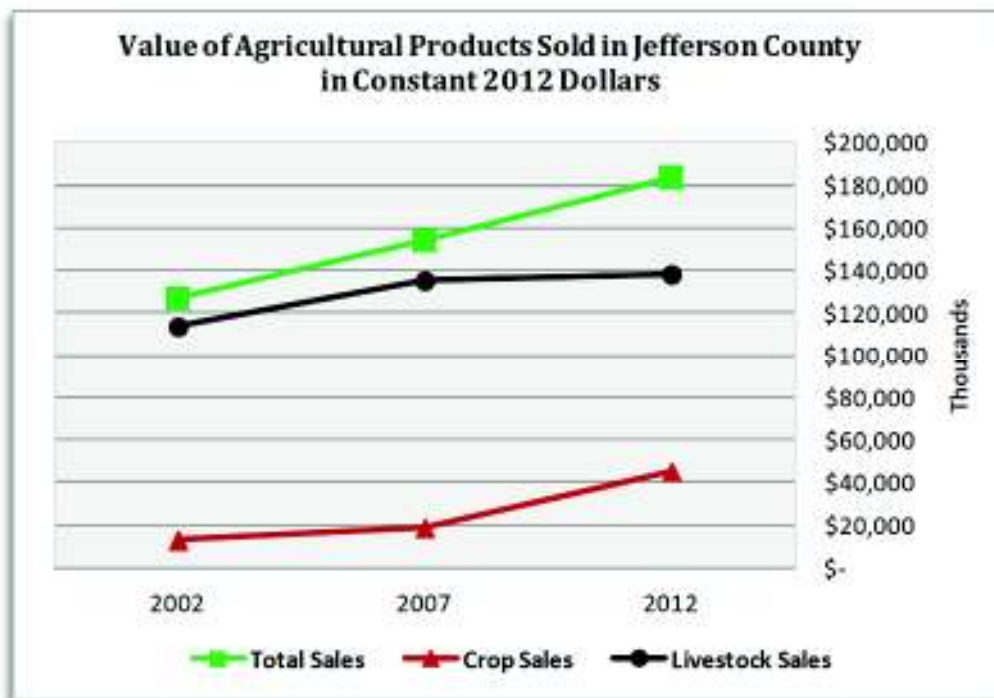


Figure 13 - Value of Agricultural Products Sold

Jefferson County’s first Agricultural and Farmland Protection Plan in 2002 observed that “the total value of agricultural products sold... has been stagnant since a high in 1982. Considering inflation, Jefferson County has been moving backwards in total value of agricultural products sold.” This has not been the case since 2002, however. In fact, between 2002 and 2012, total farm sales in constant 2012 dollars increased by 45%. Sales of livestock and their products rose by 22%, sales of crops by more than 240%. The latter can be attributed to increased production of corn for grain and soybeans.

Gross Farm Income

Gross farm income includes income from the sale of agricultural products, rental of farmland, custom farm work (e.g., planting, plowing, spraying) provided to others, agritourism and recreational services, crop and livestock insurance payments, government payments, and “other sales and services closely related to the principal functions of the farm business” before taxes and expenses. The chart below shows the components of average gross farm income in Jefferson County, from 2002 through 2012, in constant 2012 dollars.

Jefferson County farms averaged \$227,242 in gross income in 2012. Not only did average gross farm income rise in nominal dollars from \$110,304 in 2002, it also increased by 61.5% in inflation-adjusted dollars over the ten-year period.

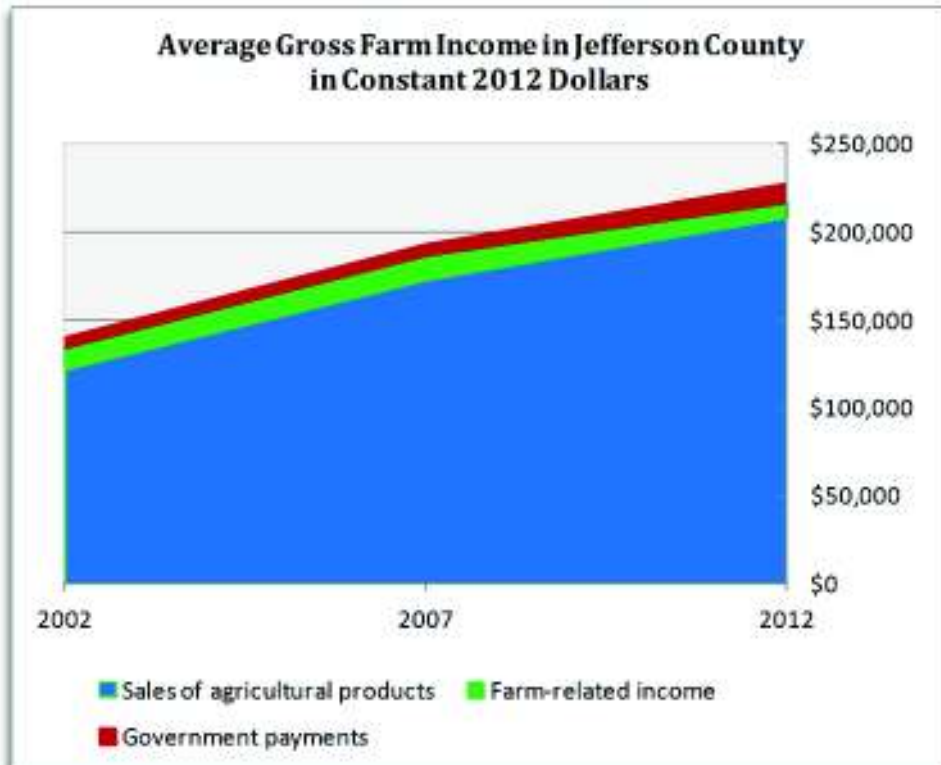


Figure 14 - Average Gross Farm Income

More than a third of farms in the County reported income from farm-related sources (other than product sales) in 2012. Only ten farms had income from agri-tourism and recreational services, while well over 100 farms received patronage dividends and refunds from cooperatives. Other important sources included rental income and custom farm work. Not counted in the Agricultural Census are employment and business earnings from other family members, which often help farm operators support their households.

Farm Production Expenses

Farm production expenses include electricity, feed, gasoline and fuel, labor, livestock, property taxes, seed, and fertilizer, soil conditioners, and chemicals. According to the Census of Agriculture, Jefferson County farms incurred more than \$132 million in production expenses in 2012. As indicated in the table below, feed for animals was the largest single production expense, comprising 26.6% of total farm expenses. Other significant expenses

included labor (12.7%) and repairs and maintenance (10.0%). From 2002 to 2012, overall production costs increased by 54%.

The average production cost per farm in 2012 was \$150,702 in Jefferson County, compared to \$127,617 in New York State overall. This was higher than in St. Lawrence County (\$108,053), but lower than in Lewis County (\$166,454).

It is important to note that the figures in the table below reflect the expenses of Jefferson County farms in the aggregate, and may obscure differences in the cost structures exhibited by different types of farms.

Table 21 - Farm Production Expenses

Farm Production Expenses in Jefferson County (\$000s)							
	2002		2007		2012		% Change, 2002-12
	Number	Percent	Number	Percent	Number	Percent	
Electricity	\$3,376	3.9%	\$4,039	4.0%	\$3,948	3.0%	16.9%
Feed	\$23,749	27.7%	\$26,902	26.7%	\$35,115	26.6%	47.9%
Fertilizer & Chemicals	\$3,158	3.7%	\$5,486	5.4%	\$9,595	7.3%	203.8%
Gasoline & Fuel	\$3,532	4.1%	\$6,503	6.4%	\$8,441	6.4%	139.0%
Labor	\$10,686	12.5%	\$12,465	12.4%	\$16,812	12.7%	57.3%
Livestock and Poultry	\$4,878	5.7%	\$2,958	2.9%	\$2,474	1.9%	-49.3%
Property Taxes	\$4,308	5.0%	\$4,012	4.0%	\$4,215	3.2%	-2.2%
Repairs & Maintenance	\$10,085	11.8%	\$11,922	11.8%	\$13,171	10.0%	30.6%
Seeds, Plants, & Trees	\$1,707	2.0%	\$2,682	2.7%	\$4,439	3.4%	160.0%
Other*	\$20,281	23.6%	\$23,874	23.7%	\$33,805	25.6%	66.7%
Total farm production expenses	\$85,760	100.0%	\$100,843	100.0%	\$132,015	100.0%	53.9%
<i>Average costs per farm</i>	\$83,344		\$113,946		\$150,702		80.8%

Source: U.S. Census of Agriculture, 2002, 2007, and 2012.

* Other expenses include cash rent for land, buildings, and grazing fees; depreciation expenses claimed; interest expense; custom work and custom hauling; rental expenses for machinery and equipment; etc.

Fixed Assets

Farms are capital-intensive businesses that require significant investments in land, buildings, machinery, and equipment. In 2012, Jefferson County farms owned more than \$477 million in land and buildings. They also owned machinery and equipment such as trucks, tractors, and hay balers valued at \$116.9 million.

Table 22 - Farm Property and Equipment Values

Farm Property and Equipment Values in Jefferson County				
	2002	2007	2012	% Change, 2002-12
Market Value of Land & Buildings	\$280,266,000	\$363,564,000	\$477,013,000	70.2%
Average Per Farm	\$272,367	\$410,806	\$544,536	99.9%
Average Per Acre	\$872	\$1,386	\$1,640	88.1%

Source: U.S. Census of Agriculture, 2002, 2007, and 2012.

Farm Operators

In 2012, there were 1,411 farm operators in Jefferson County (the majority of farms have one or two operators, but a few have three or more). The average age of a *principal* farm operator - i.e., the person primarily responsible for day-to-day operation of the farm - was 57.5 years; statewide, the average age of a farmer was 57.1. Many large farmers in the County, especially dairy farms, are owned by families and are multigenerational. Nevertheless, as state and national farm advocacy organizations have noted, many experienced farmers are reaching retirement age; the question is whether new and younger farmers, including family members, will be available to take their place. According to the Census of Agriculture, 37 principal farm operators in Jefferson County, or 4.2%, were under age 35 in 2012.

Table 23 - Farm Operator Characteristics

Selected Characteristics of Principal Farm Operators in Jefferson County								
	2002		2007		2012		% Change, 2002-12	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Occupation: Farming	663	64.5%	482	54.5%	503	57.4%	-160	-24.1%
Occupation: Other	365	35.5%	403	45.5%	373	42.6%	8	2.2%
Under Age 35	41	4.0%	42	4.7%	37	4.2%	-4	-9.8%
35 to 44 Years	203	19.7%	131	14.8%	102	11.6%	-101	-49.8%
45 to 54 Years	329	32.0%	232	26.2%	227	25.9%	-102	-31.0%
55 to 64 Years	240	23.3%	275	31.1%	249	28.4%	0	3.8%
65 Years and Over	215	20.9%	205	23.2%	261	29.8%	46	21.4%
Average Age	53.9		55.3		57.5		3.6	6.8%

Source: U.S. Census of Agriculture, 2002, 2007, and 2012.

More farm operators in Jefferson County reported their primary occupation as farming in 2012 (57.4%) than in 2007 (54.5%), but this was less than in 2002 (64.5%).

The majority of Jefferson County farmers own at least some of the land that they farm. These numbers have been relatively consistent over the last 10 years, with approximately 69% farming only the land that they own, 29% farming land they owned as well as land owned by others, and less than 2% operating farms as tenants.

Table 24 - Farm Tenure

Farm Tenure in Jefferson County								
	2002		2007		2012		% Change, 2002-12	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Full Owners	678	66.0%	598	67.6%	603	68.8%	-75	-11.1%
Part Owners	313	30.4%	263	29.7%	256	29.2%	-57	-18.2%
Tenants	37	3.6%	24	2.7%	17	1.9%	-20	-54.1%

Source: U.S. Census of Agriculture, 2002, 2007, and 2012.

