

Agriculture and Farmland Protection Plan

PURPOSE:

To support the continued economic prosperity of the largest economic sector in Seneca County by: recognizing the diversity of agriculture within the county, supporting local production, processing and marketing of agricultural products, supporting the preservation of prime farmland, encouraging environmental stewardship, and promoting the education about and awareness of the value of agriculture in Seneca County.

*Seneca County
Agriculture provides
opportunities to see the
wonders of the natural
resources that
surround it.*



STATUS OF SENECA COUNTY AGRICULTURE

The most visible and thought of component of Agriculture in Seneca County is the production sector. Seneca County in 2008 had 127,972 acres in farms which is 62% of the county's total acreage of 207,171 acres. Seneca County in 2007 had 513 farms which averaged 249 acres per farm. Seneca County ranks 28th in New York State for land in farms. (Seneca County by size is 54th out of 57 counties that do not include the NYC boroughs). Seneca County's production sector is diverse; however, 35% of the land in production is taken up by the top three categories of agriculture in Seneca County: Dairy, Grain Production, and Beef and Feedlots. According to the 2007 Census of Agricultural Products, the market value of agricultural products sold from county farms was \$84 million. Dairy

products, grain and bean sales, and cattle and calf sales making up about 75% of total agricultural product sales for Seneca County.

The input sector provides the producers with the seed, fertilizers, machinery, fuel, feed and other products and services necessary to produce farm products. In this sector, there are about 20 businesses and institutions that provide direct support to producers. Primary input businesses include: Seneca Farm and Home Supply, Keystone Mills, Empire Tractor, and Waterloo Container (suppliers of wine bottles). In addition, there are other community support businesses such as lawyers, plumbers, carpenters, and accountants that look to agriculture for about 10% of their business. Seneca County farmers spent \$69 million in production expenditures, clearly indicating that agriculture's economic impact does not stop at the farm gate.

The output sector is a diverse group of businesses (livestock and commodity auctions, produce brokers, food processors, wineries and others) that are often national in scope, functioning as buyers, processors, distributors and marketers of agricultural products.

The profitability in one of these sectors affects the viability of the other two, as do various external factors specific to each. Profitability of businesses in the input and output sectors of the industry have improved through mergers, increases in efficiencies, expansion of markets, or diversification into other products. The production sector has lagged behind the other two and has reached a plateau in profitability where businesses are stable but not growing. The results of this situation are seen most readily in farm businesses that are being assumed by the younger generation. Farm businesses that cannot generate revenue beyond that which meets operating costs fail, since the new owner cannot pass equity to the older generation. Farm operators are aging with the average age of the operator being 53.1 years.

The 2007 Census of Agriculture showed that 62% of the farm operators reported farming as their principal occupation.

Additionally, production agriculture businesses provide the basis for the county's tourist industry. For example, wineries and farm markets represent direct tourist attractions, while farms maintain the open landscape and scenic vistas.

Dairy Industry Overview

The dairy industry in Seneca County generates the largest dollar volume of sales and includes the most diverse number of support businesses. Overall, the industry includes 112 (2007) farms producing \$27.1 million (2007) in gross sales. In addition to dairy farms, the industry includes: feed supplies and services; insemination services; veterinarian services; milking and animal housing equipment supplies and services; manure handling supplies and services; milk inspectors; milk haulers and shippers, and processors. The dairy industry in Seneca County has a total economic impact of \$47.42 million (using 1.75 multiplier) and employs about 350 people on farms and about an equal number in the allied industries.

Dairy production is a highly sophisticated process that requires a high degree of management. The lactation of cows during pregnancy results in the need for management of the animal being milked; those that are between pregnancies (dry cows); those waiting to be bred for the first time (heifers) and calves that result from the pregnancy. The typical dairy farm will sell male calves and retain the best of the female calves



for inclusion into the herd. Usually, a dairy will maintain the same number of calves and heifers as they have cows in production. Calves will be fed a ration to maximize growth and will be bred when they enter heat and become heifers. Breeding is done artificially to insure success and the parentage of the

offspring. Bred heifers are fed and housed to maximize the success of the pregnancy. At the birth of the calf, the cow begins to lactate and is again fed to maximize production.

The typical dairy farm will utilize the following services:

- Construction to provide feed storage, animal housing, manure handling, and milking equipment and facilities. Animal housing may include: individual “hutches” for calves, barns with pens or free stall areas to group heifers by age, and free stall barns, tie stalls or stanchions for lactating cows. Manure handling includes a number of techniques to mechanically or hydraulically clean barns. Milking

equipment and facilities are designed and inspected to meet USDA/NYS Department of Agriculture and Markets specifications for cleanliness. Field-chopped hay or corn is stored in traditional cylinder type or, more recently, in “bunker” silos. Other materials are stored in bins or buildings based on their specific handling and storage requirements. The majority of these services are provided by off farm contractors, plumbers or specialists in the design, installation and management of the specialized equipment.

- Crops produced on a dairy farm usually include corn for silage or grain, soybeans, hay for silage or dry. (This production requires the same investment and support as described under the section “CASH CROPS”.)
- Herd nutrition is designed to maximize the health and production/growth potential of each segment of the herd. Often the feed company will provide specialist services to do this by “balancing the ration” for each segment of the herd. Producers then feed the specified ration by combining corn (silage or grain), soybeans and hay produced on the farm with other micronutrients from cottonseed meal or distillers grains. Frequently producers will buy some of the needed materials to balance the ration from a feed supply company, who will grind the constituents and mix them based on given specifications.
- An outside company that will contract to come to a farm on a regular basis provides insemination services (often a farmer cooperative). The quality of their service depends on their reliability, frequency of success, and parentage of the semen used for fertilization.
- Herd health is provided by veterinarian services. Framers work to implement Best Management Practices to prevent disease within the herds. While producers (for economic reasons) often administer medicines themselves, veterinarians provide diagnostic services or assistance in case of emergencies. Although veterinarians provide traditional herd health services, the trend is for them to provide preventive health management. They go beyond sick cow care and provide education and consulting in nutrition, cow comfort, reproductive management and even facilities. The objectives are to maximize the herd’s profits and minimize disease. Farms are encouraged to participate in the NYS Beef Quality Assurance program.
- Milk is marketed as either fluid milk or cheese at any of the five or so plants in New York State or one facility in New Jersey. Facilities in New York that are owned by producer cooperatives include Upstate Milk. Privately owned processors include Sorrento, Byrne Dairy and others. Brokers who also market milk include Dairylea, Agri-Mark, Dairy Farmers of America and Land-o-Lakes. The price paid to farmers for

their milk is determined by a USDA formula that establishes a base price based on certain criteria. Different prices are established for different milk marketing plants. A “Cheese Trail” has been developed in Seneca County which represent the increase in Artisan Chesses being made from locally produces milk and marketed locally.