Farm Labor

According to the 2012 Census of Agriculture, 245 farms -- about 28% of all farms in Jefferson County -- had hired labor in addition to their principal operators (data are for total hired farm workers, including paid family members, by number of days worked). These farms accounted for 1,024 employees with \$16.6 million in annual payroll. Twenty farms reported having 10 or more workers, and they accounted for nearly half of the County's total farm employment.

Table 25 - Hired Farm Labor

Hired Farm Labor in Jefferson County								
	2002		2007		2012		% Change, 2002-12	
	Farms	Workers	Farms	Workers	Farms	Workers	Farms	Workers
Farms w/ 1 worker	59	59	72	72	82	82	39.0%	39.0%
Farms w/ 2 workers	70	140	63	126	53	106	-24.3%	-24.3%
Farms w/ 3 or 4 workers	63	202	47	154	61	202	-3.2%	0.0%
Farms w/ 5 to 9 workers	26	147	20	119	29	179	11.5%	21.8%
Farms w/ 10 or more workers	18	396	29	468	20	455	11.1%	14.9%
Total farms with hired labor	236	944	231	939	245	1,024	3.8%	8.5%

Source: U.S. Census of Agriculture, 2002, 2007, and 2012.

Between 2002 and 2012, the total number of farm workers in Jefferson County increased by 8.5%, corresponding to a 64% increase in annual payroll.

Agriculture-Related Industry

Farming in Jefferson County is supported by a large and diverse agribusiness base that includes milk haulers, feed and seed dealers, hoof trimmers, farm equipment dealerships, agricultural lenders, and veterinarians. Data from Cornell Cooperative Extension indicates that there are approximately 75 such establishments serving local farms.

Agriculture is also linked to “downstream” sectors engaged in food and beverage manufacturing and the production of farm chemicals, machinery and equipment. These companies provide hundreds of jobs in Jefferson County. Not all of these manufacturers rely on local agricultural inputs, however. Only the dairy processors - Great Lakes Cheese and Crowley Foods - might not exist in Jefferson County were it not for the abundant supply of milk from local farms.

Table 26 - Agriculture Related Industries

Agriculture-Related Industry in Jefferson County			
	Firms	Estimated Employment	Businesses without Employees*
Support Activities for Crop Production (NAICS 1151)	3	11	15
Support Activities for Animal Production (1152)	2	7	18
Animal Food Manufacturing (3111)	2	18	0
Grain and Oilseed Milling (3112)	1	<5	0
Sugar and Confectionery Product Manufacturing (3113)	1	<5	NA
Dairy Product Manufacturing (3115)	2	275	0
Bread and Bakery Product Manufacturing (3118)	3	25	NA
Beverage Manufacturing, Including Wineries (3121)	4	65	0
Fertilizer and Agricultural Chemical Manufacturing (3253)	1	15	0
Dairy Product Merchant Wholesalers (42443)	2	25	NA
Livestock Merchant Wholesalers (42452)	1	<5	NA
Other Farm Product Raw Material Merchant Wholesalers (42459)	1	<5	NA
Farm Supplies Merchant Wholesalers (42491)	2	25	NA
Nursery, Garden Center, and Farm Supply Stores (44422)	5	40	NA
Fruit and Vegetable Markets (44523)	2	7	NA
Veterinary Services (54194)	9	105	4

Source: County Business Patterns and Nonemployer Statistics, 2012.

* A nonemployer is a business that has no paid employees, has annual business receipts of \$1,000 or more (\$1 or more in the construction industry), and is subject to federal income taxes. Most operate as sole proprietorships.

The following tables detail information comparing Jefferson County to New York State and other significant dairy counties in the State.

Table 27 - Number of Farms

Total Number of Farms				
	2002	2007	2012	% Change, 2002-12
Jefferson County	1,028	885	876	-14.8%
Lewis County	721	616	634	-12.1%
St. Lawrence County	1,451	1,330	1,303	-10.2%
New York State	37,255	36,352	35,537	-4.6%

Table 28 - Land in Farms

Land in Farms (Acres)				
	2002	2007	2012	% Change, 2002-12
Jefferson County	330,561	262,331	290,811	-12.0%
Lewis County	196,774	167,249	181,741	-7.6%
St. Lawrence County	403,364	347,246	356,909	-11.5%
New York State	7,660,969	7,174,743	7,183,576	-6.2%

Table 29 - Acres per Farm

Average Acres Per Farm				
	2002	2007	2012	% Change, 2002-12
Jefferson County	322	296	332	3.1%
Lewis County	273	272	287	5.1%
St. Lawrence County	278	261	274	-1.4%
New York State	206	197	202	-1.9%

Table 30 - Large Farms

Large Farms: % of Farms with 500 Acres or More				
	2002	2007	2012	% Change, 2002-12
Jefferson County	18.0%	14.7%	17.2%	-4.4%
Lewis County	13.5%	12.0%	12.5%	-7.4%
St. Lawrence County	14.8%	12.1%	10.8%	-27.0%
New York State	9.4%	8.4%	8.4%	-10.6%

Table 31 - Total Farm Sales

Total Farm Sales in Constant 2012 Dollars				
	2002	2007	2012	% Change, 2002-12
Jefferson County	\$126,966,837	\$154,199,336	\$183,567,000	44.6%

Total Farm Sales in Constant 2012 Dollars				
	2002	2007	2012	% Change, 2002-12
Lewis County	\$92,063,776	\$124,727,575	\$137,040,000	48.9%
St. Lawrence County	\$127,187,500	\$155,205,980	\$187,363,000	47.3%
New York State	\$3,976,829,082	\$4,893,282,392	\$5,415,125,000	36.2%

Table 32 - Average Farm Sales

Average Sales Per Farm in Constant 2012 Dollars				
	2002	2007	2012	% Change, 2002-12
Jefferson County	\$123,508	\$174,236	\$209,551	69.7%
Lewis County	\$127,689	\$202,480	\$216,152	69.3%
St. Lawrence County	\$87,656	\$116,697	\$143,794	64.0%
New York State	\$106,746	\$134,608	\$152,380	42.7%

Table 33 - Farms with \$500,000 or More in Sales

% of Farms with \$500,000 or More in Sales				
	2002	2007	2012	% Change, 2002-12
Jefferson County	2.9%	6.8%	7.8%	169.0%
Lewis County	1.4%	7.5%	5.8%	314.3%
St. Lawrence County	2.5%	4.4%	4.1%	64.0%
New York State	2.9%	4.8%	5.5%	89.7%

Table 34 - Farms with Dairy Cows

Farms with Dairy Cows				
	2002	2007	2012	% Change, 2002-12
Jefferson County	325	231	205	-36.9%
Lewis County	318	257	237	-25.5%
St. Lawrence County	445	262	319	-28.3%
Wyoming County	218	181	163	-25.2%
Cayuga County	173	156	147	-15.0%
Genesee County	98	68	79	-19.4%
New York State	7,388	5,683	5,427	-26.5%

Table 35 - Total Number of Dairy Cows

Total Number of Dairy Cows				
	2002	2007	2012	% Change, 2002-12
Jefferson County	32,736	30,065	28,430	-13.2%
Lewis County	26,440	27,120	27,235	3.0%
St. Lawrence County	38,018	31,525	33,604	-11.6%
Wyoming County	49,010	47,970	46,483	-5.2%
Cayuga County	28,939	32,158	34,489	19.2%
Genesee County	23,089	24,610	28,938	25.3%
New York State	670,003	626,455	610,712	-8.8%

Table 36 - Dairy Cows per Farm

Average Number of Dairy Cows Per Farm				
	2002	2007	2012	% Change, 2002-12
Jefferson County	101	130	139	37.7%
Lewis County	83	106	115	38.2%
St. Lawrence County	85	120	105	23.3%
Wyoming County	225	265	285	26.8%
Cayuga County	167	206	235	40.3%
Genesee County	236	362	366	55.5%
New York State	91	110	113	24.1%

Table 37 - Production Expenses per Farm

Average Production Expenses Per Farm in Constant 2012 Dollars				
	2002	2007	2012	% Change, 2002-12
Jefferson County	\$106,306	\$126,186	\$150,702	41.8%
Lewis County	\$103,216	\$135,939	\$166,454	61.3%
St. Lawrence County	\$84,255	\$89,082	\$108,053	28.2%
Wyoming County	\$252,429	\$278,422	\$378,608	50.0%
Cayuga County	\$159,853	\$196,167	\$257,516	61.1%
Genesee County	\$215,014	\$270,680	\$348,031	61.9%
New York State	\$95,767	\$106,724	\$127,617	33.3%

Appendix B. Resources and Programs That Support Agriculture

- **Jefferson County Agricultural Development Council (JCADC) -**
<http://www.comefarmwithus.com>
Facebook: Jefferson County Ag Economic Development
Twitter: @jeffersonagdev
 - Led by the Jefferson County Agricultural Coordinator who “assists in the stabilization, growth and promotion of the agricultural industry of Jefferson County.” The duties of the Ag Coordinator include identifying agricultural needs and developing solutions, agricultural financing, agricultural marketing, education and public relations. Serves as spokesperson for Jefferson County’s agricultural industry.
 - Maintains the Come Farm With Us website which serves as the central information and marketing source for agriculture in Jefferson County.
 - Provides technical and financial assistance to farms, agribusinesses and agricultural manufacturers working to maintain or grow their businesses in Jefferson County.
 - Lead the Jefferson County Agricultural Agency Round Table which helps to coordinate the efforts of all the agricultural agencies in Jefferson County.
 - Identify needs of Jefferson County’s agricultural industry and facilitates identifying resources to address the industries concerns.
 - Maintain the Jefferson County Agricultural News Flash Network which is an information resource that provides an immediate form of communication within agriculture and between the industry and community.
 - Produce and host The Home Grown Show which is an agricultural radio talk show started by the Jefferson County Agricultural Coordinator in 2002 to improve awareness and support of the community for agriculture.
 - Identifies agricultural workforce development needs and brings resources to bear to resolve those needs.
- **Jefferson County Soil & Water Conservation District -**
<http://www.jeffersoncountyswcd.org>
 - The District offers a wide variety of conservation related services and programs. Their goal is to work with landowners; federal, state, and local agencies and organizations, and units of government to protect Jefferson County’s natural resources and to keep the County’s waters clean.
 - *Agricultural Environmental Management (AEM):* This program is a voluntary, incentive-based program that helps farmers make common sense, cost effective and science based decisions to help meet business objectives while protecting and conserving the County’s natural resources.
 - *Soil Group Worksheets:* These are completed for landowners that qualify for the Agricultural Assessment Program.

- *Best Management Practices (BMPs)*: Technical assistance is provided to landowners for planning and design to protect natural resources and water quality.
 - *Permit assistance*: The District helps landowners with CAFO, mined land, streambank and stormwater permits.
 - *Equipment rental program*: no till drill and tree/grapevine planter.
 - *Grant writing*: The District develops funding proposals for landowners for the installation of BMPs to protect natural resources and water quality.
 - *Comprehensive Nutrient Management Planning*.
 - The District provides technical assistance for Development Authority of the North Country's Farmland Drainage Program.
- **Cornell Cooperative Extension Association of Jefferson County** - <http://www.ccejefferson.org>
 - Educates youth, families, farmers and communities using research-based knowledge for practical application and life-long learning.
 - Agricultural outreach, field crops program, dairy and livestock program, farm business management and planning winter, dairy management, horticulture.
 - *Grow Local, Buy Local Program* - Connects producers with consumers; trains farmers on marketing and branding meat and vegetable products to increase profitability and make healthy food available to consumers.
 - Publishes an annual Local Food Guide that lists farmer's markets and producers.
 - *Northern NY Dairy Institute* - Dairy education series combining classroom, hands-on and on-farm activities to enhance farm owner and employee skills.
 - *Northern NY Water Quality Project* to increase awareness of livestock drinking water quality and quantity.
 - *Farm Business Management* - one-on-one assistance and workshops.
 - Involved in local foods - Farm to School, Farm to Institution, 20C Kitchen, Bonus Bucks Program.
 - *AgVentures Programming* - Workshops on various topics, such as social media marketing, small scale vegetable production, poultry 101, beef 101, etc.
 - *Ag-Extravaganza* - program for fourth graders in Thompson Park.
 - *Meat the Market Initiative* - A USDA-funded initiative across Jefferson, Lewis and St. Lawrence Counties. It aims to help livestock farmers identify opportunities to partner with meat processors and end-users, such as restaurants and grocery stores to sell products.
 - Dairy Prospects Program - A one-year program for students in grades 9-12 who are interested in discovering opportunities in the dairy industry. Through a year-long series of hands-on workshops and travel experiences, participants are exposed to leaders in the dairy industry who serve as examples of the exciting future the dairy industry can provide.
 - **Jefferson County Planning Department** - www.co.jefferson.ny.us
 - The Department manages administration of the County Agricultural Districts Program, which includes over 204,000 acres of land in three separate Districts in

the County. These Districts offer a number of benefits to agricultural landowners to encourage continued agriculture production and activities. Local landowners have a 30-day period during the month of June each year to request addition of viable agricultural property to any of the County's three consolidated Districts.