- Business management services are provided by off-farm vendors. Accountants, lawyers, tax preparers, and financial institutions all service the dairy industry. The Farm Services Agency and the Farm Credit of Western New York are two USDA or cooperative supported groups that service the industry, as do many local lenders.

Cash Crop Industry Overview

The cash crop industry in Seneca County includes the production of corn for silage, corn as grain, forage or hay, soybeans or wheat. Seneca County in 2007 was the second largest producer of soybeans in the state. The county was the sixth largest producer of wheat and the seventh



largest producer of corn for grain. These figures take on even greater significance when we remember that by size, Seneca County is the fourth smallest county by land area excluding the NYC boroughs. The total sales of these crops were over \$88 million. While the total farms in Seneca County and the total number of acres in

production increased between 2002 and 2007, the average size of a farm decreased. This might be partially attributed to the influx of Amish and Mennonite farmers that use more traditional forms of farm management. The yield of lands; however, has also risen with farms between 2003 and 2008 producing over 123 - 160 bushels of corn per acre while production between 1969 and 1997 ranged between 80 - 113 bushels per acre. The sale of cash crops adds significantly to the economic viability of Seneca County. Forage/hay is the largest segment of the cash crop industry producing \$26.9 million in sales. Corn for grain or seed is the next largest segment of the industry with \$26.7 million in sales. Soybeans produce \$22.7 million in sales. Corn for silage and wheat each produce about \$6 million. Some farms are also now producing hops and starting to work with the Micro Brewery industry.

Crop production is a highly specialized and sophisticated process. Intensive management skills are necessary to successfully produce a saleable product at a cost-effective price. The ever increasing costs of inputs have outstripped stagnate commodity prices. Cost control is imperative in the cash crop business. The high cost of machinery has led to the increase in farm size in order to spread the cost over more acres. The typical cash crop farm will include extensive planting, harvesting, and soil preparation machinery. Farm buildings will include machinery storage, farm shop, grain storage, hay storage and grain dryers.

The cash crop industry supports many agri-business enterprises. These include fertilizer and pesticide services, seed grain suppliers, machinery dealerships, machinery repair shops, crop consultants, and grain marketing businesses. Each of these businesses provides an important service to the cash crop enterprise. In addition to the agri-service businesses that are specific to cash crops, crop farmers use accountants, tax preparers, lending institutions, lawyers and payroll services.



The Soil and Water Conservation District and the Natural Resource Conservation Service work closely with cash crop farmers. Cornell Cooperative Extension has a long history of providing educational programs to crop farmers.

Environmental stewardship is an essential component to cash crop farmers. With 102,896 acres in crop production, they have a significant role to play in protecting soil and water resources. Crop farmers also protect the wide-open landscape and rural character of the community. Economically and environmentally viable farms are the best way to ensure these resources are preserved. One of the most effective programs for environmental stewardship is the Integrated Pest Management Program (IPM), in which Seneca County farmers willingly and voluntarily participate. IPM seeks to minimize the use of inputs such as pesticides and fertilizers while still maintaining an economically viable crop. The crux of the program is that, through various monitoring

systems, a farmer applies only the inputs necessary at the optimum time. The management involved in an IPM program is significant.

Livestock Industry Overview

Beef, sheep, swine and poultry are important components of the agriculture industry in Seneca County. They total \$24.8 million in the sale of their products. These industries are supported by many agri-service businesses. This group includes: providers of seed, fertilizer, fuel, machinery, veterinary care, equipment, accounting, fencing, and nutritional consulting, trades people such as electricians, plumbers, and carpenters and other products and services necessary for production. Livestock producers generate business for the output sector, which includes auctions, brokers and others.

The beef industry is an important component of the livestock industry in Seneca County. There are 204 (2007) producers of cattle and calves in the county, up from 178 in 2002. The beef farmers collectively had about 2,500 head in 2007 when the numbers topped out and Seneca County was ranked the 4th largest cattle producing county in New York State. The 2009 numbers show a 600 head decrease from the 2007 figures. The value of sales increased from \$15.8 million in 2002 to \$27.1 million in 2007. Nearly half of the farm operations that have beef cattle have between 20 and 100 head. These numbers reflect that smaller and part-time beef operations continue to be common, and that in most cases, the farm is supplemented by another farm operation or off-the-farm income.

Use of land on the Finger Lakes National Forest that is used by the Hector Grazing Association provides a resource for seasonal grazing of cattle. In 2011 about 1,500 head of cattle were grazed on these lands.

A typical beef farm will have breeding stock that consists of females that are bred to produce calves for sale. The breeding stock is not sold each year as meat animals but instead is re-bred. The breeding animal is either bred with the use of artificial insemination or with a bull. The breeding stock is managed to maximize genetic progress and profitability. Calves produced are sold as either meat animals or as breeding stock for other beef farms.

Some beef farmers do not have breeding stock but prefer to buy calves from other beef producers and finish raising them for market. These producers are interested in using their resources for meat production

rather than getting involved in the intensive reproductive management of breeding animals.



Sheep and Goat production in Seneca County includes 31 (2007) farms down from 45 in 2002. Sheep farms were on the increase for a period in the last decade but have more recently leveled off and decreased. Sheep producers are typically part-time operations that help a farmer make use of the farm resources and supplement the major farm enterprise.

Sheep consume a predominately forage-based diet of hay pasture and perhaps silage. Grain is fed to lactating animals and growing lambs. Rotational grazing systems allow some sheep producers to maximize the farm resources with limited outside inputs. Rotational grazing systems involve dividing the pasture area into appropriate size paddocks. The animals are then rotated through the pasture on the basis of plant growth and animal consumption. This can be a very effective system but it takes intensive management on the part of the farmer.

In 2007, Seneca County was ranked first in hog and pig production in New York State. Between 2002 and 2007, the number of farms that were producing hogs and pigs grew from 13 to 34. Being non-ruminant animals; their diet is quite different than that of beef and dairy cows. Hogs eat a grain-based diet of primarily corn and soybeans. They provide a market for homegrown grains as well as grain produced on neighboring farms. The number of hogs per farm has increased following the specialization trend seen with almost every aspect of agriculture. Pork program "We Care" focuses on best management practices for the environment, animal welfare, community.

Between 2002 and 2007, the number of farms doing poultry and egg production more than doubled from 30 to 64. The total value of sales for 2007 was \$119,000. This means the average farm income from poultry would be approximately \$3,160. Poultry production is a component of the livestock industry in Seneca County. Most of the poultry producers are also involved with other commodities. This large increase in the number of farms may be due to the increased population of Amish and Mennonite farms. Poultry eat a grain-based diet and on the whole, are kept in confinement systems. The trend among small backyard

producers is to produce free-range chicken and eggs to supply niche markets.

The typical livestock/poultry farm will utilize the following services:

- Construction to provide feed storage, animal housing, manure handling equipment and facilities. Housing is usually minimal wind and shade protection, often using old barns that would otherwise not be utilized. Pasture feeding during the growing season requires fencing and water. Grain, hay and fermented silage feeding closer to market requires storage, feeding and handling equipment. Bunker and trench silos are often used, as well as bins for grain storage.
- Swine facilities tend to be more substantial than the average livestock housing. Hogs may be kept in barns similar to dairy cattle but specifically designed for swine. Feeding systems and manure handling tend to be more automated. The barn environment is more closely regulated than beef or sheep.
- Crops produced on a livestock farm vary with the animal produced. Typical for beef and sheep are pasture, hay, and haycrop and corn silage, as well as corn for grain. Swine and poultry require diets that are grain-based and not forage-based; therefore, corn and soybeans are associated with these types of farms.
- Nutrition is an essential component to a healthy livestock or poultry operation. Rations for all species are formulated to insure the health and production/growth potential of the species. Feed companies often provide the technical services for ration formulation, as do consultants and veterinarians. However, none of these sources replace the expertise of the farmer/manager.
- An outside company that will contract to come to a farm on a regular basis provides insemination services (often farmer cooperative). The quality of their service depends on the reliability, frequency of success, and parentage of the semen used for fertilization.
- Biosecurity and veterinarian health services are important components of most poultry and swine operations, since the opportunity for disease outbreak rises as animal density increases. Biosecurity addresses the introduction of disease into an operation and the spread of disease between operations. Historically, beef and sheep producers have placed less emphasis on biosecurity, however, this is changing as animal concentrations increase.

Constraints for livestock and poultry mirror the rest of the agricultural industry in Seneca County. These include non-agricultural development, property taxes, environmental issues, neighbor relations, farm labor, and access to markets.

Tree Fruit and Small Fruit Overview

Grapes and strawberries are the principal small fruit commodities produced in the county; however, raspberries and blueberries are also grown. Apples are the major tree fruit produced, with cherries, peaches and plums produced in much smaller numbers. A total of 59 farms were involved with the production of fruits or nuts.

Several commercial operations and the New York State Agricultural Experiment Station in Geneva support this industry. Additionally, the New York State Agriculture Experiment Station in Geneva does extensive research in variety development for both grape and tree fruit.

There were 48 farms in Seneca County in 2007 that had 2,065 acres of grapevines of bearing age. There were an additional 108 acres on 18 farms that were not yet of bearing age. These vineyards produce mainly wine grapes for sale to estate wineries and Canandaigua Brands, Inc. Through strategic acquisitions, Canandaigua Brands (headquartered in Fairport) is the second largest wine producer in the U.S. and the largest market for Seneca County grapes. Another expanding market for local grapes is farm wineries. The recent “Experience the Farms of Seneca County” brochure lists 26 Wineries in Seneca County.

Grape pie sales to tourists, along with private labeled jellies, jams, and vinegars sold through local outlets, are part of the value-added products from local vineyards.



Allied to the farm winery and value-added product sales are an increased tourism business. Wine tasting along the Cayuga and Seneca Wine Trails has helped expand tourism traffic to over 225,000 visitors each year.

Strawberries, raspberries and other small fruit are very seasonal and highly perishable in nature. They are primarily sold through farm markets and U-pick farms in Seneca County, though some are sold wholesale to Tops, Wegmans and others. Of all berries grown, strawberries and raspberries are produced in the largest number.

Tree fruit produced in Seneca County includes apples, cherries, peaches, pears, and plums. Apples are by far the largest tree fruit commodity with

cherries (tart and sweet) and peaches are the next largest commodities. In total, the majority of these commodities (other than apples) are sold fresh to consumers as U-pick or through direct markets. About 50% of our apples are also sold fresh or as cider directly to consumers through U-pick, roadside stands or farmers' markets. The remainder is sold to processors mostly located outside the County for juice and sauce; however, there is also now a small hard cider producer in Seneca County that is using a number of varieties of apples.

Areas of Concern in Fruit Production

Seasonality of Product

Tree fruit products produced in Seneca County are high quality and meet the majority of consumer demands. The difficulty produce receivers have in using the fruit is the lack of a year-round supply. In order for receivers to use this product, they must find a winter source for the same produce. Our shorter growing season puts us at a competitive disadvantage with other areas in the country, since receivers like to “stick with a known source” and reduce problems that can occur in product availability, quality, and packaging. Seneca County producers have addressed this situation with apples by building “storages” that allow fruit to be harvested and stored for sale during the “off months.”

To improve our competitive advantage in apple sales, more local producers might implement controlled atmosphere and humidification storage technology that will further extend storage life. To accomplish this, much more research needs to be done to obtain an optimum environment. Also, construction, equipment costs, and utility costs will have to be adjusted to accommodate profitability in the initial stages of the operation.

Lack of Skilled Labor

Customers are demanding more fresh fruit, so producers are raising fresh market crops. Because of the perishability of these fresh commodities, they must be picked by hand, creating a demand for more agricultural labor. Workers in the U.S. do not want these jobs primarily due to lower pay and the high degree of physical endurance required. As a result, producers may secure less-skilled, migrant labor that requires compliance with extensive federal regulations. Much of this labor pool are legal Mexicans that choose to live outside of Seneca County when working locally.

Lack of Markets

Seneca County producers compete for markets with producers from Wayne, Cayuga, Erie, Monroe, and Onondaga Counties in New York, as

well as producers from California, Florida, Texas, Georgia and foreign countries. In order to be successful in these fresh produce markets, our producers must provide a consistent high quality product at a competitive price. Due to the high cost of production here, they may not be able to compete. Local, fresh market sales have been a good alternative for both small and tree fruit; however, these markets are not sufficient to support major growth in this area.

Fresh market fruit of many kinds is sold through 30 roadside stands and farm markets in Seneca County, as well as locations outside of the county. Wegmans and Tops stores in Geneva and other retail outlets sell local produce, while produce markets in Buffalo, Rochester and Syracuse also offer outlets for local fresh fruit.

Our producers need to establish or take better advantage of local farmers' markets or contacts with roadside stands, or perhaps expand into new markets such as the New York State Thruway Farmers Markets.

Neighbor Relations

Odors, pesticide use, migrant seasonal labor at harvest time, and traffic to and noise from direct marketing facilities are some neighbor relation issues to be addressed. To some extent, neighbors close to these situations must learn to accept them as a price for the food they eat and the rural character of their community.

Seneca County producers; however, can help reduce neighbor complaints surrounding these issues by educating their neighbors. This education can extend not only to immediate neighbors but also to the community and their local officials. Enactment of Right to Farm laws on a town-by-town basis may be one way to provide this education and at the same time provide some protection against nuisance complaints.