- - Through administrative support to the County's Agricultural and Farmland Protection Board, the Department also assists with maintenance and implementation of the County's Agricultural and Farmland Protection Plan.
 - The County has an adopted Right to Farm Law, updated in 1998.
- **Jefferson County Farm Bureau** - <http://www.facebook.com/JeffersonCountyNYFarmBureau>
- **Tug Hill Tomorrow Land Trust** - <http://tughilltomorrowlandtrust.org>
 - Works with private landowners to protect the working farms and forestlands, wildlands, and natural and cultural heritage for the benefit of current and future generations.
 - Uses Army Compatible Use Buffer Program to protect farmland around Fort Drum from development; has completed 19 projects covering over 4,500 acres.
 - Conservation easements to protect land and limit development around the Tug Hill region; has protected 86 properties covering 15,000 acres.
- **Development Authority of the North Country** - <http://www.danc.org>
 - *North Country Value-Added Agriculture Fund* - Recently-created program offering gap financing for projects that establish, maintain, or expand an agricultural operation, or that provide facilities for the production, manufacturing, processing, warehousing, distribution or sale of crops, livestock, and livestock products. Available to applicants in Jefferson, Lewis, St. Lawrence, Franklin, Essex, Clinton, and Hamilton Counties. Loans of up to \$250,000 or 40% of the total project cost, whichever is lower. Minimum 10% of the total loan amount in owner/cash equity.
 - *Development Authority Value-Added Agriculture Program* - Demonstration program available to producers in Jefferson, Lewis, and St. Lawrence Counties that create value-added products for retail consumption; provides low-interest loans for expansion. The first round of applications targets maple producers to increase the production of syrup for sale in the marketplace. Loans of up to \$40,000. Minimum cash equity of 20% of the project amount.
 - *Farmland Drainage Program* - Low-interest loans to the farming community (in Jefferson, Lewis, and St. Lawrence Counties) in order to increase crop production yields through farmland drainage. Loans of up to \$20,000. Minimum cash equity of 50% of the total loan amount.
- **Farm Credit East** - <http://www.farmcrediteast.com>
 - Financial services cooperative for the agricultural industry in the northeastern U.S.

- *Note:* The main farm lenders in Jefferson County are Farm Credit East; and the USDA Farm Service Agency (especially for producers unable to get commercial credit - offers loan guarantees and subsidy programs).
- **NNY Agricultural Development Program** - <http://www.nnyagdev.org>
 - A farmer-led research, technical assistance, and outreach program for the agricultural industry in the six-county North Country Region.
 - Works with multiple organizations and funding agencies, including Cornell Cooperative Extension and Cornell University's Agricultural Experiment Station.
- **Madison Barracks Shared Use Kitchen** - <http://www.MadisonBarracksKitchen.com>
 - Jefferson County's premier commercial NYS-licensed 20C kitchen rental facility, fully equipped.
 - Provides shared space where small food artisans, commercial processors, and other local food entrepreneurs can efficiently manufacture their products.
 - Located in Sackets Harbor.
- **Adirondack Harvest** - <http://www.adirondackharvest.com>
 - A nonprofit community organization that aims to 1) increase opportunities for production and sale of high-quality food and farm products, and 2) expand consumer choices for locally produced healthy food.
 - Has developed and copyrighted a logo to identify products grown or made in the Adirondack region.
 - Maintains a Farm Fresh Foods Map showing farm stands, farmers markets, restaurants and stores in the Adirondack region.
 - Hosts workshops and trainings for farmers.

New York State

- **NYS Tug Hill Commission** - <http://www.tughill.org>
 - Works with local governments and partner organizations to support both the economy and the environment.
 - Has assisted the Land Trust in securing additional funding for purchase of development rights from farms surrounding Fort Drum.
- **NYS Department of Agriculture and Markets** - <http://www.agriculture.ny.gov>
 - Division of Agricultural Development aims to strengthen the viability and consumer awareness of New York's food and agricultural industry; includes activities and services in market development, business development and support.
 - *Specialty Crop Block Grant Program:* Funding to enhance the competitiveness of specialty crops, defined as "fruits, vegetables, tree nuts, dried fruits, horticulture, and nursery crops (including floriculture)."
 - *Organic Farming Development/Assistance:* Guidance in locating resources on organic agriculture and organically produced foods.
 - Additional funding opportunities announced periodically.
- **Pride of New York Program** - <http://www.prideofny.com/PONY/consumer/viewHome.do>
 - NYSDAM website with information on over 3,000 "Pride Of New York" members and their products.

- **New York State Energy Research and Development Authority (NYSERDA) -** <http://www.nyserda.org>
 - Offers objective information and analysis, innovative programs, technical expertise, and funding to help New Yorkers increase energy efficiency, save money, use renewable energy, and reduce reliance on fossil fuels.
 - Programs and funding opportunities for the agricultural sector - <http://www.nyserda.ny.gov/Energy-Efficiency-and-Renewable-Programs/Commercial-and-Industrial/Sectors/Agriculture.aspx>
- **North Country Regional Economic Development Council**
 - One of ten regional economic development councils in the state.
 - A partnership between state government, private businesses, higher education, and communities responsible for the development and implementation of regional economic development strategies.
 - Managed by the regional office of Empire State Development.

Federal Government

- **USDA Agricultural Marketing Service -** www.rd.usda.gov
 - Administers programs that facilitate the efficient, fair marketing of U.S. agricultural products, including food, fiber, and specialty crops; provides the agricultural sector with tools and services that help create marketing opportunities.
- **USDA Farm Service Agency -** <http://www.fsa.usda.gov/FSA>
 - *Farm Loan Programs:* Direct loans and loan guarantees to help family farmers start, purchase, or expand their farming operation; includes Farm Ownership Loans, Farm Operating Loans and Microloans, Emergency Farm Loans, Land Contract Guarantees, Loans for Beginning Farmers, etc.
 - *Biomass Crop Assistance Program:* Financial assistance to owners and operators of agricultural and non-industrial private forest land who wish to establish, produce, and deliver biomass feed stocks.
- **USDA Natural Resources Conservation Service -** <http://www.nrcs.usda.gov>
 - *Agricultural Management Assistance:* helps agricultural producers use conservation to manage risk and solve natural resource issues through natural resources conservation.
 - *Conservation Stewardship Program:* helps agricultural producers maintain and improve their existing conservation systems and adopt additional conservation activities to address priority resources concerns.
 - *Environmental Quality Incentives Program:* provides financial and technical assistance to agricultural producers to address natural resource concerns and deliver environmental benefits such as improved water and air quality, conserved ground and surface water, reduced soil erosion and sedimentation or improved or created wildlife habitat.
 - *Agricultural Conservation Easement Program:* provides financial and technical assistance to help conserve agricultural lands and wetlands and their related

benefits. (Note: This is a new program under the 2014 Farm Bill that consolidates three former programs - the Wetlands Reserve Program, Grassland Reserve Program and Farm and Ranch Land Protection Program.)

- **USDA New Farmers Website** - <http://www.usda.gov/wps/portal/usda/newfarmers?navid=getting-started>
- **USDA Rural Development, New York Office** - <http://www.rurdev.usda.gov/NYHome.html>
 - *Value-Added Producer Grants*: provides agricultural producers with matching funds for value-added ventures that will increase the return on their agricultural commodities; can be used for planning (e.g., feasibility studies, business plans) and/or working capital.
 - *Renewable Energy for America (REAP)*: grants and guaranteed loans to help agricultural producers purchase and install renewable energy systems and make energy efficiency improvements.
 - *Farm Labor Housing Program*: Direct loans and grants for new construction or substantial rehabilitation of safe, affordable rental housing for farm workers.

Other Ag Initiatives in and Around Jefferson County

- **ReEnergy Project** - biomass cogeneration project at Fort Drum
 - Began operation in early 2013.
 - Uses wood chips.
 - “Can serve as a catalyst to develop additional biomass energy projects...”
- **Biomass Production Research Plot** - SUNY ESF research plot on Belleville-Henderson School District property; growing willow for biomass production and added switchgrass trials.
- **Farmers’ Markets**
- **Agri-Tourism**
 - *1000 Islands Agricultural Tour* brochure - 1000 Islands International Tourism Council.
 - *Ag Tour website* (www.agvisit.com) - agri-tourism attractions in Jefferson County, through the Thousand Islands Regional Tourism Development Corp.
 - *Wine Trail* - Established an 87-mile wine trail with five wineries.
- **Jefferson County Community College**

Offers several college degrees related to agriculture including the Agri-Business AAS, Hospitality and Tourism AAS in Winery Management, Hospitality and Tourism AAS Marketing Concentration and the Culinary Arts AAS. The college also offers an online entrepreneurial course through the Small Business Development Center, and related business skills courses in the Ed2Go program. Course offerings related to agriculture and that support the goals and actions identified in this plan include:

 - Northern NY Agriculture
 - Grow Prepare Eat: Farm to Table
 - Horticultural Industry Applications
 - Agri-business Technologies

Marketing and Sales of Agricultural Products
Trends in Agriculture
Agriculture Laws and Regulations
Introduction to Winery Operations
Viticulture
Enology
Winery Marketing and Management
Internships in Agri-business and in Hospitality

BEGINNING/TRANSITIONING FARMER RESOURCES FOR VETERANS:

Sign up for our New York State Veterans in Agriculture Listserve: From the email address you'd like to use for your list subscription, send an email to NYVETSAG-L-request@cornell.edu and type the word "join" (without quotations) in the body of the message. The Small Farms Program and our partners will be using this forum to publicize events, resources, and opportunities related to veterans interested in farming in NYS.