Vegetable Production Overview

Vegetable production in Seneca County in 2007 comprised of 40 farms, up from 28 in 2002. The sales of vegetables from these farms; however, was \$720,000 in 2007, down from \$846,000 in 2002.

Sweet corn, peas, green beans, cabbage and beets are sold to local processors. Curtis Burns, owned by ProFac Cooperative, processes these vegetables at plants in Shortsville, Stanley and other locations outside Seneca County. They market canned and frozen products as Blue Boy, Birdseye, Tops, Wegmans and other private labels. Seneca Foods (privately

owned) markets under the Seneca Green Giant and Libby's brands as well as Wegmans, Tops and other retail and commercial private labels.

Cabbage is also sold for fresh market and coleslaw. These markets require producers, either individually or through grower shippers or brokers, to sell year-round. To accomplish this, producers harvest cabbage in October and November and market their product from environmentally controlled facilities during the winter months.

Winter squash is also produced and stored in a similar way to cabbage; however, the storage period is shorter and producers market directly to retail outlets.

Dry beans (light and dark red kidney, pea, white, black and many other types) are sold to brokers in or out of the county and in Pennsylvania. Brokers sell 80% of the product to canners and the remainder for fresh consumption mainly in South America and the Caribbean countries.

Fresh vegetables of many kinds are sold through approximately 30 roadside stands and farm markets in Seneca County, as well as locations outside of the county. Wegmans and Tops stores in Geneva and other retail outlets sell local produce, while Buffalo, Rochester and Syracuse produce markets also offer outlets for local fresh vegetables.

Nursery and Greenhouse Overview

This category covers a variety of farm products including vegetable and flower seed crops, bedding plants, foliage plants, vegetables for garden use, potted flowering plants, hanging baskets, cut flowers, bulbs and Christmas trees.

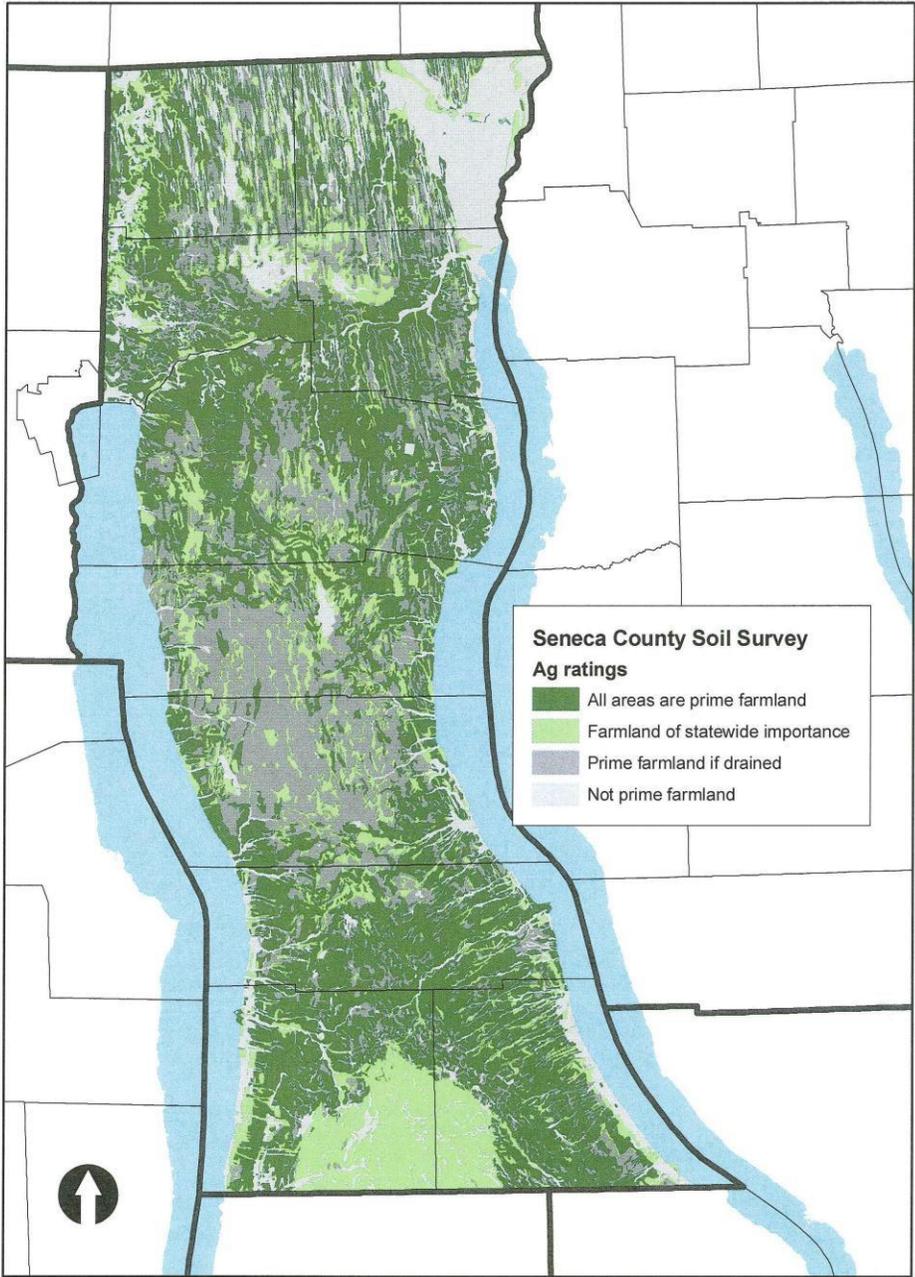
This area of agriculture is following a national trend of increased production and sales. In Seneca County in 2007, there were 19 nursery greenhouse farms in Seneca County, a decrease of four in the decade since 1997. In 2002, there was 69,450 square feet of covered greenhouse space, and 78 acres of nursery crops grown outdoors. Nursery and Christmas tree sales in 2007 totaled \$527,000.

Farms produce floriculture crops such as bedding and garden plants, foliage and potted plants. These crops are for the general consumer and not for commercial vegetable growers.

The nursery and greenhouse industry is a growth industry nationally. In Seneca County, this segment has seen some declines but has potential to

continue as customers continue the trend of purchasing plants for home and backyard use.

MAP OF PRIME SOILS



Soil agricultural ratings, Seneca County, NY

Map prepared by Karen Edelstein, Finger Lakes Land Trust
8 January 2009
Data sources: NRCS, NYS GIS Clearinghouse
Software: ArcGIS 9.3



SENECA COUNTY SOILS, WATER AND CLIMATE OVERVIEW

Seneca County is located in the Finger Lakes Region. It extends 35 miles north to south and 9 miles east to west. Seneca County has a land area of 330 square miles or 211,900 acres. The following inventory of soils is taken from Soil Survey for Seneca County developed by the USDA Natural Resource Conservation Service.

There are eleven soil associations in Seneca County which are grouped according to the content of lime in the dominant soils or according to the nature of the material in which the dominant soils formed.

Areas dominated by high-lime soils developed in glacial till occur on uplands in the northern part of the county and on slopes adjacent to Cayuga and Seneca Lakes. The soils range in slope from nearly level to steep and drumlins are a prominent topographic feature. The major soils formed in till derived mainly from the limestone and high-lime shale. These associations are farmed extensively. The Ontario-Ovid association is deep, well drained to poorly drained soil that has a loam to silty clay loam subsoil. This association is located only in the northern part of the county, mainly in the towns of Junius and Tyre, and extends along the west side of Montezuma Marsh (in the northeastern area of the county) to the vicinity of Seneca Falls. The soils of this association occur on drumlins and on the glacial lake plain that surrounds the drumlins. The soils in this association occupy 9% of the county. The well-drained Ontario soils make up 50% of the association; somewhat poorly drained Ovid soils make up 16% and moderately to well-drained Cazenovia soils make up 10%. The remaining 19% of the association consists of scattered areas of Appleton, Collamer, Lakemont, Lima, Madalin, and Schoharie and muck soils.

The Honeoye-Lima association is another high-lime soil developed by glacial till. It is a deep, well-drained and moderately well drained soil that has a heavy silt to heavy loam subsoil. This association consists of long, relatively narrow strips of land along slopes adjacent to Seneca and Cayuga Lakes. These strips of high-lime soils are 1 to 2 miles wide, but widen to 3 miles near Interlaken. Along Cayuga Lake, these soils extend from the Village of Fayette to Tompkins County, and along Seneca Lake, they extend from near the north end of the lake to Schuyler County. This association occupies 21% of the county.

Areas dominated by high-lime soils developed in glacial lake sediments occur in the lake plain area in the northern part of the county in the vicinity of Waterloo and Seneca Falls. The soils generally are nearly level to gently sloping, although a few locations are moderately steep. The major soils are formed in lacustrine clay and silt and are high in lime. The Schoharie-Odessa association can be described as a deep, well-drained to somewhat poorly-drained soil that has a silty clay loam to clay subsoil. This association consists of one large area of nearly level or gently sloping soils near Waterloo and Seneca Falls. It extends from the north end of Cayuga Lake south to a point 4 miles below Canoga. This association occupies 9% of the county.

The Odessa-Lakemont association can be described as deep, somewhat poorly-drained and poorly-drained soils that have silty clay loam to silty clay subsoil. This association occurs only in the north-central part of the county and includes parts of the Towns of Junius, Tyre, Waterloo and Seneca Falls. This association occupies 6% of the county.

Areas dominated by medium-lime soils developed in glacial till. These associations are located in the central and south-central parts of the county on the uplands between Cayuga and Seneca Lakes. The soils are nearly level to rolling and formed in till derived mainly from limy shale or from shale and sandstone that contain some limestone. The Conesus-Lansing association consists of deep, moderately well-drained and well-drained soils that have a heavy silt loam to heavy loam subsoil. This association consists of one area in the south-central part of the county. The soils are generally rolling and are gently to moderately sloping. This association occupies 8% of the county.

The Darien-Angola association consists of deep and moderately deep, somewhat poorly-drained soils that have a silty clay loam and clay loam subsoil. This association consists of one large area in the center of the county. The area extends from Ovid on the south to within two miles of Waterloo on the north. This association occupies 22% of the county.

Areas dominated by medium-lime soils developed in glacial lake sediments are located on the lake plain in the northwestern and north-central parts of the county. The soils are nearly level to undulating to rolling. They evolved primarily from lacustrine silt and fine sand, but some of them formed in islands of shaly and clayey till. All of the soils contain some lime. The Dunkirk-Collamer association consists of one area south of the Canal, between the Towns of Geneva and Waterloo. The soils of this association occupy 3% of the county.

The Dunkirk-Cazenovia association is moderately deep, well-drained and moderately well-drained soils that have a silt loam to silty clay loam subsoil that overlies limestone. This association consists of one small area of silty, nearly level soils that is located about three miles south of Seneca Falls. This association occupies 2% of the county.

Arkport-Claverack is an association described as deep, dominantly well-drained and moderately well-drained soils that are loamy fine sand and fine sandy loam throughout or that have a loamy fine sand subsoil over silty clay or clay. This association consists of one area in the northwest corner of the county along the Ontario County line. It extends from Wayne County in the north to Seneca Lake in the south and to Waterloo in the east. This association occupies 8% of the county.

Areas dominated by low-lime soils developed in glacial till are located on the higher upland areas in the southern part of the county along the Schuyler County line. These soils are nearly level to moderately steep and have uniform slopes. The Langford-Erie association is described as deep, moderately well-drained and somewhat poorly-drained soils that have a channery silt loam to channery loam fragipan. This association consists of one area along the Schuyler County line, which includes the highland between Seneca and Cayuga Lake. This association occurs in 8% of the county.

Areas dominated by soils developed in organic matter are located in the northeastern corner of the county at the northern end of Cayuga Lake. The major soils occur in the flat, depressional areas of the Montezuma Marsh. Muck-peat-fresh water marsh associations are deep to shallow, very poorly drained organic soils. This association consists of one area in the Montezuma Marsh, and makes up 4% of the county.

Water Supply

Rural areas of Seneca County depend on groundwater to supply the needs of farms. Precipitation is the primary source of groundwater, which comes from wells that are drilled or dug as well as natural springs. Seneca Falls and Waterloo, the two largest villages, use surface water from their municipal supplies, but some industry in this area uses water from drilled wells. The area that was the Seneca Army Depot and surrounding areas serviced by that water system use Seneca Lake as its water source. Seneca Lake, Cayuga Lake, the Seneca River and the Cayuga-Seneca Canal are additional sources of large amounts of water.

Climate

Seneca County has a humid, continental type climate. The average monthly precipitation in Seneca County is comparatively uniform, with no well-defined wet or dry seasons. Average annual rainfall is 33 inches, with average snowfall of 60 inches. The average annual temperature is 47°F with the average January temperature being 14°-32°F and July 59°-81°F. There is an average of 160 frost-free days.

Changes in the Agriculture Landscape Over the Last 20 Years

The Agricultural Climate in Seneca County continues to remain relatively healthy. The closure of major industrial operation and the Seneca Army Depot, and the increase of Tourism related Agriculture has brought Agriculture more to the forefront of the public consciousness.