Veteran-specific Resources in NYS. Go to our website for more information about our project and resources that may be helpful to veterans seeking careers in agriculture:
<http://www.nebeginningfarmers.org/projects/farmer-veterans/>

The Farmer Veteran Coalition. National non-profit organization "mobilizing veterans to feed America": <http://www.farmvetco.org/>

GENERAL RESOURCES FOR BEGINNING FARMERS

Get Local Help: It's always best to first ask questions to your local small farm agent since they are familiar with local zoning issues and regulations for your county. You can find your local Small Farms Cooperative Extension Agent by checking the county-by-county listing at:
<http://smallfarms.cornell.edu/contact/local-contacts/>

Getting Started? Visit the Beginning Farmers Online Resource Center. It can be overwhelming to start a farm, but this website helps you find answers to common questions, watch production videos and interviews with farmers, work through planning tutorials, find local people to help, and much more! <http://nebeginningfarmers.org>

Looking for local events/trainings? We highly recommend subscribing to our bi-monthly e-newsletter. It brings you statewide events, ag funding opportunities, new resources, and small farm related job or career opportunities every two weeks. Subscribe at
<http://smallfarms.cornell.edu/contact/e-news-sign-up/>

Financing/Grants/Loans. Everyone is looking for funding to help build and grow their small farm. We've created a section on the Small Farms Program website to feature a library of funding opportunities. Visit <http://smallfarms.cornell.edu/resources/funding/>

Guide to Farming in NYS. This Guide is an essential resource for new and existing farmers alike, providing answers to questions about taxes, business planning, labor law, zoning, regulations, marketing, funding opportunities and many other topics that farmers need to know. We update the Guide each year. To access the Guide, visit:
<http://nebeginningfarmers.org/publications/>

ENERGY EFFICIENCY AND RENEWABLE ENERGY PROGRAMS FOR AGRICULTURE

1. NYSERDA assistance to identify electric and natural gas energy efficiency measures for eligible farms and on-farm producers, including but not limited to: dairies, orchards, greenhouses, vegetables, vineyards, grain dryers, and poultry/egg. Farms must be a customer of a New York State investor-owned utility and contribute to the System Benefits Charge (SBC). This can be verified by checking the farm's current utility bills. Farms can request an energy audit. NYSERDA will assign a FlexTech Consultant to perform an energy audit at no cost for audits up to \$2,500. For more complex energy audits, exceeding \$2,500, cost-sharing by the applicant will be required. NYSERDA also has the Anaerobic Digester Gas-to-Electricity Program, where up to \$2 million in funding is available for the installation of anaerobic digester gas-to-electricity systems with a power generation capacity of 50 kW or greater fueled by digester gas from manure, agricultural waste, food waste and other wastes. Other funding programs include the Existing Facilities Program, Solar-Electric (PV) System and Solar Thermal Incentive Program (funding is available for the installation of solar PV and solar thermal (for hot water) system on farms, the On-Site (Small) Wind System Incentive Program, and the New Construction Program. The Commercial New Construction Program provides technical support to design teams and financial incentives to commercial and industrial building owners who are planning the construction of new and substantially renovated buildings in New York State.
2. The Cornell Small Farms program has the "NY Small Farm Energy Innovators: Energy Conservation and Renewable Energy Ideas for Your Farm" guide. The "Small Farm Energy Innovators" booklet describes how farmers can save energy and decide which renewable systems are right for their farm. Profiles detail the cost of installation, any grants or incentives available, amount of energy saved or produced, and where to go for further information. In addition to this guide produced by Northeast SARE, there are many other programs and information sources from Cornell on use of renewable energy on farms.
3. USDA NRCS EQIP On-Farm Energy Initiative. "NRCS provides the nation's agricultural producers with technical information and financial assistance that: Quantifies how energy can be used more efficiently to reduce input costs; Increases productivity per unit of energy consumed by equipment and lighting; and reduces air pollutants and greenhouse gas emissions caused when energy is generated for agricultural use. Through the EQIP National On-Farm Energy Initiative, financial assistance is available for site-specific energy analysis of eligible farmsteads and irrigation systems. With a completed AgEMP or other qualifying energy audit, eligible producers can apply for EQIP assistance for the purchase and installation of improvements for lighting, plate coolers, ventilation and fans, irrigation pumps, grain dryers, greenhouse improvements, maple syrup evaporators, heating and refrigeration units, insulation and building envelope sealing, and motor controls and variable speed drives."

**Jefferson County
Agricultural and
Farmland Protection
Plan
Background Information**

Adopted April 5, 2016

Contents

Appendix A. Summary of Programs Implemented Since 2002 Plan	2
Existing Plans, Programs and Initiatives Based from the 2002 Jefferson County Agricultural and Farmland Protection Plan.....	2
Appendix B. Farmer and Agri-business Input	7
Jefferson County Ag Plan Survey Results/Summary.....	7
Jefferson County Ag Plan - Farmers' Workshop Group Notes	23
Focus Groups and other Interviews/Meetings.....	25
Appendix C. Detailed SWOT Analysis.....	26
Details from Public Input on Strengths, Weaknesses, Opportunities and Threats	26
Strengths.....	26
Weaknesses	27
Opportunities.....	29
Threats	31

Tables

Table 1 - Identified Strengths Related to Agriculture	23
Table 2 - Identified Challenges Related to Agriculture.....	23
Table 3 - Identified Opportunities for Agriculture	24

Appendix A. Summary of Programs Implemented Since 2002 Plan

Existing Plans, Programs and Initiatives Based from the 2002 Jefferson County Agricultural and Farmland Protection Plan

The 2002 Agricultural and Farmland Protection Plan established a series of objectives and strategies to protect and conserve viable agricultural land and promote farming in the County. Since that time, the County, along with the agencies and organizations that support agriculture, have made great strides toward reaching goals called for in the 2002 Plan. Projects have been started ranging from developing the Dairy Profit Team concept, promoting County farming through the comfarmwithus.com project and creation of the Jefferson County Agricultural Development Corporation to guide the County's agricultural economic development. These programs have greatly benefited Jefferson farms and have helped position the County to being ranked #4 in the State for dairy production and # 9 for total value of agricultural products sold. Where many locations have experienced loss of their farm economies, Jefferson County has seen increases with more land used for farming and increased market values of products sold. Financial and technical assistance programs and other resources for farmers in Jefferson County are available through numerous local, state, and federal agencies and private organizations.

i. Promote Agricultural Protection Programs.

Progress has been made in promoting the existence of NYS Agricultural Districts and enrolling additional landowners in the Districts since the 2002 Plan. Approximately 24,500 additional acres of land have been added since then, bringing the County's Certified Agricultural District total to approximately 200,000 acres.

Jefferson County, in coordination with the American Farmland Trust and the Agricultural and Farmland Protection Board, designed a Purchase of Development Rights (PDR) program. Requests for proposals from landowners are on hold pending the identification of funds to purchase agriculture conservation easements.

The US Army, in cooperation with Ducks Unlimited, Inc and the Tug Hill Tomorrow Land Trust, has been operating the Army Compatible Use Buffer (ACUB) program for the past four years. This program purchases conservation easements near the boundary of the US Army's Fort Drum military post in Jefferson County. A total of ten parcels representing 1,935 acres have been protected through this program. Most of the land area protected is in agricultural use. Approximately \$3 million in Federal funds was utilized to purchase the easements.

The Development Authority of the North Country operates a tile drainage loan program that is serving to improve the viability of agricultural land. Since 2001, over 1,400 acres of farmland have been improved through this program at a total project cost of \$860,000.

Jefferson County Soil and Water Conservation District oversees the Agriculture Environmental Management (AEM) program to assist county producers with environmental stewardship to protect the natural resources of Jefferson County. In addition, the SWCD applies for funding annually through NYS Department of Agriculture and Markets, on behalf of county producers, to install a variety of Best Management Practices. These practices protect and enhance the natural resources of the County, in addition to assisting farms meet environmental regulations.

ii. Increase Educational Awareness Programming in Agriculture.

(1) Develop an educational outreach program using existing resources to educate agricultural and non-agricultural communities about what the social and economic value of agriculture and natural resources is in the County.

Home Grown Show- This weekly radio show, conducted by the County's Agricultural Coordinator utilizing a talk radio format, educates listeners on the importance of agriculture to their everyday lives. The show has been running since 2002. The show is available currently on Saturday mornings at 6am on AM 790 WTNY and "on demand" on the internet at www.790wtny.com. The show was recognized by former NYS Governor David Patterson for its contributions to informing the public about agriculture.

Cornell Cooperative Extension of Jefferson County Agricultural Newsletter- While primarily serving the agricultural public, this newsletter provides timely, well written informational articles about agriculture that often educates the farm community about the important role they play socially and economically in the lives of their surrounding communities.

Jefferson County Soil and Water Conservation District Newsletter and website- The Soil and Water Conservation District newsletter and website often feature informative stories about the importance of the abundant natural resources in the community.

www.comefarmwithus.com, was developed in 2002 to accomplish three goals. The first goal is to help promote Jefferson County's agricultural products and destinations to the community. The second goal is to attract new farms and agribusinesses to Jefferson County. The third goal is to provide important and timely information to the agricultural industry.

NNY Business Magazine Monthly: Agricultural Column- Since 2010, a monthly column appears in the magazine providing readers with an insightful examination of current agricultural issues.

Thousand Islands Agricultural Tour- Through a partnership between the Thousand Islands International Tourism Development Council and the Jefferson County Agricultural Coordinator's Office, a drive it yourself tour of agriculture in Jefferson County was created that lets participants enjoy and learn about the variety and

richness of agriculture in Jefferson County. People can visit the website, www.agvisit.com, to learn more.

(2) Continue to inform County officials about the economic importance of agriculture.

Through many of the methods described in (1) above, elected officials are continually reached out to inform them about agricultural issues. In addition, County Legislators serve actively on the Boards for Cornell Cooperative Extension of Jefferson County, Jefferson County Soil and Water Conservation District, Jefferson County Agricultural and Farmland Protection Board, and the Jefferson County Agricultural Development Corporation. In addition, members of agricultural organizations and agencies appear in front of the County Board of Legislators to actively engage the Legislators about agricultural issues.

(3) Educate Landowners about agricultural land use programs that are available in Jefferson County.

Through many of the methods described in (1) above, landowners are continually informed about agriculture issues. Another method used to provide opportunity for education is through the County's Land Use Workshop Series. Robert Somers of NYS Department of Agriculture and Markets has twice presented workshops on how land use laws interact with certified Agricultural Districts. In 2010, the series organized a session by David Haight of the American Farmland Trust on the Local Government's Role in Strengthening the Future of Agriculture.

iii. Support the Local Dairy Industry

Cornell Cooperative Extension of Jefferson County is constantly providing educational opportunities and demonstrations to keep farmers aware of new technologies and methodologies to maintain and improve the viability of the dairy industry. Included in these efforts is their Dairy Institute program, which works to train current farm staff to look forward towards an improving future.

Jefferson County Dairy Profit Teams Initiative Through the Jefferson County Agricultural Coordinator's Office, a grant was obtained to help local dairy farms implement the use of advisory boards to help the farm improve profitability and operating efficiencies, and look at new technologies for use on farms. Over seven farms participated in the County. After completion of this pilot program dozens of profit teams started on farms across New York State, the Jefferson County Industrial Development Agency provided further seed funding for more teams and the Development Authority of the North Country also started offering seed money for teams on a regional basis.

Sandy Creeks Watersheds Cow Comfort Grant Initiative- Through a partnership between the Jefferson County Agricultural Coordinator's Office, the Jefferson County Soil and Water Conservation District and the NYS Department of Agriculture and Markets, a grant program was offered to dairy farms in southern Jefferson County to help them improve their per cow milk production and milk quality by

introducing new technologies on the farm that improve the comfort and health of their dairy cows.

Support through Grant/Loan Opportunities - Great Lakes Cheese in Adams, NY built a new manufacturing operation on the same property of the old plant. The new plant doubled their capacity to manufacture cheese and increased their demand for milk.

iv. New Technologies and Product Development

(1) Promote agricultural research in Jefferson County and expand upon these efforts to encourage new product and market development in the region.

Willow Biomass Research- Cornell Cooperative Extension of Jefferson County, the Jefferson County Agricultural Coordinator's Office, Belleville Henderson Central School Agricultural Program and SUNY School of Environmental Science and Forestry partnered to establish a willow biomass demonstration plot at Belleville Henderson Central School. This demonstration plot led to attracting foreign investors into Jefferson County who purchased a farm in northern Jefferson County and have established Celtic Energy Farms. Celtic Energy Farms has obtained over 1,000 acres of land to plant to willow to supply the Re-Energy Black River Power Plant on the US Army Base at Fort Drum.

(2) Evaluate specific microclimates and soils in Jefferson County, especially along Lake Ontario and the St. Lawrence River, which may have the potential for alternative types of agricultural products.

NNY Grape Growers Association- While this initiative did not start under this name, the original group of private entrepreneurs who conducted the initial variety trials of cold hardy species of grapes have grown into the named association. Their initial efforts, to examine which varieties of grapes could be grown in northern New York and turned into products such as wine have yielded tremendous success. Currently, six wineries are operating and over 80 vineyards have been started. An 87-mile wine trail was created to help promote the regions new wine and grape industry.