The size of farms continues to be very diverse. Some farms have expanded and become the family/corporation farm so as to take advantage of “economy of scale”, while other family farm operations are working smaller farms “part time” and working off the farms to supplement farm income. As the Amish and Mennonites continue to move into the area in greater numbers they are typically operating smaller farm units. While there has been a small increase in the number of acres farmed – this was a matter of return some land that had been taken out of production to active use. This is not a trend that can continue however, as almost all land in Seneca County that is usable for farm production, and that is not owned by a public entity or developed as residential or commercial use, is now in production.

Meanwhile farmland is taken out of production by the many small cuts. The County Population peaked in 1970, but our number of housing units continues to increase. New home sites have been developed outside of population centers such as Villages, and taken acres out of production. Seneca County’s growth patterns are not the 25 + unit subdivisions that people recognize when a large area is converted to housing. Rather the pattern that we more often see is the single lot here, and there. One of the patterns of development that means that no comprehensive development plans are presented to local community boards and lots of offered for sale in a trickle of development that keeps subdivisions from having to be reviewed by the Dept of Health. The other way that land owners avoid Heath Department review is by sizing the lots they sell at

just over 5 acres. The net result of this action being taking a greater area out of potential production.

As energy costs increase for society as a whole, some sector of the agricultural community have been on the forefront of looking for answers. Two ethanol plants developed in the region, and are an active local market for grain sales. Research is also being conducted regarding other forms of bio-mass for ethanol production, and for the production of other bio-fuels such as soy diesel. More local and regional farmers are considering the use of alternate energies.

GOAL 1:

ENHANCE THE ECONOMIC CLIMATE FOR AGRICULTURE IN SENECA COUNTY

Include Agriculture in Economic Development Initiatives

- ◆ Agriculture is fundamental to our national security and well being. For this reason, agriculture has traditionally been treated as a separate entity in public policy and business initiatives. Although this separate treatment can be beneficial in some ways, it historically contributed to the exclusion of agriculture from some economic development initiatives. This however has changed. When funding is available for economic development initiatives, agriculture production and processing is eligible for most funding sources as long as it meets the standards in the regulations, such as employment levels for dollars spent. For a time Seneca County was receiving Community Development funds for “micro-enterprise grants” that were directed toward small agricultural processing business. At this time many of those types of funding sources are not available. Agricultural businesses will be better served, for the purposes of economic development, by Cornell Cooperative Extension, Seneca County Department of Planning and Community Development and Seneca County Workforce Development working cooperatively to continue to provide to agriculture any services that are provided to other entrepreneurs (such as consultants and business plan developers).
- ◆ Cooperate with the Seneca County Industrial Development Agency and encourage continued inclusion of agriculture in their programs. The Seneca County IDA is interested in providing services to agricultural businesses. As the re-development agency for the former Seneca Army Depot they have worked with various agricultural producers. The IDA should be encouraged to continue to work toward the concept of developing portion of the former depot as an Ag-Industrial Park, by encouraging additional agricultural producers to locate on the facility and to also work toward the development of alternative energy production on the property.

Promote Locally Grown Products

- ◆ Farmers may be able to increase their direct market sales by researching available markets. Markets not being accessed for direct sales may include farmers’ markets, restaurants, supermarkets, and farm stands. In addition, market research may reveal alternative processing markets that are presently untapped. Helping farmers to develop marketing plans could assist in them utilizing previously unidentified sales areas.
- ◆ Expand farmers’ markets in areas that are presently not served. Conduct market research to ensure locations can support a viable market. Farmer commitment to the market is essential to the success of farmers’ markets. Quality products that are predictably available enable the market to build a strong customer base. Promote and advertise farm markets.
- ◆ Fully implement the New York “Buy Local” campaign for Seneca County. The logo and supporting materials are available for farmers in the region to identify their products as locally grown. Wider distribution and use of the logo will enable consumers to identify and choose their neighbors’ products. The mission of the Buy Local campaign is to create awareness, support, and understanding of the importance of local farmers to our region by local consumers and businesses. It also seeks to increase the consumption of locally and regionally grown farm products to the benefit of everyone in the region.
- ◆ Increase sales of locally grown products through supermarkets. Some supermarkets in Seneca and Ontario Counties purchase directly from local and regional growers. These stores feature the farm in the store display and promote the freshness and high quality of local products. Providing lists of local growers and products to the supermarket produce buyers may facilitate local purchases. Continue to supply consistent, high quality products while increasing the variety of products purchased.
- ◆ Develop electronic and printed promotion materials that list agricultural products and services that include their locations. In 2010 Seneca County Cooperative Extension developed a brochure “Experience the Farms of Seneca County”. This brochure may also be found at: www.senecacountyce.org. This brochure identified the location and contact information for: Bedding Plants and Nurseries, Farm Markets and Crafts, Livestock Farms, Produce Farms Stands

and U-picks, Specialty and Artisan Farm Products, and Wineries. Additionally this brochure included an Annual Harvest Chart so that potential customers would understand when various local products would be available in the area. This and similar materials need to be regularly updated to be kept current and viable. Distribution should include such venues as the Chamber of Commerce: County Tourism Office, Cornell Cooperative Extension, the Soil and Water Conservation Districts and public libraries.

- ◆ Support the development of “Community Supported Agriculture” CSA programs. Governor Cuomo is proposing the “Share NY Food” CSA program to encourage CSA programs across the State. This program will encourage the development of partnerships with community groups, hand help provide methodologies where programs such as WIC and SNAP benefits can be used with CSA programs.
- ◆ Explore that development of a local food HUB or participation in a regional food HUB, so that foods produced in Seneca County marketed through a food HUB system.

Facilitate Small Scale Food Processing

- ◆ Small scale food processing has enjoyed resurgence recently. The trend in food processing toward fewer and larger processors, left Seneca and surrounding counties with evidence of food processing facilities that have abandoned. At the same time opportunities for small processors producing regional and specialty products has increased. Locally produced foods meet niche production markets and respond to consumer demands.
- ◆ Support the State plans to include a portion of the Manufacturing Assistance Program “MAP” for small and mid-size food processing plants.

Capitalize on Emerging Technologies

- ◆ Support the development and use of funding sources for farmers to obtain and use technologies that will enhance production and reduce costs.
- ◆ Support the development and use of renewable energies sources for individual farms and/or co-operative groups of farmers.

- ◆ Support New York State legislation to allow development of Micro Brewers and Artisan Beers and their marketing.

Support New York State Food Venture Center

The New York State Food Venture Center is located at the Agriculture Experiment Station in Geneva. The Food Venture Center assists entrepreneurs in starting new food manufacturing businesses, thereby contributing to the economic sustainability of local communities. Innovation and Diversification can add Value to what a Farms produces. With the assistance of the Food Venture Center during 2007-2008, 191 New York State producers developed 328 new food products for sale.

Develop Agricultural Workforce

- ◆ Continue and expand educational programs for farm owners and employees. Cornell Cooperative Extension of Seneca County provides continuing education programs designed specifically for agricultural businesses. Finger Lakes Community College has collaborated with Cornell Cooperative Extension to provide farm business and employee training programs. In addition, businesses that provide services to agriculture (such as Agway and Farm Credit) provide education and training. While these programs are often done in partnership with Cornell Cooperative Extension, more widespread participation in these programs should be fostered.
- ◆ Seek out non-traditional farm sources for information and training. Specific agricultural training is best provided by those within the industry that have expertise in the field. Sources for information and training that service other businesses can be an excellent resource for non-agriculture specific information. These resources include the Small Business Retention Program, Department of Labor, SCORE, and the Worker/Owner Resource Center.
- ◆ Support agricultural education in the school system. The current School-to-Work initiatives in the public school system emphasize career exploration and development. Agriculture can be included in these programs to introduce young people to the career opportunities available. Schools that implement internships should consider opportunities for students in agriculture.

Facilitate Farm Transfer

- ◆ Transferring a farm business from one generation to the next is a considerable challenge. This is true whether the farm is being

transferred within or outside the family. Fewer young people are choosing agriculture as a career and those that do need considerable equity to be able to purchase a farm even within the family. Retiring farmers express frustration in finding someone to take over the farm, and are also concerned that they will not be able to access the equity in the business to fund their retirement. Even in areas where there are non-agricultural options for a farm, farmers very often are reluctant to sell the farm for non-farm use. Farmlink is a state-funded program coordinated by Cornell University, which helps connect farmers who are planning for retirement with farmers hoping to obtain farm ownership. The program emphasizes building a farm transfer plan that will provide the entering farmer an opportunity to work into farming during a period of joint operation before the exiting farmer retires. Farmlink collects information about those interested in entering and exiting farming and serves as the conduit for the information to be transferred between parties.

- ◆ Provide estate-planning assistance for farm owners of all ages. This service is essential for a successful transfer. Cornell Cooperative Extension provides regional farm transfer programs, and FarmNet, a state-funded program coordinated by Cornell University, also offers estate-planning information.
- ◆ Provide assistance in facilitating multiple owner arrangements. A small but increasing trend in agriculture is for a farm to have multiple owners who are not all family members. Educational and technical assistance in setting up these arrangements would facilitate the success of the transfer.

Reduce Tax and Regulatory Burden

- ◆ New York State is third highest State in the nation for state and local tax burden. For many New York State businesses, the largest tax expense is property tax. This places a particular burden on farming which has large land requirements. Initiatives to limit the tax rates that both farmers and agriculture support businesses pay are critical in keeping this vital segment of the state and local economy viable.
- ◆ Regulations that the agriculture community has to comply with can be burdensome both from the substance of the regulations and the times necessary for review and approval when multiple agencies are involved. State regional and local initiatives to help streamline review protocols when multiple agencies are involved.

Encourage Agritourism

- ◆ Tourism is a growing industry in Seneca County. The rural landscape and scenic countryside are part of the allure of Seneca County. Agritourism offers farmers the opportunity to supplement their farm income. Cornell Cooperative Extension has provided regional workshops in the past and should continue to do so in the future. Local workshops as follow-ups to regional meetings could address issues relevant to Seneca County agritourism. These programs should include information on business planning, transitioning a business, working with the public, liability issues and presentation skills.

Seneca County already has some excellent agritourism operations. The wineries and wine trail program in Seneca County is a model agritourism program. The County Office of Tourism is committed to including agritourism in its efforts. Interactions between agritourism businesses and the Office of Tourism should include further development of a countywide identity for agritourism. Sensitivity also needs to be encouraged regarding the negative impacts that increased tourism has on some components of agriculture.

Goal 2: Increase the Awareness of the Economic and Social Importance of Agriculture in Seneca County

Provide Training for Town, Planning and Zoning Boards and Community Leaders

- ◆ Local town, planning and zoning boards have a tremendous impact on agriculture enhancement and farmland preservation. As fewer members of these boards come from agricultural backgrounds, it becomes more important for training in farmland preservation techniques. Members of these Boards are required to get a minimum of 4 hours annually. The County Planning Office, Agricultural Enhancement Board and Cooperative Extension should regularly present workshops on land use planning for agricultural enhancement and land use preservation. Towns need to be particularly sensitive to the impact that residential sprawl has on agriculture.

Cornell Cooperative Extension and the American Farmland Trust have prepared resource materials for this kind of workshop. These materials are called the Farmland Protection Action Kit. This curriculum is comprised of four training modules, contained on two videos. The four modules are: Agriculture and the Environment, Farmer/Neighbor Relations, Notice of Intent and Farmland Protection Planning.

- ◆ Encourage towns that do not have local town planning boards to form one. Town Planning Boards should be encouraged to have the designated agricultural member. Local Planning Boards should include the agriculture community in making local decisions. Training in farmland preservation techniques should be provided to new board members. Towns may also wish to encourage the creation of local agriculture steering committees for local farmers and agriculture business person to assist the town in developing plans that directly impact the agricultural community.
- ◆ As more Towns within the County adopt Right-To-Farm Local Laws, training needs to be developed for the citizen review boards. The training can be in the area of standard accepted farm practices, interviewing and arbitration skills, writing of finding statements.

- ◆ Encourage the county to adopt Countywide Right to Farm legislation that would take advantage of the Agriculture Enhancement Board’s expertise to serve as the review committee.
- ◆ Extend the educational component of the Farmland Protection Action Kit to other community groups. The videos combined with a live presentation could be presented to such groups as the Chamber of Commerce, Rotary, Lions Club, any service organization, church groups, and schools. These presentations would be most effective when made by farmers such as those who serve on the Agriculture Enhancement Board, Farm Bureau Board of Directors and the Cornell Cooperative Extension Agriculture Program Committee. Agriculture professionals such as Cooperative Extension Educators, Farm Bureau Staff and the County Planning staff will probably be the more realistic choice for these presentations.
- ◆ Provide a legislative and community leader tour of agriculture in the county. A bus tour of essential agricultural businesses would allow community leaders to see first hand the role agriculture plays in Seneca County. As part of this program, conservation and environmental activities should be highlighted. Farmers and agency staff could provide presentations on the bus as well as at each stop. The interaction between the farm business owners and the community leaders would be an important component of this program.
- ◆ Periodic presentations to the Board of Supervisors about Agriculture Related issues and the importance of Agriculture as an Economic Factor in the Community would help keep Agricultural considerations in the forefront of thought as policy decisions are made.