(3) Research what types of agricultural products may be economically viable in Jefferson County.

Northern New York Agricultural Development Program. This program, run by a group of farmers with funding from New York State, has provided research funding for important initiatives that examine new opportunities or how to improve existing methodologies and techniques.

Distilleries – There are two micro distilleries in operation.

v. Capital Financing Programs

- (1) Develop a database of both public and private funding sources that landowners can gain access to that are less traditional sources of capital.

www.comefarmwithus.com- A section of this website is dedicated to providing information on funding programs available to the agricultural industry. The site is in need of revamping and updating.

- (2) Continue to support and increase monies available to be used as a capital fund to offer producers low interest rate loans to install tile drainage on their farms.

Development Authority of North Country- As noted earlier, the Development Authority of the North Country continues to provide a valuable low interest tile drainage loan program.

vi. Marketing

- (1) Promote Jefferson County as a place to develop other types of agricultural production enterprises.

Come Farm With Us Regional Farm Marketing Program- This regional marketing program actively recruited agricultural enterprises from across the Northeast, Mid-Atlantic and Mid-Western United States. Lack of funding sources has led to the program becoming inactive. While active, numerous farmers visited the North Country region looking for opportunities to start beef, vegetable, fruit, small livestock, poultry and other types of agricultural production operations. Probably the greatest success of this program was attracting Morris Northstar Hatchery into Jefferson County which is a multi-million-dollar high tech egg hatchery exporting broiler chicks.

- (2) Increase the marketing and promotion of locally produced products and businesses by creating new farmer's markets and encouraging greater use of existing markets.

In 2012, during the height of the July- September growing season, there were farmers markets every day except Sunday. Four days a week, there were multiple markets across Jefferson County. These markets are promoted through the Home Grown Show on AM790 WTNY, on the www.comefarmwithus.com website, through the Jefferson County Agricultural News Flash Network which is an email network throughout Jefferson County, and through the Local Food Guide published annually by Cornell Cooperative Extension of Jefferson County.

- (3) Provide education and training opportunities for producers of agricultural products in the process and techniques of marketing.

Both the Jefferson County Agricultural Coordinator's Office and Cornell Cooperative Extension of Jefferson County have provided training opportunities for farmers on the process and techniques of marketing. Training on using Facebook and other social media has been in greatest demand and numerous group and individual training opportunities have been offered to the public.

Appendix B. Farmer and Agri-business Input

Jefferson County Ag Plan Survey Results/Summary

43 survey responses

1. What Town is your farm located in?

Ellisburg - 7; Cape Vincent - 5; Clayton and LeRay - 4; Adams and Rodman - 3; Alexandria, Brownville, Henderson, Orleans, Philadelphia, and Watertown (town) - 2; Champion, Hounsfield, and Pamelaia - 1.

There were no responses from the towns of Lorraine, Lyme, Rutland, Wilna, Worth, Theresa, Antwerp, and the City of Watertown.

2. How long has your farm been in operation in Jefferson County under your family's ownership?

Range from 1 to 172 years, with an average of 47 years. 6 answered 100 or more years. 19 answered 50 or more years. 12 answered 10 or less years.

3. How many tillable acres do you:

a. Own? Range from 4 to 3,500 acres, with an Average of 321 acres

b. Rent? Only 16 of the respondents rent land. Ranges from 20 to 1,000 acres, with an Average of 450 acres (for the 16 that do rent land)

The average total tillable land (owned and rented land) is 489 acres.

4. Are you a full or part time farmer?

22 answered full-time, 21 answered part-time.

5. Approximately what percent of your household income comes from your farm operation?

About half of the full-time farmers said 75-100% of their income was from the farm operation while slightly less than half said it was 50-74%. Two full-timers said less than 25% of their income was from the farm operation and another two said it was 25-49%.

15 of the 21 part-timers said less than 25% of their income was from the farm operation while 3 said it was 25-49%, and another 2 said it was 50-74% of their income.

6. How many employees do you have working for you, including family members?

a. Full-time Total - 154 Average - 4

Range - 0 to 30 with 9 farms employing 8 or more full-timers

b. Part-time Total - 72 Average - 2

Range - 0 to 20, with all but 1 employing more than 6 part-timers

7. Have you enrolled your farmland in a Jefferson County Agricultural District?

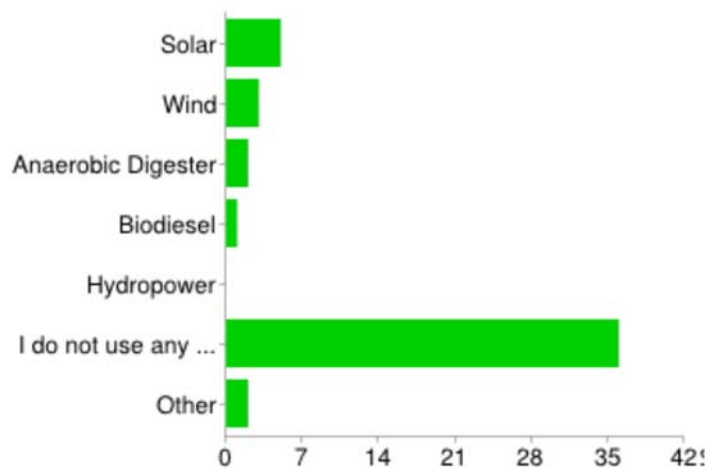
30 (70%) of the respondents answered yes.

8. Does any of the farmland you own or rent receive an agricultural value assessment?

22 (51%) of the respondents answered yes.

9. Do you use any of the following alternative energy sources on your farm?

36 (84%) of the respondents do not use any alternative energy sources. The most popular alternative source is solar (5), followed by wind (3). Two respondents use an anaerobic digester, while one uses Biodiesel and wood.



10. Is your farm conventional, organic, or natural certified?

34 (79%) of the respondents consider their farms a conventional operation. 5 called themselves Natural, and 3 were Organic certified.

11. How much financial investment have you made in your farm over the last five years?

17 (40%) of the respondents have invested less than \$50,000 in their farms over the last 5 years.

- 7 have invested \$50,000 - \$100,000
- 6 have invested \$100,001 - \$250,000
- 3 have invested \$250,001 - \$500,000
- 4 have invested \$500,001 - \$1,000,000
- 2 have invested \$1,000,001 - \$2,500,000
- 4 have invested \$2,500,001 - \$5,000,000

12. If you have internet access, is it adequate for your business needs?

All but 3 respondents said their internet access was adequate for their needs.

These three were located in Orleans, LeRay, and Cape Vincent.

13. Do you have adequate electrical service to your farm?

All but 2 respondents said they have adequate electrical service.

These two were located in Ellisburg and LeRay.

14. Is lack of access to three-phase power a barrier to growth on your farm?

7 respondents said lack of access to three phase power is a barrier to their growth.

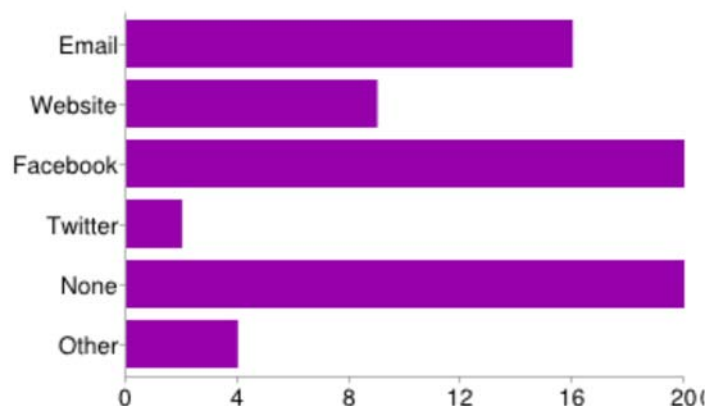
3 from Ellisburg, and one each from Adams, Rodman, Henderson, and Pamela.

15. Do you have an adequate supply of clean water for your farm's needs?

7 respondents said they do not have an adequate supply of clean water.

3 from Ellisburg, 2 from Cape Vincent, one from Henderson, and the last did not give a location.

16. What social media do you use to promote your farm to the public?



17. Will you be doing any of the following in the next five years?

19 Expanding my Farm

17 Adding new revenue streams

7 Expanding into value added production

11 Adding direct sales to consumers

7 Bringing in a younger family member

8 Begin transitioning ownership to a family member

0 Begin transitioning ownership to a non-family member

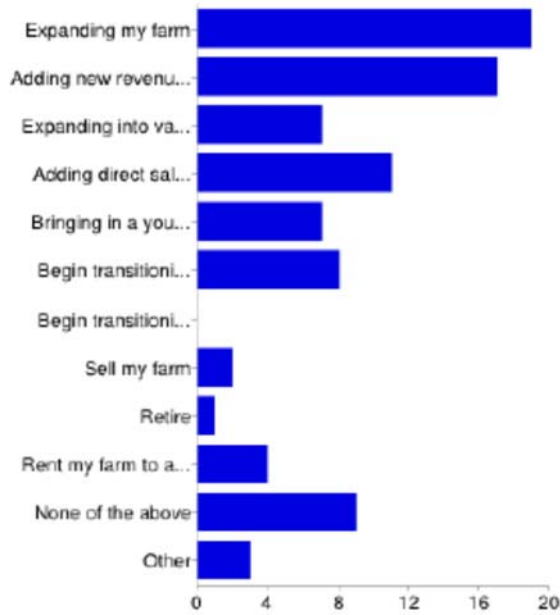
2 Sell my farm

1 Retire

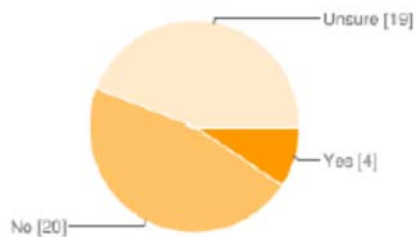
4 Rent my farm to another farm

9 None of the above

3 Other



18. Are you interested in selling or donating the development rights to your farmland to keep it forever available for agriculture or open space?



19. How important are each of the following issues to your farm operation?

The following scores represent the number of respondents that answered either “Very Important” or “Important” to each item. They are arranged in order from highest to lowest ranking score.

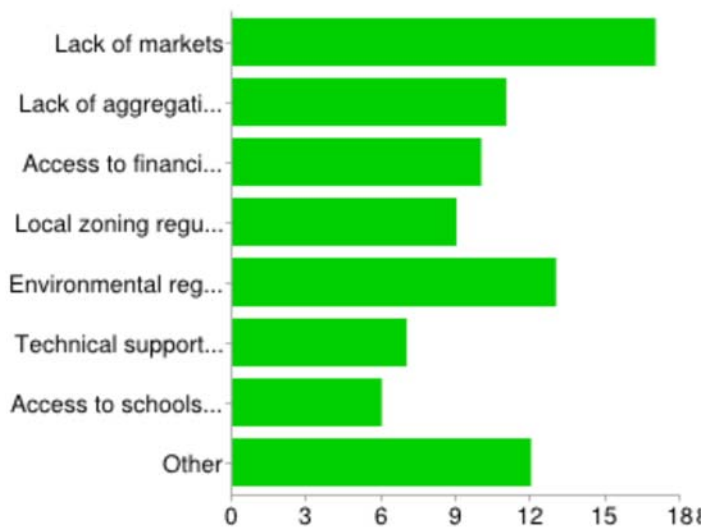
- 42 (98%) Quality of water
- 41 (95%) Water quantity
- 40 (93%) Real property taxes
- 40 (93%) Local boards understanding of land use issues
- 39 (91%) Production costs
- 38 (88%) Adequate community support for farms
- 36 (84%) Federal policies
- 35 (81%) Access to agri-services
- 30 (70%) High speed internet access
- 30 (70%) Availability of next generation farmers
- 29 (67%) Fuel costs
- 29 (67%) Lack of consumers willing to pay higher prices for local produce

- 29 (67%) Manure spreading restrictions
- 24 (54%) Availability and Cost of Farmland
- 24 (55%) Transportation costs or difficulty transporting products
- 24 (55%) Residential encroachment
- 24 (55%) Climate change
- 23 (53%) Availability of affordable or skilled labor
- 22 (50%) Development pressure
- 21 (48%) Conflicts with neighbors regarding your agricultural practices

20. What barriers are affecting your business?

- 17 - Lack of markets
- 11 - Lack of aggregation and processing facility
- 10 - Access to financial capital
- 9 - Local zoning regulations
- 13 - Environmental regulations
- 7 - Technical support for my business
- 6 - Access to schools and other public institutions to sell product to
- 12 - Other:

Answers included - consumer disposable income, time, neighbors, labor, and government regulations



21. Do you think more needs to be done locally to preserve farmland?

Yes - 31 No - 11

a. If yes, what do you think should be done?