Goal 3: Provide an Ongoing Community Education Program for the Non-Farm Public

Form an Agriculture Promotion Council

- ◆ An agriculture promotion council for Seneca County or a cooperative of regional counties should be formed to provide leadership in agriculture promotion. This group should be comprised of a cross section of farmers representing every kind of agriculture in the county. Agribusiness and agriservice people would also make a valuable contribution to the group. The agricultural promotion council should organize and coordinate agricultural promotion activities. One of its charges would be to insure that agriculture is represented at the numerous community festivals and events that are already available. The council would build a strong, continuous relationship with the local media to facilitate coverage of farm businesses and agriservice. Initial leadership for this group could come from agriculture agencies such as the Seneca County Farm Bureau or Cornell Cooperative Extension. The long-term goal should be that the agriculture promotion council would be an independent group operating under the leadership of farmers.

Develop a Seneca County Agriculture Web Site

- ◆ Develop an educational and promotional web site for Seneca County Agriculture. The primary purpose of this web site would be to provide pertinent information about agriculture for the non-farm community. Secondly, the web site could serve as a marketing tool for attracting new farmers to the area, thereby enhancing the economic stability of agriculture in the county.

Produce a Video about Seneca County Agriculture

- ◆ Develop a video geared for the non-farm public about agriculture in Seneca County. The video should address the economic and social contribution agriculture makes to the community. This video should be produced for the adult non-farm public, as there are already several well-done children's videos about agriculture. In addition, the Farmland Protection Action Kit provides videos for government officials. The Finger Lakes Interpretive Center, and especially community festivals and events would be excellent venues for viewing by a large segment of the non-farm public.

Encourage Participation in "Agriculture in the Classroom"

- ◆ Encourage participation in the “Agriculture in the Classroom” program in the elementary schools. Cornell University coordinates this integrative curriculum that is designed to be used in conjunction with the state-mandated curriculum, and is especially effective when presented with the assistance of a local farmer.

Strengthen Continued Support of “Fun on the Farm” Events

- ◆ “Fun on the Farm” is an excellent on-going agricultural education and promotion program for which the Seneca County Farm Bureau has historically provided leadership. On-farm activities for the non-farm public foster understanding and support for agriculture, and deserve continued and increased support among the agricultural community. The formation of an Agriculture Promotion Council is one strategy to facilitate spreading the workload of organizing this event.

Goal 4: Acknowledge and Enhance the Environmental Stewardship of Agricultural Businesses

Acknowledge the Role Agriculture Plays in Environmental Stewardship

- ◆ Involve all stakeholders in the process of protecting the environment. Bring farmers and environmental protection organizations together to discuss and plan methods to protect the environment. While agriculture provides the rural character and aesthetic landscape that county residents and tourists value, it can often be a source of water quality degradation if not managed responsibly. For this reason, it is important to acknowledge and enhance the environmental role agriculture plays.

Promote Sustainable Agriculture

- ◆ Sustainable Agricultural practices seek to satisfy human needs for food and other fiber, to reduce energy use, and to enhance Environmental Stewardship.

Implement the Agricultural Environmental Management Program on Seneca County Farms.

- ◆ The Agricultural Environmental Management (AEM) program is a statewide environmental stewardship program that is coordinated by the NYS Soil and Water Conservation Districts and Cornell Cooperative Extension. The AEM program coordinates partnerships among existing agricultural and environmental conservation programs to reduce agricultural water pollution. AEM helps farmers to:
 - ✓ Assess environmental concerns associated with their farming operations
 - ✓ Implement environmental practices to address identified concerns
 - ✓ Understand and comply with state and federal environmental regulations
 - ✓ Promote to continuously improve soil conservation measures
 - ✓ Reduce fertilizer and pesticide use
 - ✓ Protect drinking water from disease carrying organisms, pesticides, and excess nutrients

- ✓ Improve relations between neighbors and communities
- ✓ Enhance wildlife habitats
- ✓ Maintain and improve water quality within and outside their watershed

Funding to support farmer participation should be made available from state and local sources.

Goal 5: Preserve Prime Agricultural Land

Effectively Implement and Maintain the Agricultural District Program

- ◆ Maintain the effective implementation of the Agricultural District Program. Provide educational materials and training to town officials so they have a clear understanding of the benefits of the Agricultural District Program. Cornell Cooperative Extension, Farm Bureau and the County Planning Department are excellent resources for the Agriculture District Program. The Seneca County Agricultural Enhancement Board can provide leadership in working with town officials to effectively implement Agriculture Districts.

Initiate Voluntary Farmland Preservation Programs

- ◆ Prime farmland in areas of increased development is at much risk of being removed from agricultural use. Most farmers prefer to keep their land in farming but in areas of increased development, it is difficult to transfer farm ownership because of the rising value of land. A voluntary Purchase of Development Rights (PDR) Program or a Lease of Development Rights Program can preserve farmland and its ensuing benefits for the whole community. PDR – which is voluntary and must be agreed upon by the landowner and the participating financial institution(s) - preserves open spaces and agricultural land by compensating landowners, who agree to keep their land in agriculture. The land is then restricted to agricultural use even if the land changes ownership. The restrictions take the form of conservation easements attached to land in perpetuity. Lease of Development Rights works much the same way only the rights are transferred for a set period.
- ◆ As farmland protection has been gaining attention, both the state and federal governments have established financial assistance programs for localities to purchase agricultural conservation easements. Towns developing PDR programs should give consideration to the following factors when deciding priorities for preservation:
 - ✓ Prime and unique agricultural soils
 - ✓ Participation in an agricultural district
 - ✓ Presence of other natural and/or cultural resources important to the community
 - ✓ Proximity to other farmland

- ✓ Proximity to land uses that minimize the potential for neighbor conflicts
- ✓ Land that provides buffering for parks or critical open spaces
- ✓ Importance in maintaining a viewshed
- ✓ Maintaining a base of farmer-owned farmland

Encourage Local Towns to Plan for Farmland Protection

- ◆ The Towns of Lodi, Junius and Romulus have worked with the New York State program that provides assistance to local towns for developing Local Farmland Protections. The Towns of Fayette and Varick included a significant Agriculture section in their Comprehensive Plans. Other towns in the County should be encouraged to develop local plans that support the continued viability of agriculture and promote the preservation of Prime Farmland.

LIST OF APPENDIXES

Appendix A	Copy 2007 Census of Agriculture Summary Sheet for Seneca County
Appendix B	Seneca County Farm Statistics 2009 From NY Agricultural Statistics Service
Appendix C	Model Right to Farm Laws
Appendix D	Membership Seneca County Agriculture Enhancement Board
Appendix E	Policies and Application for Seneca County PDR Program
Appendix F	Reference Materials for USDA Agriculture Programs
Appendix G	Sections of NYS Law relating to Agricultural Fences
Appendix H	Agriculture and Markets Law Section 25AA relating to Agricultural Districts