- Answers included:
- Discourage large lot housing development (one house on lots greater than an acre).
- Establish a Farmland Land Trust to buy farms & lease/sell them to beginning farmers (young) with easement restrictions requiring them to stay in farm production.
- Preserve farmland in order to be able to feed our population.

- Ensure that what is now usable agricultural land will remain so and not become scrub land or unused land
- Re-activate agricultural land that has lain fallow for years to again become productive"
- "STOP GIVING MONEY TO DEVELOPERS FOR BUILDING HOUSING.
- Form networks with retiring farmers given access to new farmers to increase availability of land and the opportunity for mentorship
- Ag Districts
- Lower Land and school taxes.
- More state or county protection from local governments and seasonal residents who could care less if farmers can afford to keep their farms. In the last few years' land values have more than tripled on the heavy clay soils BECAUSE of #1 large farms desperate for land, #2 High commodity prices bringing in outside competition, #3 Amish who feel this land is a bargain, #4 nonfarm people buying land for hunting and recreation.
- Ag districts need much more black and white protection from local zoning boards and local government
- Payments to keep farmland forever in farming with tax caps
- Totally removing the tax burden from farm land and putting it all on housing would be the next option."
- Zoning that favors land use management.
- Before a residential development is started the location of the poorest quality farmland should be considered for the siting.
- We need access to selling our development rights from our farm land.
- Less housing developments
- Make forever farm district
- Small farms need more protection due to the fact most everything g here is geared to large crop and dairy farms and economy of scale. The price of farmland will still be driven by the market but if the market is being driven by one type of Ag producer, (dairy and crop at the moment), then it will be increasingly difficult for alternative Ag producers to start or expand. At the rate it is going now can we expect to see only ten large farms occupying all the better farm land in 10 years?
- Small farms need more protection due to the fact most everything g here is geared to large crop and dairy farms and economy of scale.
- The price of farmland will still be driven by the market but if the market is being driven by one type of Ag producer, (dairy and crop at the moment), then it will be increasingly difficult for alternative Ag producers to start or expand.
- Lower property taxes for farmland.
- Development needs to stay in the city and local villages. Too much land is being destroy with new housing and business, while there is both land and buildings available in the city and villages.
- Federal and state regulations, and estate taxes
- Manure spreading is something the public needs to get educated on.
- Give more tax breaks for farms

- Taxes should reflect actual use not highest potential use
- Land with poor access should be reflected in tax"
- Lower taxes
- Farmland needs to be preserved, for future generations, to protect where our food is grown, and for the benefits of wildlife.

22. Do you think more needs to be done locally to promote agriculture?

Yes - 33 No - 8

a. If yes, what do you think should be done?

- Promote local products for a strong local economy which can stand its own.
- Maintain current efforts.
- Continued outreach and education on the how's and why's of modern agricultural practices
- Through internet & other media inform Fort Drum personnel about existence & offerings of local farmers.
- Promote agriculture in order to educate the public of the need preserve farmland in order to be able to feed our population
- To change attitude and be willing to pay more for local food.
- People who live in towns, village, and cities have absolutely no idea what goes on out in the agricultural areas. There needs to be some way to connect the two in a very public nature.
- Too often, the term 'farmer' still carries a negative image
- We need to do more to help growers in these hard times as well as when we have a natural occurrence like the ice and cold weather last year.
- HE TAXES ARE TOO HIGH AND THE MILK PRICE IS BACK IN THE DARK AGES THANKS TO CORNELL TAKING AWAY PARITY. WE COULD SAVE A LOT OF TAX DOLLARS IF WE SHUT DOWN CORNELL, SINCE THEY ARE THE ONES THAT HAVE DESTROYED NEW YORK AGRICUTURE
- There needs to be more markets and hubs to increase the availability of local foods at restaurants in the area
- Educate youths.
- People are very concerned about where their food comes from so state or county support for year round markets in any shape or form would be very welcome
- TV or radio commercials or billboards to educate non-farm people about why farming is critical to our region and the repercussions of losing it.
- More promotion of both current and historical presence of agriculture in and around our community.
- Promote locally produced farm products and value added products in local and larger 'big box' stores.
- Tell the story of the modern farm in media
- More agricultural education for school children
- FAA can help more with promotion of farming
- More needs to be done for veterans interested in Ag.

- Many people are so far removed from the farm that we need to continually educate the public as to how and why we do what we do.
- Marketing - educating the public.
- Try to get people to understand what country living means.
- Local farm market should be encouraged
- incentives so that young people will want to make agriculture their way of life after leaving school or college, even it's on a part-time basis or as hobby farmers.
- Maybe a quick "Meet the farmer" interview and tour of some local farms to place a face with a name. These could be in the paper or better yet on the news. The Farm Bureau pieces were very nice
- Farms (not the JCIDA) should organize to do more education and promotion of agriculture to our neighbors and customers.
- We should be educating small children in our schools about agriculture. Agriculture does a good job talking to agricultural professionals, and adults. We need to regularly visit the preschools and elementary schools on production, farm diversity, and how we care for our environment.

23. Will your farm need additional land in the next 5 years?

2 - Yes, and I believe I will be able to purchase or rent land to meet my farm needs

16 - Yes, but I am not sure there will be enough land available to purchase or rent

24 - No, I will not need to purchase or rent additional land for my farm needs

24. Would your farm benefit from having another USDA inspected and certified meat processing facility within 50 miles?

Yes - 26 No - 17

25. What are your top three immediate business needs?

14 responses included Market issues (access, stability, additional)

13 responses included references to labor

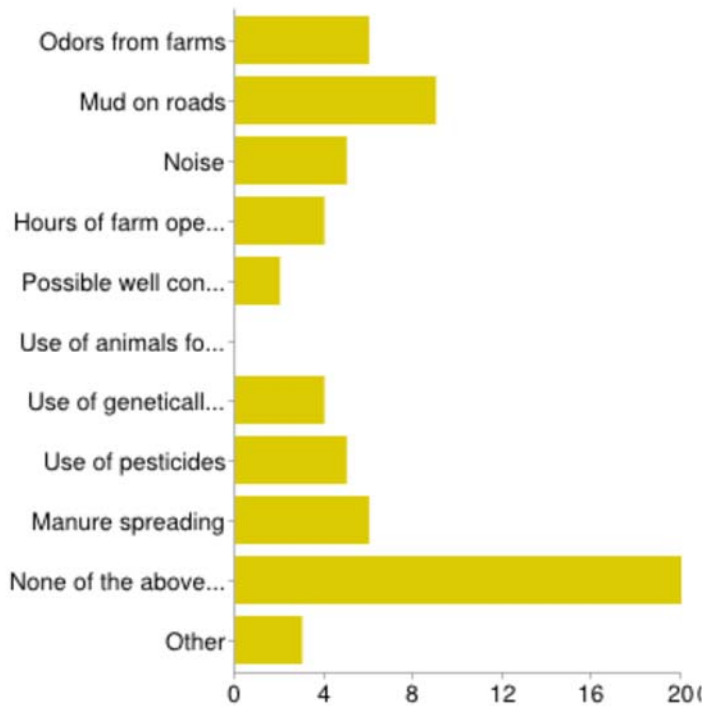
7 responses mentioned the following: Access to capital, Prices, Processing facilities, Tax relief, and some form of technical assistance

5 responses mentioned government or regulatory relief

26. Please let us know if you have experienced any of the following complaints from neighbors or the public regarding your farm operation:

20 (47%) of the respondents said they have not experienced any complaints from neighbors.

The most often cited complaint was Mud on roads (9) followed by Odors and manure spreading (6 each), and Noise and Pesticide use (5 each).



27. How do you feel about the effectiveness of the following Farmland Protection Strategies?

The following scores represent the number of respondents that answered either “Very Beneficial” or “Somewhat Beneficial” to each item. They are arranged in order from highest to lowest ranking score.

- 42 (98%) Education programs about farming for the non-farm community
- 39 (91%) Right to farm laws
- 38 (88%) Farm friendly local zoning that allows a variety of agriculture-related uses on one property
- 34 (79%) Incentives for farmland to be preserved, including tax incentives
- 33 (77%) Limitations on non-farm development in productive farm areas
- 27 (63%) Purchase of development rights (PDR) programs
- 22 (51%) Lease of development rights (LDR) programs

28. How do you feel about the effectiveness of the following Agricultural Economic Development Strategies?

The following scores represent the number of respondents that answered either “Very Beneficial” or “Somewhat Beneficial” to each item. They are arranged in order from highest to lowest ranking score.

- 38 (88%) Marketing assistance
- 38 (88%) Development of processing facilities
- 37 (86%) Local branding for products
- 37 (86%) First time farmer financing programs

37 (86%) Additional programs to promote locally-grown farm products

33 (77%) Farm business planning assistance

29. Are there any new programs that should be developed regarding agricultural opportunities? Please describe:

- Apprentice programs on local farms funded by source other than the farmer.
- Assistance in establishing paperwork/licensing for marketing your product- What needs to be done to attend markets? Where does one achieve these certificates? etc.
- Better partnerships between producers and processor facilities.
- Pomology (a branch of botany that studies and cultivates fruit)

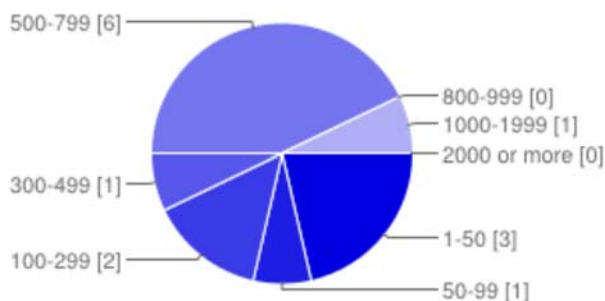
30. For the Specific Sector Questions, the following number of responses were received from the various sectors identified in the survey:

Sector:	Yes, primary	Yes, but not primary
Dairy	14	0
Beef Cattle	3	4
Vegetable, Fruits, Grapes, Hops	11	3
Small Livestock/Poultry	6	4
Commodity Crop	4	10
Other	10	

31. Are you a dairy farmer?

Yes, Primary	14
Yes, but not primary	0
No	27

32. How many cows do you milk?



33. What are your plans for the next five years?

- 12 - Increase milk production per cow
- 9 - Increase herd size
- 8 - Increase farm acreage
- 3 - Add or expand dairy beef production
- 3 - Add or expand cash crop production
- 1 - Add a satellite farm
- 1 - Other

34. Are you considering using robotic milkers on your farm?

Yes - 4 No - 5 Unsure - 5

35. Would a new dairy processing facility in the County be beneficial to your farm operation?

Yes - 9 No - 2 No Opinion - 2

36. What actions do you feel will help the Jefferson County dairy industry the most?

- Education to improve neighbor relations.
- Limit any new laws the restrict ag. Or hurt businesses in general.
- Greater number of and competition between milk buyers.
- As a new dairy processing facility is a joke. First should be price paid to farmers. Cost plus investment plus living. County wasted money on great lake cheese. Where is the farmer pay? You also have h.p.hood who is slowly ending operations. No new plant needed. Take care of the two you have left. Farmer pay first!
- A stable price for the milk.
- Somehow if we can all get together and on the same page. There is power in numbers but the numbers must have the same voice.

37. Are you a beef cattle farmer?

Yes, Primary	3
Yes, but not primary	4
No	35

38. How many animals are you currently raising for beef production?

1 to 50	3
50 to 99	3

39. Do you currently use a USDA certified and inspected processing facility?

Yes - 3 No - 3

40. If yes, does it meet your needs?

Yes - 2 No - 1

41. What actions do you feel will help the Jefferson County beef cattle industry the most?

- Continue to expand USDA beef processing facilities, especially in Jefferson County
- An auction barn to serve western Jefferson County
- A closer USDA plant and a year round farmer's market.
- Lack of close certified processing, both conventional and organic.
- Being able to source local dairy steers for a NY State beef program.

42. Are you a Vegetable, Fruits, Grapes, or Hops farmer?

Yes, Primary	11
Yes, but not primary	3
No	26

43. Estimate the acres of each of the crops you grow. (Answer all that apply)

	Total	Average	Range
Vegetables	55.6	5	0.1 to 22
Fruits	10	1.4	0.1 to 5
Grapes	22.1	5.5	0.1 to 10
Hops	1	1	(only 1 grower)
Other	10	2.5	

44. How do you sell your crops?

- 10 - Direct to consumers through a farm stand or on-farm store
- 6 - Wholesale to retailers
- 4 - Direct to consumers through Community Supported Agriculture (CSA)
- 4 - Direct to consumers through Farmers' Markets
- 3 - Sell to winery, brewery, and distillery
- 3 - Use crops in my own value added production
- 3 - Institutional buyers such as a restaurant
- 2 - Direct to restaurant or other food establishment
- 2 - Retail outlet such as grocery stores
- 3 - Other

45. How do you currently market or advertise your products?

- 9 - I produce my own marketing materials such as brochures, flyers, pamphlets
- 7 - I advertise using - Social media
- 6 - I advertise using - Print publications
- 5 - I do not advertise at all
- 3 - I have a webpage for my business
- 2 - I advertise using - Online publications
- 1 - I purchase professionally designed marketing materials
- 1 - I advertise using - Television ads
- 1 - I advertise using - Radio ads
- 3 - Other

46. Do you plan to further diversify your crops?

Yes - 9 No - 7

47. If yes, what do you plan to diversify into?

- Beef
- More uncommon fruits
- Organic meats: Chickens, pigs and rabbits
- Hops
- Would like to add greens, root crops, and eventually fruit.
- Add on more acreage of more varieties

48. Do you plan to build high tunnel greenhouses on your farm?

Yes - 5 No - 10

49. If yes, how many are you considering?

(This question was not phrased properly in the online survey. It was given a yes-or-no answer type when it should have allowed a number to be entered.)

50. What actions do you feel will help the Jefferson County vegetable/fruit/grapes/hops industry the most?

- Promote the Cold Hardy Grape Varieties
- Local processors, if they are under ag & markets, should be required to buy 51% of their product locally.
- Alternative methods for producing fruits and vegetables. Currently I have a greenhouse and a high tunnel. Have available more local professionals related to the industry. I currently have to contact Cornell staff for questions related to my raspberry crop in the high tunnel and outside. Also allowing more signage to be used when selling direct to consumers. Are there contacts made to see if a processor or manufacturer could be interested in locating to the area? I have not seen anything lately. Other counties seen to be making at least more headlines.
- Provide a hops harvesting machine
- Further interest in buying local/know your farmer.
- County or City have an Oktoberfest with local produce only

51. Are you a Small Livestock or Poultry farmer?

Yes, Primary 6
 Yes, but not primary 4
 No 33

52. How many head of the following do you raise?

	Total	Average	Range
Hogs	2,014	503	3 to 2,000 (one farm with 2,000. Others 3 to 8)
Sheep	130	43	10 to 100
Goats for Dairy	0	0	
Goats for Meat	95	32	10 to 65
Alpacas/Llama	0	0	
Laying chickens	766	153	6 to 700
Broiler chickens	3,105	1,035	5 to 3,000
Exotics	2	2	(one farm with 2)
Other	18	18	(one farm with 18, unspecified other)

53. In the next 5 years do you plan to increase the number of animals you raise for the following? (Estimate the number you plan to increase by):

	Total	Average	Range
Hogs	524	131	6 to 500
Sheep	80	27	10 to 50
Goats for Dairy	5	5	5
Goats for Meat	120	30	5 to 75

Alpacas/Llama	0	0	
Laying chickens	135	67	35 to 100
Broiler chickens	1,050	525	50 to 1,000
Exotics	0	0	
Other	42	14	(10 beef, 20 rabbits, 12 unspecified)

54. What markets do you sell your products to?

- 7 - On farm sales of products
- 6 - Freezer trade - direct to consumer selling quarters, halves, whole animals
- 6 - Eggs sold direct to consumer
- 5 - Cuts of meat USDA certified/inspected to consumer
- 2 - Farmers' Markets
- 1 - Cuts of meat to food establishments
- 1 - Cuts of meat to retail shops
- 1 - Community Supported Agriculture (CSAs)
- 1 - Products made from wool, hair direct to consumer
- 1 - Eggs sold at farmers' markets
- 1 - Eggs sold to retailers
- 2 - Other

55. How do you market your products?

- 4 - I do not advertise at all
- 4 - I produce my own marketing materials such as brochures, flyers, pamphlets
- 4 - I advertise using - Social media
- 3 - I advertise using - Print publications
- 3 - I have a webpage for my business
- 2 - I advertise using - Online publications
- 2 - I purchase professionally designed marketing materials
- 0 - I advertise using - Television ads
- 0 - I advertise using - Radio ads
- 2 - Other

56. What actions do you feel will help the Jefferson County small livestock and poultry agricultural industry the most?

- Making the buyers understand that locally raised farm products are better than imported store products
- More processing facilities for USDA inspected meats, more markets, and more marketing for small farmers to join together to fill larger orders
- More processing facilities- facilities that will take smaller quantities- more frequently- assistance with achieving the certifications necessary to sell legally
- Marketing - just bit by bit telling the story of small producers and the facts of nutrition of other products than beef or chicken and of the nutrition facts of meats produced locally, naturally.
- Lower taxes, especially school
- More promotion of products and practices

- Need young people who want to shear sheep
- Branding our region, our ag community, and natural resources

57. Are you a Commodity Crop farmer?

Yes, Primary	4
Yes, but not primary	10
No	29

58. Do you plan to increase, decrease, or maintain the same acreage of these crops over the next 5 years?

	Increase	Decrease	Remain the same
Corn	3	0	6
Soybeans	2	0	5
Hay	4	1	7
Small Grains	4	0	5
Other	2	0	4

59. What will have the greatest influence on your decision about changing your crop acreage?

- 5 - Crop price
- 4 - Land Availability
- 2 - Input costs
- 2 - Other (Profit, and Age)

60. Are there adequate markets for your products?

Yes - 11 No - 3

61. What actions do you feel will help the Jefferson County commodity agricultural industry the most?

- Increase of current commodity prices.
- Building a large commodity grain milling and shipping facility

62. If your farm includes honey production, how many pounds do you sell...

Direct to consumers - Three responses: 100 lbs., 80 lbs., less than 10 lbs.
 To retailers - 0
 Wholesale - 0

63. If your farm includes Christmas trees, how many acres does this include?

0

64. If your farm includes maple products:

- How many gallons of syrup do you produce per year? - One answered 20, noting this will increase in 2015
- How many acres of land is used in maple production? - One answered 5 acres, noting this will increase in 2015

65. If your farm does not include any of the products we've mentioned so far in this survey, please describe what you grow, raise or produce here:

- Milk some beef

- At this time, I am more a landowner, retired farmer and farmer at heart than active farmer. I have standing hay which I sell to a neighboring farm.
- Grapes and pumpkins
- Crops for my own use ... hay, corn silage
- MILK, HAY, BALEAGE
- Dairy
- U Pik strawberries, raspberries, Sweet Corn
- Apples
- Wood

66. If you have any additional thoughts about farming in Jefferson County, please feel free to include them here. We are especially interested in hearing your ideas about specific programs and projects you feel need to take place to enhance agriculture and farmland protection in Jefferson County.

- Labor training and regulation compliance are to large areas that will always have limiting influence on farming.
- I like Cuomo's great initiative. No taxes on income no taxes on property no fees. The only thing he added that sounds good is grants to operate with no payback. That would make Jefferson County the best place to operate a business for 10 years."
- Thank you for your efforts we enjoyed the meeting last night at CCE
- All farmers want to keep farmland as farmland, but when it comes times to retire - selling your land for development often does not look so bad.
- More social events on farms i.e. weddings, birthday parties. Bring the non-farmer to the farm. Yes, I know it's already been done, make it a bigger deal!
- Ag. in the classrooms
- We have farmed in three different states. Farmers are connected to the land. They will do anything to preserve their land. This includes selling off lots or parcels of the farm to preserve as much of the land as possible. Joseph H. Geiser. 5665 County Route 14 Chase Mills, New York 13621 St. Lawrence County 315 322 4354
- Farmers need higher prices for their products. These prices need to increase when the costs of inputs raise.
- I think if you get out and see other areas we are very fortunate here that we aren't experiencing the neighbor problems that big cities close to farming communities can create. We have our share of headaches but overall we all do a great job in a friendly environment.
- I feel it very important that our region invests in Ag infrastructure. We should be looking to invest in a large USDA meat processing facility (100 hd beef, 500 hd hogs, 1000 birds daily production) a large scale feed facility (roasted soy, processed grain, corn, soy) to take big volumes of grains in and re market and a specialty food facility (further cooked products). One or all of these projects would help support our Ag-economy and surrounding farms. Agriculture communities are severely shrinking in the US. Consumers are getting farther away from their food source. Let it not be us, let's keep our heritage and our strong farm economy.

- You did leave out the equine businesses in the area. There are perhaps over a dozen equine businesses in the county.

Jefferson County Ag Plan - Farmers' Workshop Group Notes

Held on November 5th, 2014

Table 1 - Identified Strengths Related to Agriculture

Strength	Priority Votes Received
Adequate Water	4
Change of Seasons	3
Proximity to Markets (Boston, NYC)	2
Room for growth of beef industry	1
Fort Drum - diverse markets	
Relatively inexpensive land	

Table 2 - Identified Challenges Related to Agriculture

Challenges	Priority Votes Received
Town government doesn't understand the needs of agriculture	3
Assessments, taxes, and PILOTs	3
Lack of 3-phase power	2
Lack of internet	2
Traffic - speeds, impatience with farm vehicles	2
Farmland values increasing Amish willing to pay more Southern Co. farmers moving north	2
Concentrated ownership of large farms	2
Restrictive local regulations	1
Some towns are not farm friendly	1
Urban sprawl or attitude of new residents	1
Condition of town and county roads	1
Farmers pay a higher percentage of taxes than 10 years ago	1
Lack of animal processing facilities Beef Other small animals	1
Competition for farmland Availability Price	1
Little information about market opportunities	1
Attitude of neighbors towards agriculture	
Growth around Fort Drum - not going away	
Passing on to next generation Old guard waits too long	

Lack of cooperation between small farms For the benefit of many	
Labor and immigration rules Can't expand without reliable labor	

Table 3 - Identified Opportunities for Agriculture

Opportunities	Priority Votes Received
Agri-tourism	4
Buy local promotion	3
Get dairy and wine producers together, wine and cheese	2
Programs to improve marginal soils	1
Mentoring program - match old farmers with new farmers	1
Aggregate produce for larger markets	1
Education of local officials	
Cost of Community Services Study as an educational tool	
Form plans to pass on to next generation	
Improve local wine distribution system (statewide)	
Cooperative marketing of vegetables	
Maple products - expansion	
Food hub	
Extension of growing season - Hoop and Green houses	
Indoor/year-round farm market	

Vision for the future...In the future, agriculture will be:

- Diversified
- Adapting to a changing climate
- Profitable
- Cooperative among small farms, using marketing and sales to make more profitable
- Have a better informed public, knowledgeable about their food supply
- Accessible to more open Canadian markets

Focus Groups and other Interviews/Meetings

The following focus groups or interviews with ag-businesses were conducted to learn more about the strengths, weaknesses, opportunities and threats facing agriculture in Jefferson County. The results of these focus groups and interviews are included in the SWOT chapter of this Plan.

CAFO Farms

Great Lakes Cheese

Tug Hill Tomorrow Land Trust and Fort Drum ACUB Program

Agri-businesses

Agriculture Economic Development

Individual farm businesses including dairy, agri-tourism and vineyard

Jefferson County Agricultural and Farmland Protection Board

Jefferson County Agricultural Agency Round Table

Appendix C. Detailed SWOT Analysis

Details from Public Input on Strengths, Weaknesses, Opportunities and Threats

Strengths

- Farmland resources
 - Large contiguous areas of productive soils¹
 - Good climate for agriculture
 - Inexpensive farmland
 - Farmland available
 - Availability of farmland
 - Good Water supply
- Farm Infrastructure Exists
 - Agribusiness - suppliers, dealers still exist - large value-added businesses and supply chain supports ag
 - Technical assistance, loan funds available, support organizations and ag infrastructure intact/new farmer loans and programs
 - Educational infrastructure, support for Ag
 - Large Web presence for Ag - ComeFarmWithUs url
 - Development of beverage industry - wineries, breweries, distilleries - with State support
 - Supportive Regional (REDC)
 - Government support for agriculture is very strong/supportive community
 - Railroad transportation access
 - Agritourism support
 - Farmers' markets exist
- Development Pressures
 - Not much development pressure in major farming areas, relatively stable land prices recently, but it is changing
 - Limited amount of Ag conversion compared to other areas
 - Good communications between agencies and with farmers - County government, agencies, and farmers
 - Compatible military uses
 - Population density - makes for more market access
 - Impact of Fort Drum is positive - consumer demand
- Location - market access/proximity to Canada/market access
- Diversity of commodities - dairy, cash crops, livestock, more diversity of farm types
- Fourth largest dairy county - milk production up 20%, acres in production is increasing, (with fewer farms)
- Quality of milk is high
- Money from Great Lakes watershed

¹ Highlighted items were those identified as priority by the farmers who participated in the workshop. Note also that this list records comments from all public input sources, including those that were brought up by an individual. Inclusion on this list represents the full range of comments or observations made. See SWOT, page 51 to see the priority SWOT items as that list represents a consensus of opinions.

- Progressive thinking farmers - also very good at adopting technology
- Support for farming in schools
- Use of biofuels, bio-digesters, renewable energy (including landfill)
- Increase in Amish population - bringing back productive ag lands
- Acceptance of farm practices by most communities
- Opportunity to use marginal land for grazing, livestock
- Young people interested in Ag/more entering as a career
- Last spot in the state where Ag expansion is possible, and happening
- Relatively low cost of power
- Area farmers very good at adopting technology
- ACUB program
- Fort Drum biomass electric generator plant
- Some well-known regional brands exist (such as 1000 Islands)
- Right to Farm law in County
- Lots of seasonal homeowners in Jefferson County creates increased demand for ag products

Weaknesses

Labor issues

- Immigration issues with proximity to border
- Issues finding and keeping quality labor

Regulations

- Environmental regulations, Regulatory environment
- Concerns over potential future regulation of manure spreading
- Maintaining farm-friendly land use practices (Farm friendly land use laws are in place, but often overlooked)
- CAFO regulations - use of spent grains for feed
- OSHA regulations
- Food Safety Act - unknowns make farmers uneasy
- Milk processors may require more tracking of farm activities in the future
- Regulations are not set, moving target and this puts stress on farms
- Town government doesn't understand needs of agriculture
- Tariffs - into Canada

Competition for Land - Increasing pressure for Ag land, availability of Ag land between farmers

Lack of ...

- Livestock processing for large and small animals lacking
- Need regional bottling of maple products
- Lack of new markets
- Lack of aggregation/distribution of products NYC is far away/ Lack of efficient access for farmers to get produce to market - especially important for small farmers
- Lack of local branding for county/region not cohesive
- Lack of funding for alternative and non-dairy farming (lenders don't get it) - lack of capital
- Lack of start-up capital for new/young farmers
- Lack of competitive buyers for cattle, processing, finishing means prices are \$0.15 lower than other areas
- Lack of enough ag business planning, especially for small farms
- Lack of internet county-wide
- Lack of information on marketing opportunities

- Lack of understanding of agriculture as a good career limits young people from entering ag as a profession
- Lack of interaction of agriculture and children leads to an uneducated populace
- Lack of efforts to promote agriculture locally
- Lack of right to farm laws locally to protect farming operations

Attitudes and Conflicts Attitudes Bring About

- Fewer people realize where food comes from
- Lack of community support for farmers
- Perception that “Big farms are bad”
- Negative attitudes about agriculture among non-farmers
- Farmer/non-farmer conflicts
- Large vs small farm issues and attitudes
- Agriculture and farmers are highly fragmented and segmented and don’t work together cooperatively
- Lack of familiarity about agriculture on the part of non-farmers builds on negative perceptions Fort Drum turnover - requires ongoing education of residents
- Regulators have enforcement attitudes that are hard line rather than helpful.
- Apathy of farmers to get involved with towns or farm organizations.
- Lack of cooperation between small farms
- Lack of farm friendly zoning and local regulations

Aging and fewer farmers

- Dairies lack transition/succession plans
- Lack of understanding about land use and farm issues

Development Pressures

- Conversion of farmlands for residential and commercial uses
- Fort Drum is driver for sprawl and development pressure
- Conversion - adjacent to Fort Drum, marginal areas around the edges, municipal water coming in (Southern part of county), traffic is a major concern of conversion
- Land availability under pressure, and land prices rising (lack of land availability and affordability)
- Road traffic issues and conflicts between farm and non-farm traffic/roads are stressed
- Signage requirements/issues along the Scenic Byway are not business friendly and hurt agri-tourism efforts
- Water and sewer infrastructure that has been extended into farm areas brings conflict and promotes sprawl

Farm/Farmer Technical Support

- Harder for support agencies to get funding, less money for staff
- Need some specialists for some growing sectors (veggies), but not enough need to justify additional staff
- Little infrastructure for non-dairy Ag
- Harder for small farms to get financing

Agri-tourism

- Not a lot of family friendly tourism opportunities in County now
- Insurance liability for agri-tourism is an issue

General Farm Issues

- Not all farms are in NYS Agriculture district
- Not all farms receive NYS ag value assessment
- Consistency of products varies
- Dairy price volatility

- Cost of doing business in NYS - production costs
- Ag producers can't access low cost power (but processors can); Cost barriers to 3-phase power/access to 3-phase power
- Manure management - more manure, less land/threat of regulation of manure spreading. Limited land resources for manure management which limits expansion possibilities for dairy farms
- Taxes and assessments are high
- Aging of large animal vets may make this service more difficult to access in the future
- Concentrated ownership of large farms
- It is hard to attract people to northern New York due to climate
- Some farmers worried that money and program support for non-dairy efforts will adversely affect the dairy industry
- Farmers markets in the lake/river area are not robust - they are too spread out

Opportunities

Attract more food processing

- All around, especially USDA inspected meat processing facilities, and hubs to aggregate and process food products from smaller farms
- Food hub for distribution/aggregation/efficient access to distant markets
- Improve wine distribution
- Expand maple production
- Add more milk processing capacity
- Meat processing

Education and Awareness

- Opportunities for Ag education for next generation - elementary schools
- Start mentoring program to match old and new farmers
- Educate elected officials and assessors
- Farmers have to come together to support all segments
- Provide education on role of technology in helping farms be sustainable
- Engage highway crews with ag landowners when road work is being done
- Initiate proactive steps for BMP instead of it being forced on farmers
- Start internship program for ag with area colleges
- Educate farmers about new technologies (such as robotics)
- Institute a pomology program
- Technical assistance to help farmers diversify farms
- Encourage farmers to use more renewable energy
- Training and assistance in farm succession and transfer
- Education programs on organic/GMO operations
- Mentorship and apprenticeship programs
- Educational outreach to public, youth and elected officials
- Education programs on organic/GMO operations
- Get farmers involved

Marketing, Local Branding and Buy Local Programs

- Agritourism growth - cheese trail to compliment wine trail/farm stays and farm to table
- Buy-local promotion, indoor and year-round farmers market

- Local branding and buy local programs
- More marketing - especially Cooperative marketing of vegetables/more cooperation overall
- Get dairy, wine and cheese together
- Work to help recognize role agriculture plays economically in County
- Have positive spokesperson for Ag
- Market the positive side and role of ag in the county
- Start online market for small farmers
- Start co-packer operation
- Develop new markets
- Promote county as a good place to live and work in agriculture

Profitability, Value Added and Diversification Programs

- Value-added dairy - cheeses, butter patties/beef
- Grain fed beef
- Increased milk production per cow
- Push for beverage industry in NYS, beyond wine-only (sweet reds, beer, distillery)
- Wineries are becoming event centers
- Hoop houses to extend season, with labor resources
- Mechanical harvesting - vegetables
- Hop harvester
- Market phosphorus by-product instead of as waste
- Promote NYS funding for anaerobic digesters
- Promote willow for biomass
- Offer incentives for cow comfort
- Promote distilleries
- Promote dairy beef
- Promote aquaculture
- Develop new markets first, then promote as farming opportunity
- Better/expanded use of the "Pride of NY" program, - revitalize this program
- Have central location for farmers market
- Have a mobile farmers market that goes to campgrounds
- Include ag tourism in 1000 Island tourism programs
- Aggregate wine/cheese/brewery into a consolidated trail map
- Expand commodity crops (malt barley, cereal rye, red spring wheat)
- Grain drying operations
- More direct sales opportunities
- Improve water quality to improve milk production
- Programs to enhance groundwater quality and quantity
- Grow internet and communications infrastructure

Assistance with Regulations

- Clarification of Ag and Markets laws - education

Agri-business Development

- Attract equipment manufacturers - near Canada
- Develop more rail - intermodal facility for Ag commodities
- More funding to SWCD for programs, especially buffer areas

Land Planning

- Opportunities to use more conservation easements
- Institute more programs to improve marginal soils
- Do COCS as an educational tool
- Use PDR for acquiring lands for manure management
- Identify lands that are most productive and at risk for conversion
- Work with towns to limit sprawl
- Preserve land in larger acreage units
- Increasing the intensity of farming in underutilized farm parcels north of the Black River
- Promote use of easements and development rights programs
- Land use programs that are farm friendly
- Smart Growth programs to direct more growth to areas with infrastructure
- Methods to use fallow land more
- Increase use of marginal soils with technology
- Start farmer/farmland owner land match program
- Work with Fort Drum officials to limit conflicts with fort-related development
- Increase use of easement requirements that require preservation of farmland
- Work with area land trusts to strengthen land preservation efforts

Farm Business Planning

- Succession planning
- Have more ag business planning
- Business training and planning for expansion
- First time farmer financing program
- Bring in more large animal vets
- Keep supporting Ag Position at IDA
- Small business development center
- Work with State for more business friendly programs
- Support JCC ag-related programming

Threats

- Development Pressure/farmland conversion
- Regulations, especially possible regulation of manure spreading
- Rising land prices
- Rising competition for land resources
- Lack of labor and immigration issues
- Dairy price and crop commodity price volatility
- Lack of education and awareness of the public and local officials about agriculture and about understanding the role of agriculture
- Negative attitudes and conceptions about agriculture
- Apathy of farmers
- Increasing reliance on farmland not owned by farmers
- Development pressures and conversion of farmland to non-farm uses